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MATERIALITIES, DISCOURSES, AND ENTANGLEMENTS IN  
GENDERED DECISION-MAKING AND PRACTICES: AN ETHNOGRAPHIC  
ACCOUNT OF ‘FISH MAMMY’ HOUSEHOLDS IN GHANA

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PHD

LINGNAN UNIVERSITY

2021

MATERIALITIES, DISCOURSES, AND ENTANGLEMENTS IN  
GENDERED DECISION-MAKING AND PRACTICES: AN ETHNOGRAPHIC  
ACCOUNT OF 'FISH MAMMY' HOUSEHOLDS IN GHANA

by  
ADJEI Moses

A thesis  
submitted in partial fulfilment  
of the requirements for the Degree of  
Doctor of Philosophy in Sociology and Social Policy

Lingnan University

2021

## ABSTRACT

Materialities, discourses, and entanglements in  
gendered decision-making and practices: An ethnographic  
account of ‘fish mammy’ households in Ghana

by

ADJEI Moses

Doctor of Philosophy

Critical feminist scholars have challenged essentialist understandings of gender inequality and the use of discourses to categorize men as superior to women. For critics however, a focus on discourse equally limits our understanding of the role of materialities (human and non-human) in co-creating such social outcomes. Using a new feminist materialist approach, this thesis examines the factors which create opportunities for and obstacles to women’s participation in household and community-based fishery decision-making and practices in Ghana. The study adopts an ethnographic approach using multi-methods including a cross-sectional survey of 400 female fisherfolk, 48 in-depth interviews with female fisherfolk, male fisherfolk as well as community-based fishery leaders, and officials of governmental and non-governmental organisations. The study sample was drawn from three fishing communities (Axim, Sekondi and Dixcove) in the south-western coast of Ghana known for their historical and crucial contributions to Ghana’s small-scale fisheries sector. In terms of household fishery decision-making/practices, the results showed that women do more processing/trading, but less of strenuous tasks (e.g., fishing and repairs). In terms of community participation, results showed that while women attend meetings, their male counterparts dominate in terms of positions in the community-based fishery association. Multivariate linear regression revealed that women’s financial contributions, ownership of equipment and seasonality were significantly associated with their household decision-making power. However, participation in strenuous tasks (which commands high decision-making power) dampens the positive relationship between women’s financial contributions, gender role attitudes and decision-making power, such that financial contribution become insignificant. Women’s fishery decision-making varies according to the sex-typed division of labour, and those who violate it are ‘punished’ as they have to reduce their quest for equality in strenuous tasks in order to assume some level of decision-making. In-depth interviews and participant observations revealed that while discourses of masculinity and femininity were crucial in the gendering of fishery decision-making and practices, materialities (e.g., human bodies with (in)capacities in terms of strength, birthing, breastfeeding) as well as non-human objects such as canoe, the sea and its waves, and the heavy fishing net, food distributed at meetings and microphones equally mattered. The co-implication of the material, discursive, spatial, and temporal forces co-determined the extent of women’s participation in household and community-based fishery decision-making and practices. Thus, focusing on gender equality campaigns

and women's financial inclusion without attention to materialities (e.g., the physicality of activities women do) would be inadequate in explaining the complexities of their decision-making. Focusing on material-discursive co-implications highlight the physical bodily demands that women have to overcome and the how such entanglements can be reconfigured to enhance their decision-making. The current thesis calls for the need to embrace more materially engaged research, which recognizes the active role of such material forces as they intra-act with other forces in co-creating different outcomes for women.

## DECLARATION

I declare that this thesis is an original work based primarily on my own research, and I warrant that all citations of previous research, published and unpublished have been duly acknowledged.

  
  
SIGNED

.....  
(ADJEI Moses)

DATE: 08/09/2021

CERTIFICATE OF APPROVAL OF THESIS

MATERIALITIES, DISCOURSES, AND ENTANGLEMENTS IN  
GENDERED DECISION-MAKING AND PRACTICES: AN ETHNOGRAPHIC  
ACCOUNT OF 'FISH MAMMY' HOUSEHOLDS IN GHANA

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## TABLE OF CONTENTS

LIST OF TABLES .....	vi
LIST OF FIGURES.....	vii
ACKNOWLEDGEMENTS .....	viii
CHAPTER 1	
INTRODUCTION TO STUDY .....	1
1.1 Background and problem statement .....	1
1.2 Ghana’s fishing industry .....	7
1.3 Women’s participation in community-based fishery decision-making .....	9
1.4 Research question.....	11
1.4.1 Research sub-questions.....	11
1.5 Study sites .....	12
1.6 Relevance of study .....	13
1.7 Thesis structure .....	15
CHAPTER 2	
LITERATURE REVIEW AND THEORETICAL FRAMEWORK.....	18
2.1 Introduction .....	18
2.2 Biological determinism/essentialism and gender inequality .....	20
2.3 Social constructionist/poststructuralist account of gender inequality .....	21
2.3.1 Gender inequality in couples’ household decision-making and practices.....	22
2.3.1.1 Women’s economic contribution and decision-making power .....	22
2.3.1.2 Gender role attitudes and women’s decision-making power .....	25
2.3.1.3 Specialization/utility maximization and couple’s decision-making.....	29
2.3.2 Gender inequality in community-based decision-making .....	31
2.3.2.1 Modernization and Neo-institutional theories .....	31
2.4 The new materialist explanation: An intra-action of forces .....	40
2.4.1 Theoretical strands within new feminist materialism.....	42
2.4.1.1. DeleuzoGuattarian Assemblages.....	42
2.4.1.2 Actor-Network Theory (ANT) .....	43
2.4.1.3 Baradian Agential Realism, Intra-Action and Posthumanist Performativity.....	44
2.5 New feminist materialist approach to examining gender inequality in fisheries .....	49
2.6 Criticism of new feminist materialism .....	52
2.7 Conclusion.....	53

## CHAPTER 3

RESEARCH METHODOLOGY .....	54
3.0 Introduction .....	54
3.1 Research design.....	54
3.2 Data production methods .....	56
3.2.1 Reconnaissance stage.....	56
3.2.2 Ethnographic approach to study .....	57
3.2.2.1 Interviewer-administered questionnaire .....	58
3.2.2.2 Participant observation .....	70
3.2.2.3 Photo elicitation.....	73
3.2.2.4 In-depth Interviews .....	75
3.2.2.5 Vignettes.....	77
3.3 Sampling techniques .....	77
3.3.1 Purposive and snowball sampling .....	78
3.3.2 Sample Size .....	78
3.4 Data Analysis .....	79
3.5 New materialism and researcher positionality in the data production.....	84
3.5.1 Researcher/participants body co-implications in data production assemblage.....	86
3.5.2 Non-human objects co-implication in data production assemblage .....	88
3.6 Ethical issues.....	93
3.6.1 Recruitment of participants and informed Consent.....	94
3.6.2 Anonymity and confidentiality.....	94
3.6.3 Privacy.....	95
3.7 Data validity and reliability .....	95
3.8 Conclusion.....	97

## CHAPTER 4

PERCEPTIONS AND DYNAMICS OF WOMEN'S FISHERY DECISION-MAKING AND PRACTICES .....	99
4.1 Introduction .....	99
4.2 Socio-demographic characteristics of study population (Survey).....	100
4.3 Socio-demographic characteristics of study population (Interviews) .....	102
4.4 Women's financial contribution, gender role attitudes and ownership of equipment. ....	103
4.5 Women's participation in fishery decision-making and practices .....	107
4.6 Conclusion.....	113

## CHAPTER 5

HOUSEHOLD FISHERY PRACTICES AND DECISION-MAKING ASSEMBLAGE.....	116
5.1 Introduction .....	116
5.2 Micro-political conditions of division of fishery labour and decision-making assemblage .....	117
5.2.1 Material Components of fishery decision-making and practices .....	118
5.2.2 Discursive forces in household fishery practices and decision-making.....	119
5.2.3 Spatio-temporal forces .....	120
5.2.4 Economic, demographic forces and familial arrangements .....	120
5.3 Identifying Components: Quantitative Analysis .....	121
5.3.1 Sociodemographic factors .....	121
5.3.2 Effects of women's financial contributions, gender role attitudes, ownership of equipment and seasonality on decision-making .....	122
5.3.3 Intra-actions of material-discursive-economic forces in women's decision-making power.....	124
5.4 Women's participation in decision-making across different household fishery decisions .....	132
5.4.1 Women's financial contribution, gender attitudes and decision-making on repairs and major purchases .....	132
5.4.2 The effects of socio-demographic factors on repairs and major purchase decisions.....	142
5.4.3 Women's financial contribution, gender attitudes and sale decisions across space.....	136
5.5. Conclusion.....	137

## CHAPTER 6

MAPPING THE FORCES: HOW THE MATERIAL-DISCURSIVE FORCES RHIZOMATICALLY COMBINE TO PRODUCE AN OUTCOME.....	139
6.1 Introduction .....	139
6.2 Mapping entangled Human and Non-human bodies and gendering enactments .....	140
6.2.1 (In)capable bodies: Differential strength (brawn) and gendered fishery practices .....	141
6.2.2 Birthing and 'bad luck' menstruating bodies, and gendered fishery decisions and practices.....	147

6.2.3	Mapping entangled object's affects: Canoes, fishing nets, the sea and sea waves	151
6.2.4	Entangled non-human objects and relations in fishery decision-making.....	155
6.3	Gendered spaces, fishery decisions and practices.....	157
6.3.1	The fish landing Beach and the fish processing site/kitchen.....	158
6.3.1.1	The Fish landing beach.....	158
6.3.1.2	The fish processing kitchen/site.....	160
6.3.1.3	Landing beach spaces, and material-discursive entagled practices.....	161
6.3.1.4	Processing kitchen space, and material-discursive entangled practices.....	163
6.4	Gender discourses, historical accounts, marital expectations and material entanglements.....	171
6.4.1	Name calling in subversive fishery decisions and practices.....	179
6.5	Embodied affects, emotionality and the gendering of fishery decisions and practices..	181
6.5.1	The sea expedition.....	183
6.6	Forces of territorialization and deterritorialization in fishery practices and decisions..	192
6.7	Altering or Unsettling the fishery practices and decision-making assemblage.....	202
CHAPTER 7		
COMMUNITY-BASED FISHERY DECISION-MAKING AND PRACTICES		
ASSEMBLAGE.....		209
7.1	Introduction.....	209
7.2	Measuring women's Community Participation (Quantitative).....	210
7.3	Extent of women's participation in community-based fishery decision-making.....	212
7.3.1	Women's "self-limiting" behaviours in community-based fishery positions.....	213
7.3.2	Gendered division of labour, flextime and women's meeting attendance.....	214
7.3.3	Rules of community participation, interests and the gendering of community-based decision-making.....	215
7.4	Forces affecting women's participation in community-based fishery decision-making	217
7.4.1	Forces affecting women's frequency of meeting attendance.....	218
7.4.1.1	Socio-demographic factors and women's meeting attendance.....	218
7.4.1.2	Gender role attitudes, psychological and institutional factors.....	219
7.4.1.3	Networks and socio-material forces, and women's meeting attendance.....	222
7.4.2	Women's position in community-based fishery associations.....	223

7.4.2.1	Socio-demographic factors.....	224
7.4.2.2	Gender, Psychological characteristics, interpersonal/network factors .....	226
7.4.2.3	Institutional, socio-material factors and women's position in fishery association .....	227
7.5	Mapping component forces in the events of women's community participation.....	230
7.5.1	Mapping material forces affecting women's community participation.....	230
7.5.1.1	Birthing and breastfeeding bodies, and gendered community participation ....	231
7.5.1.2	Non-human material objects: t-shirts, take-away, microphone and gendering of community-based fishery decision-making.....	235
7.5.1.3	Material-emotionality entanglements and gendered community participation ..	238
7.5.2	Discursive forces and entanglements in women's community participation participation.....	240
7.5.2.1	Social perceptions about women's (in)abilities, hierarchies of emotions and gendered community participation.....	241
7.6	Delimiting forces of territorialization and deterritorialization .....	247
7.7	Altering or unsettling the territorialisation assemblages .....	252
CHAPTER 8		
SUMMARY OF FINDINGS, IMPLICATIONS AND CONCLUSION .....		256
8.1	Introduction .....	256
8.2	Purpose of study, theoretical approach and methods .....	256
8.3	Summary of Findings .....	257
8.3.1	Extent of women's participation in household fishery decision-making and practices.....	257
8.3.2	Materialities, discourses, and entanglements co-creating opportunities for and obstacles to women's decision-making/practices .....	258
8.3.3	Extent of women's participation in community-based fishery decision-making .....	262
8.3.4	Materialities, discourses, and entanglements co-creating opportunities for and obstacles to women's participation in community-based fishery decision-making .....	262
8.3.5	Unsettling the assemblage to address gender inequality in decision- making and practices.....	267
8.4	Study's contributions, limitations and recommendations for future research .....	271
APPENDICES.....		276
REFERENCES.....		307

## LIST OF TABLES

Table 1: Measuring women's household decision-making (Dependent variable).....	60
Table 2: Key independent variables (For fishery-based household decisions) .....	63
Table 3: Measuring women's community-based decision-making.....	66
Table 4: Key independent variables for women's community participation.....	67
Table 5: Measures of socio-demographic factors.....	69
Table 6: Summary of the sample for the survey.....	79
Table 7: Socio-demographic characteristics for survey.....	101
Table 8: Socio-demographic characteristics of Participants in the interviews.....	103
Table 9: Descriptive analysis of independent and dependent variables used in study.....	112
Table 10: Household decision-making arrangement*living with spouse cross tabulation.....	112
Table 11: The interaction effects of strenuous, and processing and trading activities in the relationship between <i>financial_contribution</i> , <i>gender_attitudes</i> , <i>ownership</i> and decision-making power by multiple hierarchical regression analysis.....	124
Table 12: Factors affecting women's decision-making power across different fishery-based household decisions.....	152
Table 13: Descriptive statistics of the outcome and predictor variables.....	212
Table 14: Hierarchical regression showing factors influencing women's Community-based....	219
Table 15: Multiple logistic regression showing factors influence women's positions in community-based fishery association .....	251

## LIST OF FIGURES

Figure 1: Map showing study areas.....	13
Figure 2: A conceptual model of material, discursive, spatial and temporal assemblage.....	51
Figure 3: A walk on landed canoe being prepared for another trip.....	70
Figure 4: Fishermen teaching me how to mend net.....	71
Figure 5: Helping women lift smoked fish on metal net.....	71
Figure 6: Helping woman package smoked fish.....	72
Figure 7: Observation of community-based fishers meeting in Axim.....	73
Figure 8: In-depth interview with fisherman fixing his net at home.....	75
Figure 9: Couple interview in the fish processing kitchen of fisher couples .....	76
Figure 10: Landed tuna categorized into sizes for price negotiation .....	109
Figure 11: Women lined-up at the coast waiting for fish, whilst men carry fish to shore. ....	109
Figure 12: The moderating role of strenuous fishery activities in the relationship between gender role attitudes and decision-making power .....	127
Figure 13 The moderating role of processing and trading activities in the relationship between gender role attitudes and decision-making power.....	127
Figure 14: The moderating role of strenuous fishery activities in the relationship between ownership of fishery equipment and decision-making power .....	128
Figure 15: The moderating role of processing/trading activities in the relationship between ownership of fishery equipment and decision-making power .....	128
Figure 16: Man mending net with male children .....	142
Figure 17: Girl assisting mother with sales by taking records.....	142
Figure 18: Helping fishermen push landed canoe to shore.....	144
Figure 19: Fishermen fixing faulty canoe.....	144
Figure 20: Helping fishermen to pull net into canoe.....	145
Figure 21: Fisherman asks that I feel his muscles .....	145
Figure 22: Women gathered along the coast as fishermen prepare their canoe for fishing trip...	159
Figure 23: Interview with woman in fish processing kitchen.....	160
Figure 24: Processed fish stored in kitchen .....	160
Figure 25: Household fishery practices and decision-making assemblage of rhizomatically interconnected material, discursive, spatial, temporal and economic forces, all mutually affecting. ....	192

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## CHAPTER 1

### INTRODUCTION TO STUDY

#### **1.1 Background and problem statement**

Traditionally, the concept of breadwinning has been associated with men in both developed and developing countries. It connotes the provision of financial support and is traditionally regarded as a norm of masculinity (Tichenor, 2005; Warren, 2007). Men have been considered to be the income-earners, household heads and ‘the pillars of the home’ (Parreñas, 2005, p. 57). This view of men has conferred on them privileges and power within their families. Being the providers has meant that husbands have controlled their homes, determined the utilization of household resources and have been the final decision-makers (Hoang and Yeoh, 2011; Orgad, 2019). In addition, in the public sphere, it has been axiomatic that the political arena (public sphere) is for men who oversee decision-making in communities and other spheres of socio-political interaction (Paxton and Kunovich, 2003; Paxton et al., 2007). On the other hand, wives in male breadwinner homes have been expected to take charge of the private sphere (the home), do housework and childcare duties, and be submissive and obedient to their husbands’ decisions (Meisenbach, 2010; Warren, 2007; Winter and Pauwels, 2006; Parreñas, 2005).

However, recent decades have seen a progressive global increase in women’s participation in the labour force (Charles, 2011; Chesley, 2011), which has been accompanied by changes in traditional gender norms and roles (Scott and Braun, 2009; Orgad, 2019). Extant research shows that a key area of transformation is the change in the traditional roles of couples in the household, where wives have become the main breadwinners – ‘providing the majority of household income’ (Warren, 2007; Winter and Pauwels, 2006; Meisenbach, 2010, p. 8). The increasing economic participation of women has attracted the attention of many scholars (Chapman, 2004; Charles, 2011; Van-Bavel et al., 2018; Ridgeway, 2014; Jayachandran, 2015; Iversen and Rosenbluth, 2008), partly because it challenges

traditionally established roles (Bolak, 1997; Bianchi et al., 2012). Such changes are expected to have implications for couple's household decision-making<sup>1</sup> arrangements as well as public attitudes towards women's roles in the home and in the public sphere (Bianchi et al., 2012; Orgad, 2019; Mundy, 2013; Davis and Greenstein, 2009).

However, the relationship between women's economic status and intra-household dynamics, specifically their household bargaining power and community-based decision-making is complex (Meisenbach, 2010; Tichenor, 2005). Whereas some studies reveal that women become more powerful and independent as their economic earnings increases (Coltrane, 2000; Gamburd, 2010), the literature on both developing and developed countries on this relationship is inconclusive, as men preserve and control their privileges and power in decision-making in the home and in the public sphere (Jha, 2004; Anderson et al., 2017; Tichenor, 2005; Greenstein, 2000; Bittman et al., 2003; Zhao et al., 2013). Some studies have even found that women's economic earnings may have a negative impact on their decision-making power in the home as it may result in abusive conduct from their partners (Atkinson et al., 2005). Increase labour force participation of women involves them in three times more work – childcare/housework, labour force participation and community participation, which may limit their decision-making power (Orgad, 2019).

The above findings suggest that the relationship between women's economic contribution, household bargaining power and community-based decision-making goes beyond financial provision or economic factors (Tichenor, 2005; Bolak, 1997). Contemporary studies have therefore focused on examining why gender equality exists in some aspects of social, economic, and political spheres, but not others? Why do men disproportionately occupy positions of decision-making in the private and public domains, despite the

---

<sup>1</sup> Household decision-making typically involves family members making decisions about domestic matters, but it can also involve decisions about economic production (especially when the unit of production is the household) (Jha, 2004). Household decision-making is an important measure of women's empowerment (Bartley et al., 2005; Alkire et al., 2013).

considerable economic contribution of women? (Levanon and Grusky, 2016; Charles, 2011; Van-Bavel et al., 2018; Ridgeway, 2014; Jayachandran, 2015; Iversen and Rosenbluth, 2008; Jha, 2004).

Two main theoretical approaches have been developed to explain gender inequalities within the household and other socio-political spheres, viz, the modernization and neo-institutionalist theories (Charles, 2011; Jayachandran, 2015; Van-Bavel et al., 2018). From the modernization perspective, the inequality of couple's household bargaining and community-based decision-making tends to be high in less developed countries and narrows as countries develop economically (Charles, 2011). At the micro level, the relative resource theory inspired by the modernization perspective proposes a positive relationship between a partner's household financial contribution and bargaining power (Sullivan, 2011; Blood & Wolfe, 1960).

Thus, modernization theorists link gender egalitarian attitudes to economic development of countries (Parsons, 1970; Inglehart and Norris, 2003; Matland, 1998). They argue that economic modernization coupled with increased market competition and economic pressures is likely to result in a shift from gender discriminatory attitudes to more egalitarian attitudes and the participation of women in economic, political, and social spheres (Jackson, 2006; Giele, 2006). As Matland (1998, p. 114) argues, '[economic] development leads to weakening of traditional values and changes in perceptions of appropriate roles for women'. Since developed countries generally tend to have less gender inequality compared to the developing countries, modernization theorists argue that gender gaps will automatically reduce as countries develop economically (Charles, 2011; Jayachandran, 2015).

The neo-institutionalists on the other hand argue that modern gender egalitarian attitudes are grounded in the adoption of modern social institutions, norms and values of gender

equality through the adoption of Western egalitarian culture (Kenworthy and Malami, 1999; Charles, 2011). They argue that the adoption of Western egalitarian culture renders the social environment more conducive to the participation of women in decision-making in both the domestic and public spheres, irrespective of a country's level of economic development (Meyer et al., 1997; Boyle, 2002; Ramirez et al., 1997). As countries interact through international platforms and through the works of international governmental and non-governmental organizations, Western ideas and the adoption of gender egalitarian policies in less developed countries will have long term culture altering effects (Ramirez and Wotipka, 2001; Berkovitch, 1999; Blau et al., 2006). These scholars have therefore attributed gender inequalities to 'differences in tax and family policies, labour market structures, family demographics and norms of motherhood' (Charles, 2011, p. 359; Pettit and Hook, 2009; Charles and Cech, 2010) – suggesting that the differences in gender gaps between developed and less developed countries could be addressed through their propositions.

In summary, both theoretical perspectives place emphasis on the role of socio-economic and cultural practices 'underpinned by patriarchal structures' as major constraints to women's decision-making power (Wrigley-Asante, 2012, p. 359). Whilst these theoretical perspectives may address gender inequalities to some extent, a more detailed analysis suggest that such accounts require qualification (Charles, 2011; Van-Bavel et al., 2018). Although gender equality has generally increased more in developed countries than in less developed countries, studies show that some forms of gender inequality have decreased more than others and gender gaps persist even in the advanced countries (Stone, 2007; Cohany and Sok, 2007; Van der Lippe and Van Dijk, 2001). Other studies show that notwithstanding the increase in women's participation in the labour markets of advanced economies, gender inequalities persist, and housework and childcare duties remain a key role reserved for women in these countries (Charles and Cech, 2010; Bittman et al., 2003).

In addition, outcomes of women's socioeconomic and political participation provide mixed results on the role of policies in fostering gender equality in community-based decision-making (Gornick and Meyers, 2003; Charles and Cech, 2010).

The broad theoretical statements by modernist and neo-institutionalist who argue for the primacy of structural and macrosocial forces in reducing gender inequality is inadequate because the process of gender equality has been occurring through 'partial domain-specific equalization' globally (Charles, 2011, p. 357). Besides, modernization theorists fail to account for the high rate of women employment in the dominant informal sector of most developing countries (Charles, 2011; Jayachandran, 2015). The modernization and neo-institutionalist perspectives also pay little attention to the historical and different developmental trajectories of countries which may shape the socio-political and economic milieu for women's status and roles (Iversen and Rosenbluth, 2008).

In short, the predictions of both modernization and neo-institutional theorists lack consistent empirical support not only in developed countries (e.g., Tichenor, 2005), but also in developing countries. In the latter case, the picture is often complicated in the case of dominant small-scale agricultural work, which is mainly based on family labour. Examining the factors that influence women's household and community-based decision-making within this agricultural-based context is clearly a crucial contribution to explaining gender inequality in decision-making and practices. Understanding women's underrepresentation in decision-making is particularly crucial as women account for more than 60% of the agricultural labour force including the fisheries sector (Doss, 2014), is a phenomenon which remains to be addressed. Women's household bargaining and community-based participation processes may also be shaped by other contextual factors including couples' sociodemographic characteristics such as age, living arrangements and ages of children (Doss, 2013, 2014; Tsige 2019). Parents are role models and the way in

which decision-making occurred during the children's formative years may also shape expectations about their own conjugal life (Ciabattari, 2001).

Although existing literature as discussed above provides crucial explanations of gender inequality in both developed and developing economies, theoretically, such studies have been largely human centered with little attention to the role of materialities (such as human physical strength and non-human objects such as heavy equipment) in co-creating gender inequalities. Studies in occupations such as policing (Chan and Ho, 2013) and agriculture (Boserup 1970; Alesina et al., 2013; Anderson et al., 2017), and in parental care (Doucet, 2013; Gaunt, 2006) provide evidence that such materialities (human and non-human) matter. However, the active roles of materialities have been largely neglected in most studies that examine occupational sex-segregation including the fishing industry (Doucet, 2013; England, 2011; Tomaskovic-Devey et al., 2006; Zhao et al., 2013). Thus, there have been increasing calls for models to consider the multidimensional complexity and the complex process of interaction between cultural, historical, structural, personal characteristics and most importantly, the material dimensions that create gender inequality in decision-making (Doucet, 2013; Coole and Frost, 2010; Barad, 2007; Ridgeway, 2014; Meisenbach, 2010; England, 2016; Iversen and Rosenbluth, 2008).

In line with these calls, the current study utilizes the new feminist's materialist approach to examine the co-implication of the material, discursive, embodied, spatial and temporal factors that co-produce the opportunities for and obstacles to women's participation in household and community-based fishery decision-making/practices. The new materialist framework highlights the important role of matter (human and non-human) and their co-implications with other forces in co-creating social outcomes such as women's roles in fishery decision-making (Barad, 2007; Frost, 2011; Taylor and Ivinson, 2013; Bennett et al., 2010; Braidotti, 2013a).

According to the Food and Agriculture Organisation (FAO), the fishing industry directly and indirectly employs more than 800 million people globally (FAO, 2020). Women account for about 50% of the total workforce employed in the fishing industry and often dominate various aspects of the fisheries value chain (Weeratunge et al., 2010). However, recent studies have detailed gender gaps in various aspects of the fishing industry, from lack of data on women's involvement (Zhao et al. 2013; Kleiber et al. 2015, 2017; Tilley et al., 2020), gender inequality in fishery decisions and practices (Torell et al. 2015; Harper et al. 2013; Overå 2003), and in community-based fishery decision-making processes (Mutimukuru-Maravanyika et al., 2017; Finegold et al., 2010), all of which remain to be addressed.

This thesis builds on the above works by adopting a new feminist's materialist approach to examine how human bodies with different physical capacities (e.g., strength, birthing, etc.) performing different fishery tasks, and non-human factors (e.g., seasonality, canoes, heavy fishing nets, etc.) interact with other social factors in gendering household and community-based fishery decision-making and practices in Ghana. Using the new feminist materialist approach is particularly important as existing studies of the fishing industry have been less explicit in their examination of the ways in which physical materialities (human and non-human) play a crucial role in understanding women's decision-making, despite the persistent calls for gender equality in fishing industry (Weeratunge et al. 2010; Zhao et al. 2013; Kleiber et al. 2015; Tilley et al., 2020).

## **1.2 Ghana's fishing industry**

Ghana is traditionally a patriarchal society. However, historical accounts show less distinction in the involvement of men versus women in the public and private spheres of work. For instance, historical accounts of fishing among the Fanti ethnic group in Ghana shows that women have traditionally participated in the fishing industry with their male counterparts since the pre-colonial and colonial periods (Finegold et al., 2010; Walker,

2002; Overå, 1998). Ghana's fishery sector is an important industry as it employs about 10% of the country's working population and an essential source of protein, accounting for over 60% of the country's protein intake (Akyeampon et al., 2013; Rurangwa et al., 2015). In most coastal fishing communities, fishing, fish processing and trading are dominant occupations (Adjei, 2017, 2021) and an 'entire way of life' (Ackah-Baidoo, 2013, p. 409).

Marine fishery contributes over 70% of the total fish catch from three main fleets – the industrial, semi-industrial and small-scale fisheries (Ayivi, 2012; Bank of Ghana, 2008). The main difference between these fleets stems from the ownership and mode of fishing. Whereas the industrial and semi-industrial fisheries are owned by foreigners, and co-owned by foreigners and locals respectively, the small-scale fishery is solely reserved for Ghanaians (Akyeampon et al. 2013). Again, the industrial and semi-industrial fleets use large scale fishing boats, whereas the small-scale fleets consist of dugout canoes mostly fitted with outboard motors for relatively short-distanced fishing (Coastal Resource Centre, 2013).

Among the three sub-sectors, the small-scale fisheries sector accounts for over 70% of the country's total fish landings and employs 80% of the total number of fisherfolk, of which about 60% are women (Akyeampon et al., 2013; Nunoo et al., 2014). Recruitment into the small-scale fishery is mainly based on family labour, but roles are highly gendered; men are generally responsible for fishing while women oversee processing and trading activities (Kraan 2009; Overå, 2003). According to Overå (2003, p. 51), many female fisherfolk popularly known as 'fish mummies' were able to increase their presence in the male domain of work in small-scale fisheries by owning important fishery equipment (facilitated by their access to loans provided by community-based NGOs and self-help groups), such as outboard motors (introduced in the 1960s), canoes, fishing nets and pre-financing



fishing trips<sup>2</sup>. It is estimated that about 40% of canoe owners in Ghana's small-scale fishing industry are women (Akyeampon et al., 2013). Overå (2003) asserts that due to these crucial roles, many women employed in small-scale fisheries have 'carved out a position for themselves in the local community, not only in terms of wealth but also in terms of social power and prestige' (ibid., p. 59). In addition, the small-scale fishing industry in Ghana is characterized by seasonal variation in catch, with July to September as the main season and November to January as the minor season, which is caused by the periodic upwelling of the country's ocean current (Nunoo et al., 2014; Koranteng, 1991; Ayivi 2012). The lean season is characterized by migration of fisherfolk especially the men, who are likely to travel to work in neighbouring fishing towns or find alternative jobs such as farming (Overå, 1998; Owusu, 2019). During such periods, women usually engage in the processing and sale of imported fish mainly to support the family income (Owusu, 2019).

### **1.3 Women's participation in community-based fishery decision-making**

Prior to the advent of colonialism, women had traditionally been involved in the management of Ghana's fisheries. In the pre-colonial era, traditional village chiefs, chief fishermen (*Apofohene*), female chief fish traders (*Konkohemaa*) and their sub-chiefs (*Beesonfo*) were important community agents in regulating for instance, the types of fishing nets used, pricing of fish and fishing days, within their communities (Finegold et al., 2010). However, in 1946, the colonial government established the Department of Fisheries which provided a formal regulatory framework for the fishing industry (Penney et al., 2017). Local traditional authorities lost their power to make and enforce fishery regulations, but through the indirect rule system, the male traditional leaders were better

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<sup>2</sup> After the introduction of outboard motors, the small-scale fishing industry became capital intensive so men usually depended on the women's financial support for their trips. Again, competition for fish among the women increased and women began to invest in the purchase of key equipment such as canoes, outboard motors and fishing nets to enhance their chances of sustaining regular supply of fish to sell (See Overå 1998, 2003).

positioned to participate in decision-making than the women (Tsamenyi, 2013). After independence in 1957, the government of Ghana continued the colonial model of fishery management. As part of the country's economic recovery strategies in the 1980s, government Ministries, Departments and Agencies, including the fisheries were decentralized (Acquay, 1992). With decentralization, the fisheries department was further weakened by poor government funding, leading to poor management of the fishing industry (Finegold et al., 2010).

To ensure effective co-management of the fisheries at community level, the World Bank in collaboration with the government of Ghana established the Community-based Fisheries Management Committees (CBFMCs) within coastal fishing communities (Tsamenyi, 2013; Mutimukuru-Maravanyika et al., 2017). Interestingly, the CBFMCs were established based on the local traditional fisheries management system that existed before the colonial era (Finegold et al., 2010; Braimah, 2009). The CBFMCs consisted of the chief fisherman as the head, who also represented the traditional chief on fishery matters (Adjei, 2017), as well as seven male and female fishery leaders (*Beesonfo*) (Owusu, 2020). In addition to the community members, the government was also represented at the community level via the District Assemblies within these communities. However, poor financing and collaboration which characterized the CBFMCs also resulted in their collapse in most fishing communities (Tsamenyi, 2013; Torell et al., 2016).

Currently, the remaining CBFMCs are managed by the local fisherfolk such as the *Asafo*, in the Central and Western regions (Overå, 2001; Owusu, 2020). Recent years have seen increasing collaboration between the existing CBFMCs, local/international Non-Governmental Organizations (NGOs) and local level governmental organizations (e.g., Fisheries Commission) (Torell et al., 2019; Adjei, 2021). These have resulted in the creation of quasi community-based fishery management committees such as the Ghana National Fish Processors and Traders Association (NAFPTA), Ghana National Canoe

Fishermen Council (GNCFC), which serve as platforms for collaboration between government bodies, local and international NGOs and the existing CBFMCs where both male and female fisherfolk are expected to participate.

Despite being owners of essential equipment and working alongside men in various capacities, a growing body of literature suggests that women have only limited voices in fishery decision-making processes at the household, community and national levels (Mutimukuru-Maravanyika et al., 2017; Tilley et al., 2020; Torell, 2016; Harper et al. 2013; Kleiber et al. 2015; Zhao et al. 2013). This study examines the factors that create opportunities for and obstacles to women's participation in household and community-based fishery decision-making in Ghana using the new feminist materialist framework. Following scholars such as Deleuze and Guattari (1988), Barad (2003, 2007) and Taylor (2013), the central argument of this thesis is that, bringing to the fore the effects of human and non-human materialities would reveal a constellation of human-nonhuman agencies and events to understand the complexities of gender inequality in household and community-based fishery decision-making/practices and how such complexities could be unsettled to address gender inequality. This thesis therefore answers the following research questions.

#### **1.4 Research question**

How do the combined material, discursive, spatial and temporal factors co-produce opportunities for and obstacles to women's participation in household and community-based fishery decision-making/practices?

##### ***1.4.1 Research sub-questions***

1. To what extent do women in Ghana's small-scale fishery participate in household and community-based fishery decision-making/practices?

2. What are the material, discursive, economic, spatial and temporal factors that influence women's participation in household and community-based fishery decision-making/practices?
3. How does the combination of the aforementioned factors co-create opportunities for and obstacles to women's participation in household and community-based fishery decision-making/practices?
4. How could the assemblage<sup>3</sup> be unsettled? (That is, how altering the combined forces might change the extent of women's participation in fishery decision-making).

## 1.5 Study sites

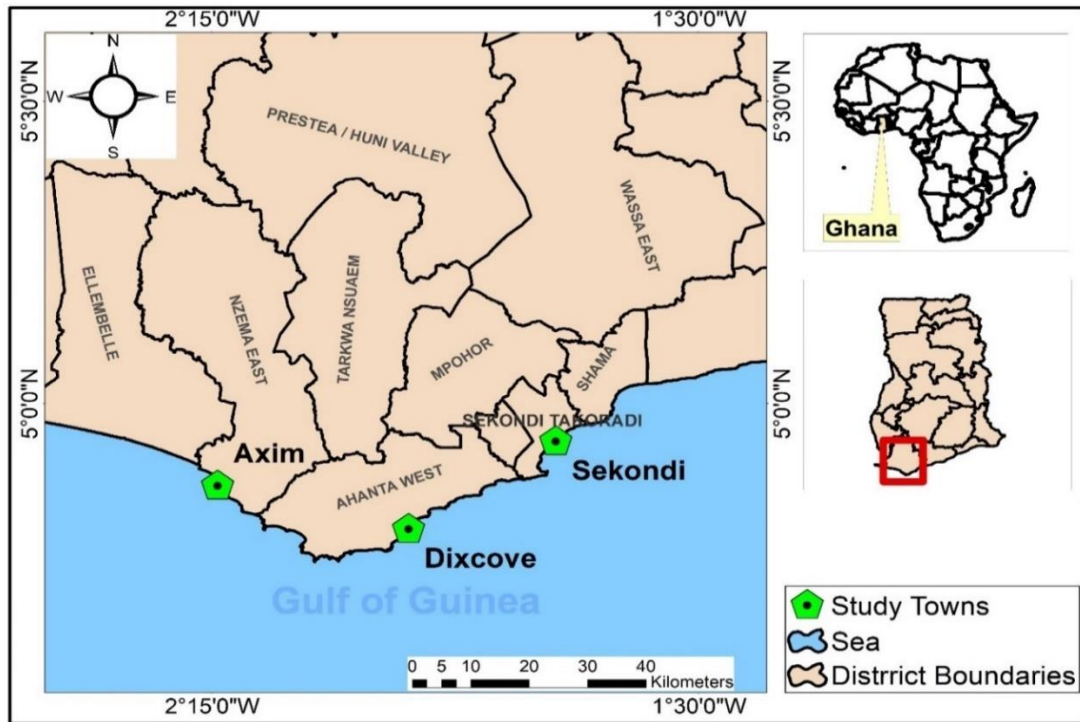
The study was conducted within three fishing communities along the south-western coast of Ghana – Axim, Sekondi and Dixcove (see Figure 1) – between July 2019 and January 2020. These fishing communities were selected for their important contributions to the small-scale fisheries in Ghana and for historical reasons. Axim, the capital of the Nzema East Municipality is one of the busiest among the 186 coastal fishing communities in Ghana, with 13 fish landing beaches (Akyeampon et al. 2013; Adjei and Overå, 2019). The dominant occupation of the people in Axim is fishing and it is also known for being one of the preferred destinations for migrant fisherfolk (male and female) in Ghana (Adjei, 2017). Axim is also known for having one of the most vibrant CBFMCs with the national vice president of the fish processors association living in the town. The second study area, Sekondi, is the capital of the western region of Ghana and an important fishing area. Most of the residents along its coastal suburbs engage in fishing, fish processing and trading. Sekondi was chosen for having the biggest modern fishing harbour of the region (Albert Bosomtwe Sam harbour) and being the busiest fishing town in the region (Akyeampon et al. 2013). The third study area, Dixcove is a rural area and one of the oldest fishing

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<sup>3</sup> Assemblages consist of a 'multiplicity of heterogeneous orders of existence' (e.g. the material, the economic and the biological) traditionally considered separate, which come together to function as a whole or form a particular understanding, activity or entity' (Patton 1994; Feely, 2014, p. 47).

communities in Ghana. Fishing is the main livelihood of its inhabitants and the centre of fish trade for the adjoining communities (Akyeampon et al. 2013). These different communities provide an important mix of participants for better understanding of women's decision-making power and to emphasize the crucial role of the fishery sector among inhabitants along the coast of Ghana.

**Figure 1:** Map showing study areas



**Source:** Author's construct based on ESRI shapefiles using ArcGIS 10.6

## 1.6 Relevance of study

Whilst the proportion of women in the labour force has increased globally in recent decades, research consistently demonstrates that in spite of this, women lag behind their male counterparts in decision-making power (Orgad, 2019; Bartley et al. 2005; Meisenbach, 2010; Tichenor, 2005). Although existing literature provides crucial understanding of issues relevant to this dichotomy, many aspects of this paradox remain unanswered. A synthesis of the literature shows that extant research has largely been based on developed

economies, and women in white-collar and blue-collar occupations (Meisenbach, 2010; Atkinson et al., 2005; Tichenor, 2005; Bittman et al., 2003; Bianchi et al., 2000).

However, there are some studies which show that a large proportion of women equally participate in the dominant informal, agricultural sector of developing economies such as Ghana (Hoang and Yeoh, 2011; Overå, 2003, 2007; Britwum, 2009; Walker, 2002; Kraan, 2009). Within the informal small-scale, brawn-based agricultural occupations such as farming and fishing, couples usually work as an economic unit and it is possible for women to be directly involved in the activities or decisions of their male partners (Overå, 1998, 2003; Walker, 2002). This differs from the advanced economies where most couple's undertake different economic activities in dual-earner homes, with strict division between domestic work and labour force participation (Bartley et al., 2005; Levanon and Grusky, 2016). This suggest that the dynamics of women's decision-making in the small-scale agricultural sector are likely to be different, which requires further research. For instance, a study by Levanon and Grusky (2016) in the US shows that male dominance in muscular, labour-intensive occupations, which are considered lowly, is an advantage to women and gender equality. However, in the dominant brawn-based agricultural sector, participation in strenuous activities is crucial and would be an oversimplification to assume them as having inferior status. Thus, examining the forces at work in influencing the extent of women's participation in decision-making/practices in the small-scale agricultural sector in a developing country context, such as the small-scale fishery in Ghana provides an important case example for understanding gender inequality dynamics in other similar social contexts.

Whilst extant research on gender inequality in decision-making and practices inspired by modernization and neo-institutionalist theories have made significant contributions, they have largely focused on gender structures and socioeconomic factors with little attention to the role of materialities such as physique, and heavy equipment (Doucet, 2013; Fox and

Allred, 2015), whilst the complexities of gender inequality in decision-making are not completely answered. The new materialist approach sensitizes us to the agency/liveliness of materialities (human and non-human) as they combine with other forces; their effects on women's household and community-based fishery decision-making/practices remain to be examined empirically.

As the findings in this research are intended to reveal, human (male/female) bodies with different capacities in terms of strength, birthing, breastfeeding as well as non-human material objects such as the canoe, heavy fishing net, the sea and its waves, microphones, T-shirts, and different spatio-temporal factors are active forces in the gendering of household and community-based fishery decision-making processes. Therefore, women's participation in strenuous fishery activities (e.g. fishing and repairs) does have a significant effect on the positive relationship between their gender role attitudes, household financial contribution and their fishery decision-making status.

## **1.7 Thesis structure**

This thesis is structured into eight interrelated chapters. Following the introduction to the study discussed in Chapter 1, Chapter 2 presents a synthesis of the literature on gender inequality in household and community-based decision-making, and theoretical debates on the factors that create such outcomes. In this chapter, I also present the new feminist materialist theoretical approach that provides a framework for my approach in explaining the complexities of gendered decision-making and practices. I draw strongly on DeleuzoGuattarian assemblage analysis and Karen Barad's concept of material-discursive intra-action<sup>4</sup> in the co-production of gendered outcomes. In Chapter 3, I describe the research design and methods of data production. I include data analytical approaches,

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<sup>4</sup> Barad uses the term 'intra-action' to indicate how the agency of bodies or entities are not pre-established or inherent, but emerges from their co-implications or entanglements, such that they lose their agency in that context when separated (Barad 2007, p. 141).

researcher positionality issues as well as ethical considerations in this chapter. In Chapter 4, I provide a description of the participants' sociodemographic characteristics as well as a discussion of the participants' perceptions and attitudes towards women's household fishery decision-making and practices.

In Chapter 5, I focus on women's household decision-making and practices. I examine quantitatively the extent to which women's gender role attitudes, household financial contributions, ownership of fishery equipment and seasonality are associated with their decision-making power as well as the effects of the type of fishery activities women do (strenuous or processing/trading) on the relationship between the selected independent variables on women's decision-making power. In addition, I provide qualitative information to extend (and in some cases contrast) the quantitative results. The chapter helps to identify the various material, discursive, spatial and temporal factors at work in women's household decision-making.

In Chapter 6, I present the fluid contingent processes through which the different factors identified in Chapter 5 combine in different contexts of household decision-making and practices to co-create opportunities for and obstacles to women's decision-making. I also discuss the processes by which this assemblage of forces can be altered to change the observed outcome. In Chapter 7, I discuss my findings on women's participation in community-based fishery decision-making. In the first section, I present a descriptive analysis of the variables used to assess women's community participation. Thereafter which I examine the extent to which the different factors affect women's community participation. I then map out how the different factors identified combine to create opportunities for and obstacles to women's community participation. I also discuss how this combination of forces can be unsettled/altered to address the problem of women's community-based fishery decision-making. Chapter 8 concludes the thesis. Here, I provide a summary of the findings of the study and reflect on the study's contributions and its



implications for understanding gender (in)equality in decision-making and practices. I end the thesis with some limitations of the study and recommendations for further research

## CHAPTER 2

### LITERATURE REVIEW AND THEORETICAL FRAMEWORK

#### **2.1 Introduction**

In 2005, a popular speech by former Harvard University's president, Lawrence Summers explaining why only few women succeed in science and mathematics careers sparked criticisms and debates within the school and featured on the headlines of various national dailies around the world. He provided three factors to explain the underrepresentation of women in senior positions of mathematics and science fields. First, he argued that women were reluctant to work for long hours which is required to undertake these fields, due to their childcare responsibilities. He then argued that gender inequality in science and mathematics was biologically or genetically determined. Lastly, he belittled the role of socialization or social norms and values as only a third possible force in determining gender inequality in these fields (Charles, 2011; Hill et al., 2010). Critics argued that Summers' elevation of biological factors over the social in explaining gender inequality in cognitive ability served the interest of those seeking to discriminate against women based on their physicality, while the role social norms and patriarchal structures are less recognized (Hill et al., 2010).

Social constructionist/poststructuralist recognition of the historical and cultural discourses which elevate men over women can help to deconstruct/contest the gender norms and values that result in women's subordination (Risman, 2004; Butler, 1990, 1993; Oakley, 1974 in Holborn et al., 2004). However, existing research reveals that a focus on the social as the determining factor of gender inequality is equally restrictive (Barad, 2007; Ringrose and Rawlings, 2015; Braidotti, 2013b). Specifically, within the social constructionist approach, one would struggle to find ways to incorporate the roles of the materialities such as the human bodies with different capacities in terms of strength to undertake activities such as fishing or construction, and the spatial locations within which specific

activities/decisions are undertaken. These problems partly reflect the critiques of social constructionist/poststructuralist such as Butler (1990, 1993), whose works have been criticized for its preoccupation with language, discourse and signification in explaining gender inequality (Doucet, 2013). Hence, the need to address the seeming ‘biophobia’ that characterize most poststructural feminist theorists and re-conceptualize the nature/culture duality (Davis, 2009, p. 67; Kirby, 2008).

In this chapter, I provide an alternative framework that allows us to highlight the important role of materialities, while recognizing the role of discourses - as Barad (2007) refers in her popular book, *Meeting the Universe Halfway*. By this, Barad postulates that social outcomes (such as gender inequality in decision-making) emerge when the physical materialities (human and non-human objects) ‘meet’ with anthropocentric forces such as gender discourses (Barad, 2007, p. 141). In this case, I move from the purely biological determinist’s and purely social causality epistemologies by taking up the new materialist approach. This approach highlights the active role of different forces of existence as they combine. As would be discussed in later sections, the DeleuzoGuattarian assemblage inspired by Spinoza’s flat ontology decentres human intentionality and disregards biological essentialism inspired by Cartesian dualism by examining the co-implication of materiality and discourse (Feely, 2020; Jagger, 2015; Fox and Alldred, 2018a; Barad, 2003).

In the next section, I discuss the polarized debates between biological determinists and social constructionists/poststructuralists and provide a synthesis of the literature to show how these have influenced feminist’s studies and understanding of gender inequality in decision-making/practices in different contexts. I would also discuss how the new materialist framework provides a novel approach to understanding gender inequalities in different contexts and applies to Ghana’s small-scale fisheries.

## **2.2 Biological determinism/essentialism and gender inequality**

The polarized debate between biological determinists and social constructionists as in the case of Summers and his critics is not new. Biology has been used to justify the dominance of men over women since the time of Aristotle who described the female biological makeup as a deformity of the male (Lam, 2016). By this, Aristotle illustrated how biological factors reinforced social practices and inequalities (ibid.). These ideas underlie biological determinist's arguments that social outcomes are biologically or genetically determined (Lam, 2016; Birke, 1999, 2003). In its most recent form, sociobiologists such as E.O. Wilson inspired by Darwin's theory of natural selection, and George Peter Murdock are known to relate the differences in behavior, social roles and statuses between men and women to their sexual or biological differences (Holborn et al., 2004; Feely, 2015). For instance, in explaining sexual division of labour Murdock posits that:

Man, with his superior strength can better undertake the more strenuous tasks such as lumbering, mining...not handicapped, as is woman by the physiological burdens of pregnancy and nursing, he can range farther afield to hunt, to fish...woman is at no disadvantage, however in lighter task which can be performed in or near the home, e.g. fetching water, preparation of food, etc (Murdock, 1949 in Holborn et al., 2004, p. 98).

From the above, Murdock argues that the gender division of labour has biological underpinnings where women are restricted to domestic and child related activities as a result of their biological abilities to give birth and daintiness, whereas men's physique make them ideal to undertake brawn-based, long-distanced activities. Biological determinists further argue that it is actually beneficial for such divisions to exist for both men and women to co-exist, as their biological differences were inherent and largely immutable (Parsons, 1955 in Holborn et al., 2004; Murdock, 1949 in Holborn et al., 2004). Biological explanations of men's dominance in fishery decision-making and practices follows essentialist arguments which emphasize men's physical advantages (e.g., brawn)

and the fact that women bear children; this division of labour is seen as optimal (Murdock 1949 in Holborn et al., 2004; Zhao et al., 2013). Apart from the fisheries, there are studies in other occupations such as mining (Bryant and Jaworski, 2011; Reeson et al., 2012), construction (Sang and Powel, 2012) and policing (Chan and Ho 2013), where physical strength matters, but has received limited attention in the literature on occupational sex segregation (England 2011; Tomaskovic-Devey et al. 2006; Ridgeway et al. 2004).

However, biological explanations fall short in explaining why, despite being owners of essential equipment and working alongside men in various capacities, women fare worse in decision-making power than their male counterparts (Harper et al. 2013; Kleiber et al., 2015; Zhao et al. 2013). Thus, a purely biological account of gender inequality in fishery decision-making/practices is obviously inadequate.

### **2.3 Social constructionist/poststructuralist<sup>5</sup> account of gender inequality**

In response to biological essentialism, feminist scholars have turned to social constructionist and poststructuralist approaches. These scholars emphasize the role of culturally and historically grounded processes which categorize social roles and statuses of men and women (Lam, 2016). Since gender inequality emerge from social discourses, they can be altered or deconstructed to change the situation (Butler, 1990, 1993). However, just like the biological essentialist, social constructionist/poststructuralist equally attribute certain essential characteristics to categorize women in their arguments (Lam, 2016). This is even more apparent in environmental related studies where the popular discourse that ‘women are closer to nature’ due to their caring and reproductive roles is used to justify women as better managers of the environment (Resurrección, 2013, p. 34; Mies and Shiva, 1993).

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<sup>5</sup> Social constructionism and poststructuralism are considered in the same category for their focus on human agency, discourses and the continually changing social norms, institutions and practices which determine gendered outcomes (see Feely, 2014; Barad, 2003, 2007).

Middle-range theories such as relative resource theory still prioritizes the non-discursive in understanding household dynamics. Relative resource theory proposes a positive relationship between partner's household financial contribution and household bargaining power – the one who contributes more has more power (see Sullivan 2011; Blood and Wolfe, 1960; Coltrane 1996). However, outcomes of women's economic contribution on their bargaining power has been complex, hence the relative resource theory is equally inadequate in explaining gender inequality in household decision-making. Notwithstanding, a combination of the discursive and economic forces are often cited as the main factors explaining gender inequality in household decision-making and practices in different spheres of interaction as discussed below (Doss, 2013; Jha, 2004; Agarwal 1997; Kleiber et al. 2015).

### ***2.3.1 Gender inequality in couples' household decision-making and practices***

Couples may take series of decisions ranging from reproductive health decisions (family planning, number of children, maternal health etc.), use of household resources (food, income, etc.), and division of housework and childcare roles (Islam, 2018; Park and Goreham, 2017; Davis and Greenstein, 2009). Extant research on couple's household decision-making have focused on the social constructionist/poststructuralist approaches and the economic models in explaining gender inequality (see Charles, 2011; Bartley et al., 2005). In the next section, I examine the extent to which women's economic roles influence their household bargaining power.

#### ***2.3.1.1 Women's economic contribution and decision-making power***

In developed country contexts, the outcomes of women's economic contributions on their household bargaining power have been inconsistent. For instance, a study by Tichenor (2005) in the United States reveal that in female breadwinner marriages, women's decision-making power increased, but such increase is conditional, as husbands had to 'put [their] foot down' in some major decisions such as purchasing of cars (ibid. p. 200).

Similarly, Stockman et al. (1995) compared women's work-life decisions in England, Japan, China and the United States. They found that wives who worked as full-time employees had increased household decision-making power and their husbands did more in housework. They however stressed that an increased decision-making power of women in the home did not mean that they had more power than the husbands (Stockman et al., 1995). It is however unclear the kinds of decisions which men dominated and the ones that women's decisions increased, as the authors did not examine the different forms of household decisions couples took. Besides, Hardill et al. (1997) examined the career and housing decisions among 30 dual-earner households in Greater Nottingham area, UK. They found that dual earner couples had equal share of power on the routine life decisions, but in the more important and non-routine decisions such as purchase of cars, houses or lifestyle decisions, the men decided most (two-thirds), whilst the wives or the couple jointly decided on the other half of such decisions (Hardill et al., 1997). In examining the perceptions and attitudes of women about their household decision-making among 15 women breadwinners from Eastern and Midwestern United States with different cultural and racial backgrounds (11 European Americans, 2 African Americans and 1 Chinese American), Meisenbach (2010) had two key findings. First, participants described themselves as experiencing opportunities of control and independence in their households, which enhanced their participation in the use of household finances (Meisenbach, 2010). Second, she stressed that the participants did not feel the same way about having control as some women experienced guilt and the pressure of being the main wage earner whilst others enjoyed the control of household decisions. Although the study provided in-depth discussion of female breadwinner's experiences, Meisenbach paid little attention to the differences in culture, which could have resulted in the participant's different experiences and attitudes. Perhaps, the Chinese woman's discomfort of being a breadwinner may be connected to the lack of support for such roles in traditional Chinese culture (Buzzanell et

al., 2007). The African-American women's comfort in breadwinning and control may be connected to the cultural expectations of African women as primary home makers (Reynolds, 2001).

In a developing country context, Anderson et al. (2017), for instance, found that for Tanzania's farming couples, despite women's active involvement in farming activities, their decision-making power only centered on cropping and marketing of produce, whereas their husbands had the 'overall authority' (Anderson et al. 2017, p. 181). They also found that hours spent by women working on the farm were positively associated with their farm-related decision-making authority but negatively associated with their authority over the purchase of equipment.

In another study, Kumar and Maral (2015) compared the decision-making power among 272 working and non-working women in Allahabad, India. They found that most women (working and non-working) confirmed their participation in decisions in the area of daily household expenses, savings and health related decisions, whereas their husbands dominated the infrequent and more important issues such as purchase of land, children's education and settlement of family disputes. The study also found that working women especially those with high financial contribution to household needs were more likely to take joint decisions with their husbands on issues such as dispute settlement than their non-working counterparts (Kumar and Maral, 2015).

Similarly, Gummerson and Schneider (2012) investigated the relationship between women's income contribution and household expenditure among extended (non-nuclear) households in South Africa. They found that when women contributed major part of household income, their decisions on household spending on food was higher whereas spending on alcohol was lower and the inverse was true when the husband was the main provider in the households (Gummerson and Schneider, 2012). They also found that in



households with multiple adults (relatives), bargain in decision-making reflects the gender preferences for household expenditures. They therefore concluded that women may derive power in household decision-making not only from their relative earnings but through the presence of other female members in the household (ibid.). This implies that the presence of other family relatives such as, in-laws and children, may influence the extent to which women control decisions.

The above findings from both developed and developing countries corroborate the paradox that contributing more financially does not always mean women have greater household bargaining power (Meisenbach, 2010; Tichenor, 2005; Bianchi et al. 2012). Although women's increased economic contribution enhanced their bargaining power in the routine-based decisions, the men continue to have more say in the 'important decisions' such as purchase of vehicles, houses, and children's education. A common phrase used in most studies reviewed was that such important decisions 'belonged to men'. Thus, the relative resource theory cannot adequately explain why women's greater financial contribution does not significantly result in their higher decision-making power (Lim, 1997). Existing literature shows that the extent to which women's financial contribution impact on their decision-making may also be influenced by couple's gender role attitudes (Coltrane, Parke and Adams, 2008; Coltrane, 2000).

### ***2.3.1.2 Gender role attitudes and women's decision-making power***

Gender theorists argue that gender norms emanating from patriarchal structures shape couples' bargaining and production relations (West and Zimmerman 1989; Bittman et al. 2003; Coltrane, 2000; Risman 2004; Behrman et al. 2014; Agarwal 1997). At the individual level, a couple's gender role attitudes may influence decision-making roles, 'through the norms internalized', irrespective of their relative earnings (Bittman et al. 2003, p. 190). Egalitarian gender role attitudes connote more equal decision-making power for women, whereas internalized traditional gender norms undercut it (Agarwal 1997; Kleiber

et al. 2015, 2017; Kulik 2004; Bianchi et al. 2012). Whereas some studies find significant impact of couples' gender role attitudes on household decision-making (Shu et al. 2012; Xu and Lai 2002), in other studies, the effects are insignificant (Bianchi et al. 2000). For instance, a study by Shu et al. (2012) in urban China based on a national survey of married individuals (N= 8,300) from 178 cities examines the influences of patriarchal ideas, relative resource and housework specialization theories on couple's household decision-making. The authors found gender ideology to be the most salient factor determining couple's household decision-making arrangement. The study revealed that wives with egalitarian gender ideologies tended to have increased decision power on key family decisions, whereas husbands with more egalitarian attitudes seem more willing to turn down their masculine ideals and pursue more equal sharing of decision-making with their wives. They therefore conclude that couples with more egalitarian gender attitudes have a more equal balance of power at home than those with traditional gender attitudes (Shu et al., 2012).

A similar study was conducted by Xu and Lai (2002) in Taiwan, using their 1994-1995 Social Change Survey to examine the relationship between socioeconomic resources, gender ideologies and marital power in contemporary Taiwanese families. From their multinomial logit models, results show that gender ideologies of wives and husbands were significant determinants of their relative power in household decision-making. Besides, wife's socioeconomic status combined with their egalitarian gender ideology enhanced their decision-making power. They conclude that spouses with egalitarian gender ideology tend to have balanced decision-making power in the household (Xu and Lai, 2002). However, couple's egalitarian gender role attitudes did not always enhance women's decision-making power. There could be further reasons for couples to undertake such egalitarian or traditional gender role attitudes based on their interests or what they have been exposed to (Bolzendahl and Myers, 2004).

*i. Interest-based and exposure-based factors*

According to Bolzendahl and Myers (2004) couple's gender ideologies<sup>6</sup> are influenced by two main factors – interest-based and exposure-based factors. The interest-based factors assume that people will have egalitarian gender role attitudes if they are likely to benefit from such arrangements (Davis and Greenstein, 2009). For instance, Becker et al. (2006) assessed couples reports on who had the final say in decision-making on matters such as household purchases, childcare decisions, postpartum checkup and birth control measures based on a survey of 1000 women in 53 communities and interviews with men in Western Guatemala. By comparing the responses of the wives to that of the husbands, wives underreported their household decision-making power. They concluded that women may choose to subordinate their position in decision-making to secure their marriage and to avoid the threat of social accountability or a possible ridicule of their husbands. Hence, women are likely to favor gender egalitarian or traditional ideologies given that they are likely to benefit directly or indirectly from such arrangements (Barnett and Rivers, 2004; Bolzendahl and Myers, 2004; Ridgeway and Correll, 2004).

Stemming from the interest-based argument, husband's perceptions and attitudes towards wife's decision-making power have been argued in line with two opposing discourses: The threat discourse and benefit discourse. The benefit discourse suggests that men are likely to promote egalitarian attitudes and increased wife's participation in household decisions when they are likely to benefit from such arrangements (Gerson, 1993). On the other hand, the threat discourse suggests that women increased decision-making power may pose a threat to men's masculine identity (Hiller and Philliber 1986 in Zuo and Tang, 2000). Hence, men hold on to conventional gender values despite their wife's high economic roles,

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<sup>6</sup> Gender ideology refers to people's level of support for a gender division in various aspects of human relations based on the notion of 'separate spheres' (Davis and Greenstein, 2009, p. 89). A person's gender ideology can be assessed by measuring his/her support for sharing equally roles that are mainly sex-typed – usually used as a proxy for egalitarian ideology (see Vespa, 2009).

for fear of losing their social status as men (Chesley, 2011; Medved and Rawlins, 2011). For instance, in examining how female fishery entrepreneurs convert their high economic status to maneuver male fishery spaces in Ghana, Overå (2003) found that women's participation in male domain of fishery activities and men's acceptance of such roles of women largely depended on whether such participation threatened male authority and position of power or not. The attitudes of both men and women towards equality in decision-making may also be influenced by a number of factors such as age, level of education, religion, age of children and socialization – known as exposure-based factors (Ciabattari, 2001; Davis and Robinson, 1991; Cunningham and Sagas, 2005; Tsige 2019).

*ii. Societal gender role arrangements – Social norms and values*

Women's decision-making power may be influenced by societal gender norms and the prevailing gender institutions and structures (Shu et al., 2012). Societies with widespread egalitarian or historically traditional gender ideologies are likely to influence wives and husbands' attitudes towards their respective decision-making power. For example, a study by Santasombat (2008) among the Tai people showed that in Lak Chang where men are ridiculed by friends for being controlled by their wives, traditional gender ideologies of male superiority are used as 'a self-preservation mechanism' upheld by men (Santasombat, 2008, p. 140). Similarly, a woman may adopt certain strategies outwardly which portrays men's supremacy in order to conform to societal norms and expectations whilst she may influence the man's decision-making by 'put[ting] her words in [his] mouth' (Santasombat, 2008, p. 143). The study by Tichenor (2005) mentioned earlier provide evidence of societal gender norms and values in women's decision-making power. She found that instead of wives' dominant earnings granting them decision-making power, the women deferred their economic power to show that they were not trying to dominate their husbands and both spouses reproduced the male as dominant decision maker. Tichenor (2005, p. 197) added that, though wives may disagree with husbands' decisions or make clear their opinions,

both ‘couples disrupted the link between money and power for the wives but maintained the link for husbands’. She therefore concluded that in addition to the lack of impact of women’s earning status on their household power, it also became a liability which the female breadwinners had to deal with (Tichenor, 2005). Although Tichenor’s research methods suited her study to understand how couples discursively co-produced male dominance within the home, her consecutive interviews of the couples may have influenced their answers, especially on the part of the wives in which none claimed to have power in decision-making than their spouses (ibid.). This is because conducting interviews with the wives right after or prior to their husbands meant that each partner’s answer may have been heard by the other, which may have triggered a performance of socially desirable behavior during the interview from the couples.

Although the gender ideology school provides useful explanations for the factors influencing couple’s decision-making, it also has several limitations. From the studies reviewed from both advanced countries (with relatively egalitarian gender ideology) and the less developed countries (dominantly patriarchal), the findings show that husbands maintain their decision-making powers. Such outcomes are considered as impediments resulting from gender norms and values (Zuo and Bian, 2005). Yet, some of these studies find instances where women with egalitarian attitudes did not resist such male dominance (e.g. Santasombat, 2008; Tichenor, 2005). Rather both wives and husbands consensually ensured that husbands dominate such decision-making (Meisenbach, 2010). The gender ideology school fails to explain why couples may decide to ‘renegotiate their gender ideologies’ (ibid. p. 330) or why women’s egalitarian gender attitudes may not necessarily change their decision-making power in the home (Bianchi et al., 2000).

### ***2.3.1.3 Specialization/utility maximization and couple’s decision-making***

Another dimension for explaining couple’s decision-making patterns is the specialization or utility maximization theory (McDonald, 1980; Shu et al., 2012; Becker, 1985; Anderson

et al., 2017). The specialization perspective argues that spouses have joint goals of maximizing the welfare of their homes (Becker, 1985), hence household resources would be maximized if the spouses specialized in a specific aspect of the home and make decisions concerning that specific issue (Shu et al., 2012). The specialization theory is not necessarily based on biological differences between spouses, but it dwells on who is an expert in a particular area of household decision (Shu et al., 2012). The main tenet of the specialization theory is that it is most advantageous for women who are generally more productive in childcare and housework to make decisions within the domestic arena (Becker, 1985; Shu et al., 2012). Some studies find evidence of the specialization theses. For instance, in the study by Shu et al. (2012) earlier mentioned, they found evidence of the specialization argument by indicating that housework bestows power on wives in mundane and child-related decisions, (Shu et al., 2012). The study revealed that for both spouses, every 1% increase in the amount of daily housework, increases spouses' power by 0.26% in daily household budgeting. Which suggest that men's specialization in housework and child-related activities could equally enhance their decision-making as women.

Another study by Arcidiacono (2016) examined couple's daily decision-making through communicative interactions by couples in the US, Sweden and Italy. They found that couples have different levels of decision-making power depending on the 'recognition of expertise' – such as who is an 'expert in preparing dinner or making beds' (ibid., p. 42). Tichenor (2005) as mentioned earlier found similar outcomes where wives deferred their authority on certain kinds of decisions despite their higher earnings compared to their husbands by arguing that such kinds of household decisions as purchasing cars 'belongs to men' (ibid., p. 200). Hence, from the specialization arguments, couples' decision-making roles may be consensual instead of oppressive contrary to what some scholars argue (see Atkinson et al. 2005).

Despite the profound arguments by the specialization school about women's specialty in domestic sphere and men's labour force participation as utility maximizing (Zuo and Bian, 2005), they tend to ignore the processes through which women (and men) become 'specialized' in such decisions (Charles, 2011). Besides, existing studies show that men are not necessarily more productive in some decision-making than their female counterparts (Charles, 2011; Iversen and Rosenbluth, 2008). Hence, ascribing expertise in a particular realm to men or women is overly simplistic.

Understanding the complexity of women's participation in household decision-making would also provide important leads or 'spill' into the dynamics of women's decision-making role within higher socio-political spheres such as the community-based or public decision-making (Iversen and Rosenbluth, 2006, p. 1; Chant, 2005). The next section provides a synthesis of the literature on women's participation in community-based decision-making, to lay the foundation into understanding female fisherfolk's participation in community-based fishery decision-making in Ghana.

### **2.3.2 *Gender inequality in community-based decision-making***

The factors that affect women's participation in community-based decision-making has been highly contested in the literature (Stockemer and Byrne, 2012). In explaining gender inequalities two main lines of arguments, mainly based on Western scholarship – modernization and neo-institutionalist perspectives have been proposed (Charles, 2011; Jayachandran, 2015). These are discussed below.

#### **2.3.2.1 *Modernization and Neo-institutional theories***

The modernization theorists link gender egalitarian attitudes to economic development of countries (Parsons, 1970; Inglehart and Norris, 2003; Matland, 1998). They argue that women underrepresentation in community-based decision-making results from their low levels of labour force participation which constrain them of the required resources and

skills to participate in community decision-making (Iversen and Rosenbluth, 2008; Rosenbluth et al., 2006; Burns et al., 2001). With modernization coupled with increasing market competition and economic pressures, there would be a shift from gender discriminatory attitudes to more egalitarian direction, and increased participation of women in economic, political and social spheres (Jackson, 2006; Giele, 2006). In short, modernization theorists argue that economic development precedes gender equality.

On the other hand, gender theorists, inspired by neo-institutionalism argue that the adoption of egalitarian gender ideologies renders the social environment more favourable for women's participation in decision-making in the public sphere (Boyle, 2002; Ramirez et al., 1997). Such scholars therefore call for societies dominated by patriarchal ideologies to adopt Western gender egalitarian ideologies which would ultimately change societal attitudes towards women as well as women's perceptions about their ability to participate in community-based decision making (Ramirez and Wotipka, 2001; Blau et al., 2006). As such, neo-institutional theorist suggest that the adoption of egalitarian gender role attitudes of the West would result in gender equality in decision-making (Iversen and Rosenbluth, 2008).

At the micro level, modernization and neo-institutional scholars posit that women's economic participation results in change in gender norms and public attitudes towards women's leadership roles (demand side argument)<sup>7</sup> and provides the needed socioeconomic resources and skills needed to participate in decision-making (supply side argument) (Schlozman, Burns and Verba, 1999).

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<sup>7</sup> Demand side arguments refers to societal pressures and public attitudes that favour increase in the representation of women in decision-making, whereas supply side factors encompass those factors that enhances the capacity of women, who have the resources, experience and will to participate in decision-making (see Norris, 1997; Paxton and Hughes, 2007).



*i. Demand side arguments (Change in gender attitudes)*

Stemming from the demand side argument, Chafetz (1990) posits that women's labour force involvement results in change in public attitudes about women, which fosters their participation in other realms of society including participating in decision-making across different socio-political spheres. In addition, Rosenbluth, Salmond and Thies (2006) posit that women working in paid labour outside the home are likely to develop political interests as they face challenges in their occupations. In her study of the political implications of rising numbers of women in the labour force on Denmark, Togeby (1994) finds that as women enter the labour force they become more aware of the inequalities that exist between the sexes, which in turn, spurs their quest for more representation and participation in decision-making. Matland (1998, p. 118) reflects this sentiment as he reports that 'moving into the paid [labour] force...has a consciousness raising effect on women's participation [in decision-making] and their propensity to articulate political demands'. Women who enter the labour force, may also become part of greater organizational networks such as trade unions and community-based groups where they are likely to be exposed to political issues to increase their political interest (Stockemer and Byrne, 2012).

The above views emphasize the change in attitudes from normative gender specialization and traditional gender roles, which in turn fosters women's participation in decision-making (Verba et al., 1997; Inglehart and Norris, 2003). However, Iversen and Rosenbluth (2008), and Charles (2011) provide examples of countries such as the US where irrespective of the high proportion of women active in their labour force, women still lag in various arenas of positions of power and decision-making, which challenges demand side arguments. For instance, in 2018, women accounted for less than 15% of the U.S parliamentary representation despite their very high labour force participation (Inter-Parliamentary Union, 2018).

*ii. Supply side arguments (Resources, civic skills and experience, etc.)*

On the supply side, scholars argue that women's labour force participation would enhance their communication, organizational and civic skills, and provide them with the resources needed to participate in decision-making (Burns et al., 2001; Verba et al., 1995; Kenworthy and Malami, 1999; Kenworthy and Malami, 1999). These scholars argue that low women's labour force participation would limit their decision-making as women would lack the resources needed to participate in community activities. There are debates as to whether a mere availability of resource (education, financial, etc.) would enhance women's community decision-making (Stockemer and Byrne, 2012; Iversen and Rosenbluth, 2008). For instance, in their cross-national examination of the determinants of women's share of parliamentary seats in 1998, Kenworthy and Malami (1999) argue that women's access to political power does not only depend on their labour force participation, but the type of job they do. Similarly, in examining gender gaps in civic activities and the role of resources, Schlozman et al. (1999) indicate that women can only access decision-making and power positions if they are employed in professions that demand the education and training needed for political success. Although some studies confirm that women's profession influence their community participation, Iversen and Rosenbluth (2008) provides examples of countries such as the US where irrespective of the high number of professionally active women, they still fare worse than their men in terms of leadership and decision-making positions. This challenges the supply side arguments.

Clearly, results from existing studies in different countries show varied results. While some studies find a positive and strong relationship between women's labour force participation and their participation in public decision-making (Iversen and Rosenbluth, 2008; Matland, 1998), other studies find no significant effect (Matland, 1998; Yoon, 2004; Stockemer, 2009; Viterba et al., 2008). For instance, a study by Bratton (1999) in Zambia finds that compared to economic factors, societal gender expectations have more influence on

women's participation in public decision-making. Both the demand and supply side factors do not fully explain the cross-national variations. According to Mincer (1962 cited in Iversen and Rosenbluth, 2008), when jobs require uninterrupted tenures, long hours, and inflexible schedules, women are at a distinct disadvantage. Based on this assertion, Iversen and Rosenbluth (2008) posit that women are less likely to participate in community-based decision-making if the participation places premium on their political capital accumulation. They therefore emphasize the role of the system and institutions for recruiting decision-making participants in creating unequal opportunities for men and women (Iversen and Rosenbluth, 2008). Such inconsistencies in the outcomes of the relationship between women's economic participation, gender role attitudes and public decision-making calls for a more comprehensive approach.

***iii. The civic voluntarism model and public (community-based) decision-making***

The Civic Voluntarism Model (CVM) model proposed by Verba and colleagues is one of the most comprehensive models for explaining why people (e.g. women) may participate in public/group (e.g. community-based) decision-making or not (Verba et al., 1995; Burns et al., 2001). It involves a blend of the resource model, rational choice, social networks and psychological factors (Verba et al., 1995; Kim and Khang, 2014; Kirbiš et al., 2017). Verba et al. (1995, p. 271) simplifies the CVM by stating that a person's ability to participate in public decision-making is influenced by three main factors - having the 'resources/economic force, psychological engagement and political recruitment'.

For economic factors, the model suggests that socioeconomic resources are not evenly distributed but differ based on social indicators such as gender, age, social class and race, hence would result in different participatory levels (Norris, 2002). Such socioeconomic indicators provide the necessary resources such as money, time and civic skills required for women's participation in community-based decision-making (Burns et al., 2001). In

essence, having low levels of these resources would mean less participation in decision-making.

Education is considered one of the most important resources for participating in public decision-making (Kerrissey and Schofer, 2013; Mayer, 2011; Norris, 2002). Education enhances people's interest and provides the civic skills required for women to make sense of such decisions (Norris, 2002; Rosenstone and Hansen, 1993). Although the relationship between education and group decision-making is widely accepted, where the agreement ends is on the establishment of a causal relationship between higher education and community-based decision-making. Whereas some scholars find higher education to result in high participation (Gallego, 2010; Mayer, 2011), others maintain that higher education may only serve as a 'proxy for pre-adult experiences and influences, (but) not a cause of political participation' (Kam and Palmer, 2008, p. 612). One may concede, that although education would enhance citizen's chances of being politically active, establishing a causal relation between higher education and public participation may not apply to all situations (ibid.). For instance, it may depend on the level of education required for participating in such activities/decisions (Agarwal, 2015). In the fisheries sector, although having some level of education may enhance women's understanding of community issues to spur their interest, education is not a key requirement for positions (Sutton and Rudd, 2014; Chuenpagdee and Jentoft, 2019). Thus, having high education may not be commensurate with women's community-based participation (Sutton and Rudd, 2014).

Other socioeconomic resources such as income and time may also influence women's community participation (Verba et al., 1995; Kirbis et al., 2017). Time is required for one to engage in public decision-making processes/activities such as volunteering in campaigns and attending local assembly meetings. Besides, membership in community organizations may require payment of dues or monies and people with the capacity to pay for such dues are likely be part in decision-making (Verba et al., 1995). In short,

socioeconomic model argues that the uneven distribution of resources (money, time and civic skills) would result in unequal levels of women's participation in community-based decision-making.

A second set of factors of public participation in the CVM is the psychological engagement model. The psychological engagement model is based on the premise that since public participation is a voluntary act, women's psychological orientation to such public decision-making process can explain why they may be actively involved or not (Kim and Khan, 2014). According to Verba et al. (1995, p. 354), community 'interest, information and political efficacy provide the desire, knowledge and self-assurance that impel [women]' to participate in public decisions/activities. Norris classifies the psychological factors into motivational attitudes and cultural values (Norris, 2002). The motivational attitudes include one's desire to participate because he or she sees it as a duty or due to the expected benefits to be derived from participating (Dalton and Van Sickle, 2005). Similarly, the cultural values include internal political efficacy (feeling that participation in decision-making can affect policy outcomes), political interest and support for institution or systems for decision-making (Kim and Khan, 2014; Kirbis et al, 2017).

Political mistrust is considered one of the key psychological factors which can depress women's community participation. According to Putnam (2000), there is substantial evidence that public unhappiness with state institutions contribute low participation in public decision-making. However, mistrust may also result in participation, by providing the grounds for people to express their displeasure and seek redress with the institutions (Norris, 2002). Besides, people (women) may only have interest in community issues which concerns them or directly affect them (Barkan, 2004; Hansen and Rosenstone, 1993; Putnam, 2002). Those with such concerns are more likely to become actively involved in decision-making to seek redress (ibid.). For instance, workers may engage in protests to express their discontent on government policies regarding their jobs but may be inactive

once their concerns are addressed (ibid.). In sum, the psychological engagement model argues that women's interest in public issues, political efficacy and trust for institutions would influence people's (women's) public participation. As such, women with the socioeconomic resources without interest in community issues or feels their opinions would not count may exhibit apathy (Kim and Khan, 2014).

Lastly, membership in social networks is an important aspect of the CVM that can propel people's participation in community decision-making (Verba et al., 1995; McClurg, 2003; Rosentone and Hansen, 2003). Membership in associations or groups (e.g., church, occupational associations, etc.) enhances women's public awareness and consciousness of deprivation to propel their participation in decision-making (Putnam, 2000; Gallego, 2010; Quintelier, 2008; Zhang et al., 2010). The social network theory helps to examine the extent to which women's social affiliations enhances their participation in community-based fishery decision-making.

Despite the CVM comprehensiveness in explaining women's community participation, the outcomes of the socioeconomic, psychological and network factors have been inconsistent. Whilst some studies find factors such as education to enhance women's community/public participation (Burns et al., 2001), others find the effects of education to be insignificant (Bratton, 1999). Besides, most of these studies are limited to advanced economies and focused on women in formal employment (e.g. Iversen and Rosenbluth, 2008). However, the forms of economic activities that women participate in the developed countries differ from that of most part of the developing world where women have been involved in informal economic activities including fisheries for centuries (Charles, 2011; Matland, 1998; Overå, 1998). Hence, generating broad prescriptions mainly from the advanced countries may not reflect the lives of women in the developing world, which warrants further research of which the present study does in the context of Ghana's small-scale fisheries.

Despite the consistent outcome that women fare worse in household and community-based decision-making than their men in both developed and developing countries, the above theories do not fully explain the context of women in the dominant brawn-based agricultural sector (e.g. fishing and farming) of the developing world where women have worked alongside their men for centuries, but remain limited in the household and community-based decision-making and practices (Jha, 2004; Mutimukuru-Maravanyika et al., 2017; Torell et al., 2016; Kleiber et al., 2018; Lawless et al., 2021).

Within brawn-based occupations such as fishing, taken-for-granted discourses and norms of ideal fishers as strong, muscular, unrestricted by bodily demands dominate (Lee, 2018). Such implicit fisher bodily requirements may be more difficult for women to achieve (Zhao et al. 2013; Kringen and Novich, 2018), given their bodily capacities to conceive, menstruate and give birth and, by extension, their roles as care-givers (Butler, 2020; Hannagan, 2008). Women's reduced availability in the brawn-dependent realms of agricultural work may reduce their decision-making power, but how does this affect such entitlement generated from their roles in profit generation and ownership of production assets? Attention to how bodily materiality combines with discursive and economic factors could further our understanding of gendered outcomes - not only of Ghana's small-scale fisheries sector, but also other brawn-based occupations and economies where such inequalities exist (Atkinson et al., 2020).

However, most studies reviewed above place emphasis on human agency, gender norms and values, economic factors, power and the macro socio-political institutions and structures in creating household and community-based gender inequality which inadequately explain the situation of women in most developing economies. The next section therefore discusses a new approach to understanding the gendering of household and community-based decision making, focusing on the dominant informal agricultural

sector in a developing country context. I will show how the new feminist materialist framing could help us understand the complexities of women's participation in household and community-based decision-making/practices in the context of Ghana's small-scale fishery sector.

#### **2.4 The new feminist materialist explanation: An intra-action of forces**

A growing body of research shows that the complexities of household and community-based decision-making/practices go beyond the polarized debates of biological essentialism and social causality (Doucet 2013; Braidotti, 2013b; Ringrose and Rawlings, 2015; Feely, 2020; Barad, 2007; Coole and Frost, 2010; Taylor and Iverson, 2013). These scholars call for models that consider the co-implication of the social and biological factors and other material (non-human) forces for broader and better understanding of these complexities (Doucet 2013). The new materialist approach emerged due to the lapses within the biological determinists and social constructionists/poststructuralists approaches and their human-centred explanations of gender inequality. Besides, the humanists have been criticised for their emphasis on differences between the 'natural and social worlds, mind and matter, human and non-human as well as animate and inanimate' objects, as having distinct impact on social inequalities and outcomes (Fox and Alldred, 2018a, p. 1; Coole and Frost, 2010; Deleuze and Guattari, 1988; Barad, 2003, 2007).

The new feminist materialist framework as the name suggests is a 'practical turn to matter' that considers materialities (human and non-human) as having the same ontological status and inseparable from the discursive and other social forces in producing social outcomes such as gender inequality (Fox and Alldred, 2018a, p. 2; Braidotti, 2013b; Deleuze and Guattari, 1988). The new materialist framework therefore focuses on assemblages of 'human bodies, other animate organisms; material things (non-human objects), spaces, places as well as the natural and built environment' through [and within] which events occur (Fox and Alldred, 2018a, p. 1). These forces have no distinctive ontological status



unless they relate with other similarly ephemeral objects or ideas (Deleuze and Guattari, 1988). This means that neither biological nor social factors alone would fully explain social behaviours and outcomes, until the combined effects of these factors are examined. Hence, social events/outcomes (e.g., gender inequality) are emergent (rather than founded in stable structures or systems) and produced by the co-implication of a range of material forces that extends from physical, biological, psychological, social and cultural factors (Braidotti, 2013a; Frost, 2011; Lykke, 2010).

For instance, Grosz (2004, p. 2) proposes that since feminist are interested in understanding the ways in which bodies are inscribed by culture, to understand events such as gender inequality in decision-making, we need to ask, ‘what it is in the nature of [human] bodies... that opens them [women] up to cultural transcription, social immersion and production’. We lose not only the analytical power by ignoring the role of materialities (e.g., human bodies), but the body becomes a ‘blank page of social inscriptions’ without any agency (Haraway, 1991 cited in Lykke, 2010, p. 243). Similarly, Barad (2003, p. 809) suggests the need for attention to the role of the body such as the female or male anatomy and physiology, and other material forces for a better understanding of their ‘influence on the workings of power’. For example, how the female or male body enhances or limit women’s participation in specific kinds of household or community-based decision-making. This could be done by looking at how human bodily differences combined with certain material and discursive contexts co-produce opportunities for and obstacles to women’s household and community-based practices/decision-making.

In short, the new feminist materialist framework offers three main theoretical positions. First, they reject the boundary of contention between social and natural sciences by questioning the distinction between nature and culture (Latour, 2005; Braidotti, 2013b). Thus, they examine the combined impact of nature and culture, matter and mind in understanding social relations and outcomes (Van der Tuin and Dolphijn, 2010). Second,

new feminist materialists disregard the material world as fixed entities, but as relational and becomings, emerging in complex and unpredictable ways around events (Potts, 2004; Fox and Alldred, 2018a). Lastly, they discourage the dominance of human agency, but stress on the context dependent capacities of all matter – human and nonhuman, animate and inanimate, in co-creating social outcomes (Deleuze and Guattari, 1988; Barad, 2007).

#### **2.4.1      *Theoretical strands within new feminist materialism***

Beyond the commonalities shared by new materialist scholars, there exist slight differences in their conceptualizations of the materialist ontology. The different strands of such conceptualizations are discussed below.

##### **2.4.1.1. *DeleuzoGuattarian Assemblages***

A starting point of the materialist turn is often linked to the works of Gilles Deleuze and Felix Guattari who regard all materialities as relational, with no ontological capacity until they are drawn together as ‘assemblages’ (Deleuze and Guattari, 1988, p. 8). According to Deleuze and Guattari (1988, p. 6), assemblages develop in complex (and often) unpredictable ways around events with outcomes likened to that of an underground rhizome—branching and multiplying, breaking and reconnecting in different ways. This implies that the material-discursive combinations result in series of outcomes creating opportunities for some people at different places and times and inhibiting others (Braidotti, 2013a). The flow of events within these assemblages consequently become the means by which social relations and outcomes unfold (Fox and Alldred, 2018a).

Based on the conceptualization of Deleuze and Guattari, Braidotti (2011) offers important critiques of humanist and anthropocentric approaches for their focus on the centrality of human agency in determining social outcomes and inequality. From her posthuman and nomadic theory, she argues that matter including human and non-human matter is ‘self-organizing and not opposed to culture’ but produces series of outcomes with it (Braidotti,

2013b, p. 35). Thus, her posthumanist feminist perspective cut across dualisms such as male/female or nature/culture distinctions (ibid.). According to Braidotti (2013a, p. 169) posthumanism proposes a ‘move from man’ to the processes of change and becomings of the natural and social worlds in which neither human nor nonhuman objects is privileged over the other – a monist or flat ontology.

#### **2.4.1.2 Actor-Network Theory (ANT)**

The Actor-Network Theory (ANT) is another strand within the new materialist school proposed by Bruno Latour (2005). ANT is established within the field of science and technology studies in sociology (Fox and Alldred, 2018a). From his ANT perspective, Latour (2005, p. 54) ascribes agency to the relational assemblages of human and non-human ‘actants’. Thus, ANT equally collapses dualisms such as nature/culture and structure/agency just like the other materialists (Fox and Alldred, 2018a). He therefore criticizes theories such as Marxism and critical realism that explain social processes in terms of deep-rooted structures (ibid.), by arguing that the emergence of ‘social forces’ such as capitalism, patriarchy and hegemonic masculinity themselves require explanations (Latour, 2005, p. 130). He therefore argues for a focus on how different social aggregations such as human culture and hegemonic discourses are produced through wide range of factors stemming from the ‘physical, biological, economic, semiotic and other range of factors’ (Latour, 2005, p. 5-6). However, ANT scholars including Grosz (2004) have been criticized for privileging material forces (e.g., human bodies and technology) over social factors such as politics and exercise of power in explaining social inequalities and outcomes (Fox and Alldred, 2018b). As such, ANT falls into the traps of the social constructionists and biological essentialists who privilege social and biological forces respectively, which new feminist materialist seek to counter (Fox and Alldred, 2018b).

#### ***2.4.1.3 Baradian Agential Realism, Intra-action and Posthumanist Performativity***

In addition to Assemblage theory proposed by Deleuze and Guattari (1988), this study is inspired by the theorisation of the physicist and feminist theorist, Karen Barad, whom many consider as the leading contemporary thinker of new feminist materialism (Van der Tuin and Dolphijn, 2010; Fox and Alldred, 2018a; Taylor and Ivinson, 2013). According to Barad (2003, 2007) social relations or outcomes are produced through the meeting or intra-action of human (culture, language, discourse, etc.) and the universe (nature, bodies, objects, spaces, etc.). Hence, unlike Bruno Latour's ANT, the Baradian approach sees social relations and outcomes as co-produced by both human and non-human factors, discourses and material factors (Barad, 2007). She therefore provides interesting and stimulating lines of thinking as she argues:

Language has been granted too much power. The linguistic turn, the semiotic turn, and the cultural turn: It seems that at every turn lately every 'thing' – including materiality is turned into a matter of language or some other form of cultural representation...language matters, culture matters, discourse matters...The only thing that seem not to matter anymore is matter (Barad, 2003, p. 801).

To show that matter (materiality) matters, Barad and other new materialist build on Marxist, social constructionist and poststructuralist theories and posit a deeply entwined 'material-discursive understandings of materiality, corporeality and bodies' (Doucet, 2013, p. 292-293). From her posthumanist performativity inspired by Butler's gender performativity, Barad dismisses the notion of pre-existing entities prior to their enmeshment by arguing that subjects and objects are produced through temporal entanglements around events (Van der Tuin, 2011, p. 272).

Although Barad's agential realism and DeleuzoGuattarian assemblage have different traditions – from quantum mechanics and spinozist ethics respectively, they share several common ontologies. For example, both subscribe to the co-implication of forces in co-creating social outcomes rather than an existing underlying structure (Fox and Alldred,

2018b). However, there exist slight differences in the two framings. Whilst DeleuzoGuattarian assemblage highlights the intelligibility of forces otherwise disparate that together create an outcome, Barad, like other new feminist materialists highlights the often-neglected role of the material agents as equally important in such assemblages or intra-actions (Fox and Alldred, 2018b). Whilst Barad considers the inevitable entanglement of forces and her diffraction methodology as alternative to representationalism, the DeleuzoGuattarian assemblage approach embraces representationalism rather than substituting it (Fox and Alldred, 2021). The Deleuzian assemblage approach thus makes it possible to delve deeper into the micropolitical processes of events, to trace and assess the specific effects of each of the forces making up the assemblage (Feely, 2020; Fox and Alldred, 2021). Such understanding is crucial as findings about the relative effects of the individual components of the assemblage could inform policy and practice (Fox and Alldred, 2021). As such, a combination of the two theoretical framings provided crucial understandings as it moves beyond showcasing how different forces combine to produce an outcome, to assessing the specific role of each of the factors within the relations. As Fox and Alldred (2021, p. 8) rightly posit, ‘a diffractive reading of Barad’s approach through Deleuzian scholarship can enable further refinement of how they can be employed in applied sociological research’.

Despite the growing body of literature on the new feminist materialist framework within feminist, disability, education, sexuality and environmental studies (Barad, 2003, 2007; Coole and Frost, 2010; Frost, 2011; Fox and Alldred, 2018a; Van der Tuin and Dolphijn, 2010; Braidotti, 2013a; Latour, 2005; Deleuze and Guattari, 1988), most writings have been theoretical.

Whilst empirical research examining the material-discursive complexity in gender and family studies is limited, some interdisciplinary studies broadly within agriculture and family research indicate that physical differences and household/community-based

practices and decision-making processes do interact to produce gendered outcomes (see Doucet 2013; Gaunt 2006; Anderson et al. 2017; Jha 2004). However, the relative importance of women's participation in brawn-based occupations tend to differ between developed and developing economies. For instance, a study by Levanon and Grusky (2016 p. 580) in the US found that male dominance in brawn-based occupations is 'female advantaging'. This is considered to be so because in the advanced economies such brawn-based activities usually attract low pay and considered as low status jobs. In addition, they argued that male dominance in brawn-based occupations creates the opportunity for women to take up positions in the high-status white-collar jobs. An important observation of their study is the finding that men's bodily strength advantage result in their concentration in manual jobs (Levanon and Grusky, 2016). However, a relevant point of departure is their proposition that brawn-based occupations are low paying and low status, which is not usually the case for small-scale agricultural production of most developing economies.

In the dominant brawn-based agricultural production activities of developing countries, participation in strenuous activities commands high decision-making power and male dominance in such activities could rather be considered female disadvantaging. For instance, Alesina et al.'s (2013) multi-country study examined gender differences in agricultural practices and found that men historically had advantage in using ploughs which required great deal of upper body and grip strength, whereas women were on more equal footing in the use of hand tools such as hoes. They argued that gender difference in agricultural roles and decisions had their *origins* from these past agricultural practices and have remained as legacies from the past; the substantive role of physical strength was not interrogated. Similarly, a study by Jha (2004) on farming decisions among Balinese rice farming couples found that men had greater familiarity with agriculture than women due to incompatibility of agriculture activities with women's childcare duties. Consequently,

this made men become obvious candidates for agricultural decision-making despite women's contributions in rice farming. Jha (2004) argued that such inequalities resulted from societal gender discrimination but did not explain how men became more familiar with agriculture or how women concentrated on childcare activities. Jha did not focus on the agential roles of the male/female bodies with different capacities (strength and birthing) that may have contributed to such specialization of roles and women's limited rice farming decision-making. In her two-decade qualitative and ethnographic study in Canada on parental caregiving practices, Doucet (2013, p. 284) argues for a 'body-social inseparability in understanding the care-giving relations between the caregiver and the cared for'. She found evidence that women's embodied connections (e.g., the breast) gave them stronger attachment to children even under circumstances where their husbands were the main caregivers of the children. She found that children (especially girls) turned to their mothers for help with shopping – buying clothes, under wears, whilst care-giving fathers showed discomforts and mostly turned to female relatives to get their daughters such items in the absence of their wives. She therefore concludes that:

We cannot pull bodies – those of fathers, mothers and children out of the larger mangle of sociocultural, discursive, ideological and structural contexts that shape, reshape and constitutes the materiality and the meanings of embodied intra-actions across time and in different social spaces (Doucet, 2013, p. 300).

By this, Doucet (2013) calls for a reconceptualization of caregiving by recognizing that care involves fluctuating embodied entanglements of the body (the mother, father and child), breast, the mind, emotions among others across different space and time.

In terms of women's participation in public (community-based) decision-making, Railo (2014) examines how the significations assigned to the bodies of women in Finland influenced the subjective positions and female political participation in their state's (county's) political activities. The study found that before the 1970s, various significations

were given to the female body which considered women unsuited for politics. However, with wider societal changes coupled with growth oriented economic policies, such significations and discourses changed leading to high female participation (Railo, 2014). The study highlights the use of matter (the female body), discourses and policies regarding female politicians in creating opportunities for women political participation in time. However, the study seems to be overly focused on the role on language (semiotics) or significations about women's body as the main predicting force influencing women's participation without much focus on the female body itself as an active agent in this interaction.

In her work, *Women's role in economic development*, Ester Boserup hypothesized that the differences in gender roles originate from the form of agriculture activity traditionally practiced in the pre-industrial period (Boserup, 1970 cited in Alesina et al., 2013). In differentiating between shifting cultivation and plough cultivation, Boserup (1970) argued that ploughing required more muscular work and strength, and because ploughing of land demanded a long time of work, it confined men to the public sphere (working outside for long hours) whilst women provided supplementary roles – confining them to the domestic sphere. Such division of labour then became norms regarding the appropriate roles of women in society which persisted even after such economies moved to service sector. This process affected women's participation in other realms of public interaction such as their participation in community-based decision-making (Boserup, 1970 in Alesina et al., 2013). Boserup's study highlights how the distinctive roles performed by men and women based on their physicality could influence their participation in community-based agricultural decision-making. However, her use of the human bodily difference as the determining factor of gendered community decision-making commits the same blunder of the biological determinist which has been discussed in the earlier sections.



Notwithstanding their limitations, the above studies indicate that an attention to materiality and how it combines with other factors such as women's gender role attitudes and economic status (Fox and Alldred 2018a; Doucet 2013), could further our understanding of gender inequality not only in Ghana's small-scale fisheries sector but also other brawn-based occupations and economies where such inequalities exist. In the next section, I discuss how the new materialist approach could be used in understanding women's participation in household and community-based fishery decision-making/practices in Ghana.

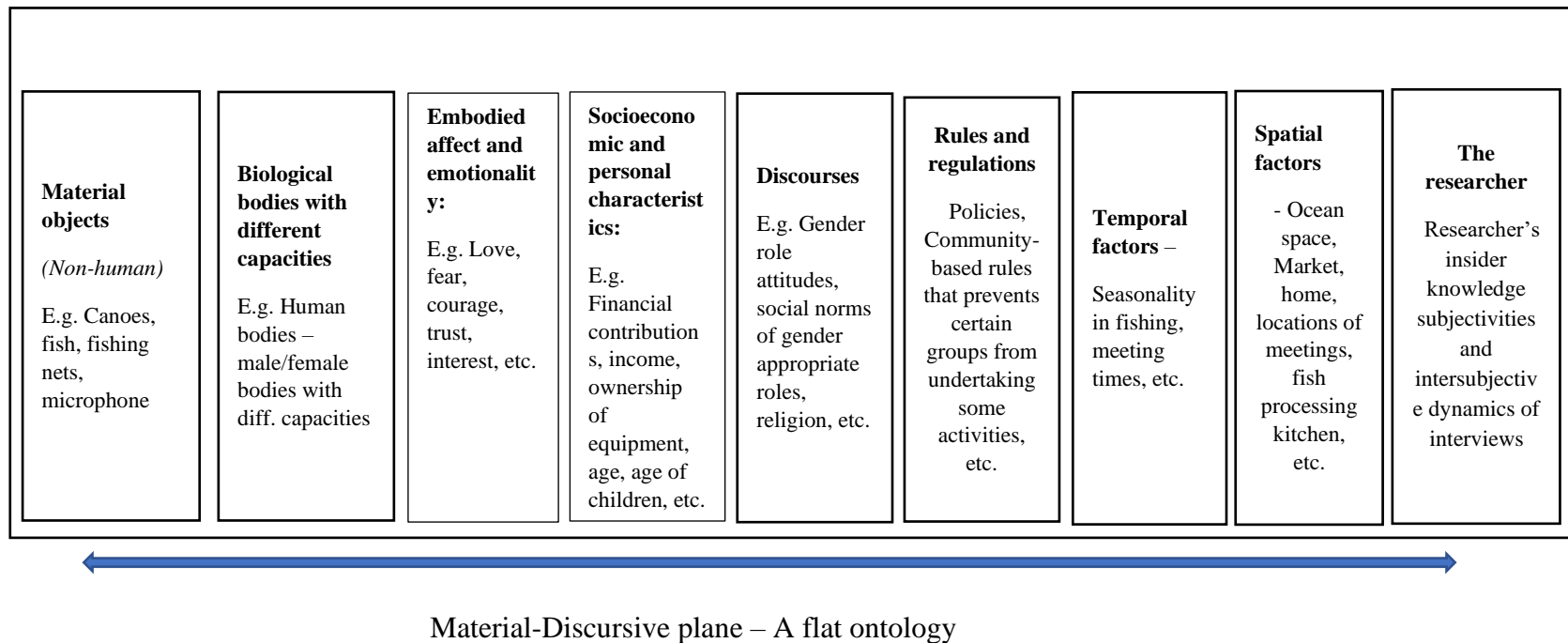
## **2.5 New feminist materialist approach to examining gender inequality in fisheries**

The main aim of this study is to examine the factors that co-create opportunities for and obstacles to women's participation in household and community-based decision-making/practices within Ghana's small-scale fisheries. Using the DeleuzoGuattarian and Baradian new feminist materialist framework helps to highlight the limitations of gender or economic models as independent units of analysis. An attention to materialities as active agents helps to examine the deep complexities about women's decision-making/practices that most scholars tend to ignore (Coole and Frost, 2010; Frost, 2011).

In the context of Ghana's small-scale fisheries sector, such material-discursive-spatio-temporal forces may include the canoe, fish, fishing net, outboard motors, sea/ocean, market, landing beach, the home, fish processing kitchen, temporal factors such as seasonality in fishing and how these non-human forces interrelate with male/female bodies, discourse of appropriate gender roles, social norms and values, as well as fishery rules and regulations to co-create gendered outcomes. These forces combine in complex and usually unpredictable fashion to co-create opportunities for women's decision-making in some contexts and obstacles in other contexts of women's decision-making. Thus, this study draws on multiple contexts as the different forces entwine to produce the deep complexities of women's participation in household and community-based fishery decision-making that

most studies tend to ignore. A material-discursive flat ontological plane developed by Feely (2020) shows how these forces simultaneously entwine to affect the outcome of different social phenomena. The flat plane showing an assemblage of the possible factors including the researcher in understanding women's household and community-based decision-making in Ghana's small-scale fisheries is illustrated in Figure 2.

**Figure 2:** A conceptual model of material, discursive, spatial and temporal assemblage



**Source:** Adapted and modified from Feely (2020).

From the new materialist framework, the outcomes of women's household and community-based fishery decision-making are viewed to be produced through a combination of the different forces as illustrated above (Feely, 2020; Pickering, 1995). Thus, with new materialism, there is a shift in focus from human agency to 'flows of affect' in assemblages (Fox, 2015, p. 4). New materialism does not deny the role of human agency but positions it in relation to the aforementioned factors in sociological enquiry (Gherardi, 2019; Pickering, 1995). Barad uses the term 'intra-action' to indicate how the agency of bodies or entities are not pre-established or inherent, but emerges from their co-implications, such that they lose their agency in that context when separated (Barad 2007, p. 141). This contingency means that recognizing the role of human materialities such as physical capacities does not mean giving them primacy in understanding gendered outcomes. This perspective shifts our understanding of gendered fishery decision-making from biological determinist and constructionist polarity, towards 'embodied doings' which focuses on forces in relations (Barad 2003; Coffey 2019, p. 77). Besides, Barad (2003) proposes the term onto-epistemologies to show that '[researchers] do not obtain knowledge by standing outside of the world; we know because [researchers] are part of the world in its differential becoming' (Barad, 2003, p. 829). This means that my interpretations as a researcher on how these material affects combine with the other agential factors are also crucial in understanding women's participation in decision-making.

## **2.6 Criticisms of new feminist materialism**

New materialism has been welcomed into feminist studies, whilst some scholars remain skeptical of its utilization for the fear of pushing feminists back into the old traps of biological determinism which feminist have fought for decades (Lykke, 2010; Doucet, 2013). Despite these valid concerns, the new feminist materialist theoretical lens neither pushes feminist thoughts back into the traps of biological determinism nor cultural

essentialism, but rather recognizes matter (human and non-human objects) and other forces of existence as intelligible and interrelated as they co-create social outcomes through the process of intra-action (Frost, 2011; Barad, 2007; Taylor and Ivinson, 2013; Feely, 2020). The new feminist materialist framework would therefore provide a more comprehensive and nuanced explanation for the factors affecting the extent of women's participation in household and community-based fishery decision-making.

## **2.7 Conclusion**

Most studies of gender inequality in different socio-political contexts including women's participation the household and community-based decision-making continue to focus on social constructionist and poststructuralists conceptualizations of gender and socioeconomic models, whilst attention to materiality remains elusive (Nightingale, 2011; Lemke, 2017). Using new materialist conceptual lens therefore makes useful contributions to critical feminist theory as it adds to existing theoretical models by highlight the active role of materialities (Frost, 2011). Focusing on the co-implication of these different factors provides a more comprehensive understanding of gender inequality and have important implications for how policies can effectively address gender inequality.

## CHAPTER 3 RESEARCH METHODOLOGY

### **3.0 Introduction**

According to Brewer (2000, p. 190), research methodology is the ‘broad theoretical and philosophical framework within which [research] methods operate, and which gives them their intellectual authority and legitimacy’. Thus, research methods are the strategies for data production/collection (hereinafter used interchangeably) and analysis inspired by the philosophical assumptions underlying the study (Feely, 2014; Myers and Avison, 2002). As outlined in the previous chapter, this study is grounded in the DeleuzoGuattarian assemblage analytical approach. By this framework, I examine how material factors (human and non-human), discourses, space and time co-produce opportunities for and obstacles to women’s participation in household and community-based fishery decision-making and practices.

In this chapter, I describe the methods utilized in the study and show how the assemblage analytical approach shaped the data production/collection methods and analytical approaches adopted. Specifically, I describe the research design, data collection methods and measurements (for survey), sampling techniques, researcher positionality issues, data analysis and conclude the chapter with research ethical considerations. In all these, I show how the different methods adopted were inspired and shaped by the assemblage analytical framework.

### **3.1 Research design**

The new materialist’s framework focuses on matter, relations and post-anthropocentric view which also necessitates changes in the methodological approaches (Fox and Alldred, 2015, 2018a). Conventional data collection methods such as interviews and narrative accounts which dwells on human actions, experiences and reflections are considered as irretrievably humanist and representational, hence some scholars argue that such methods

are not suitable for DeleuzoGuattarian assemblage analysis (Lather and St. Pierre, 2013; Lather, 2013). Other new materialist scholars are less critical of such conventional approaches on the grounds that researching a social world requires attention to methods that can address both the material and the linguistic aspects that humans contribute to assemblages through thoughts, feelings, among others (Ringrose and Coleman, 2013; Feely, 2016; Barad, 2007; Van der Tuin, 2008). Following the latter scholars, this study employed a new materialist ethnographic approach which combined a quantitative survey with qualitative methods such as in-depth interviews, participant observations, photo elicitation and vignettes in the data production.

Based on the distinctions of mixed methods offered by Leech and Onwuegbuzie (2009, p. 269) the ‘fully-mixed concurrent dominant status’ method was used. A fully mixed concurrent dominant status involves mixing quantitative and qualitative approaches at the same time with emphasis on one approach (Leech and Onuegbuzie, 2009). In this study, the qualitative data is the core component, supplemented by the quantitative data. This mixed research approach was utilized because of its suitability to the aims and objectives as well as the theoretical approach of the study. The quantitative data mainly helped to address the first two research sub-questions - it provided data on the extent of women’s participation in the different fishery tasks and decisions, to identify the types of decisions and tasks women participated more or less in. This was very crucial as it served as the basis for exploring in detail the reasons for gender inequality in household and community-based fishery decisions and practices. As earlier indicated in Chapter 2, whilst exploring the co-implications of forces that co-create social outcomes is at the core of assemblage analysis, tracing and assessing the specific effects of the individual factors making up the assemblage is an important starting point (Feely, 2020; Fox and Alldred, 2021). The quantitative analysis provided data on respondent’s sociodemographic characteristics and other factors which highlighted their distinctive effects on women’s

fishery decision-making. These factors were important pointers for in-depth qualitative analysis of how these factors entwine to co-create different outcomes of women's participation.

While the above conventional design is used, the interest is not on the humanist aspects of the data such as respondent's experiences or subjectivity, but rather the kinds of affective flows produced by the relations of forces as well as the capacities produced within these collectivities (Renold and Mellor, 2013; Dernikos, 2019). This study does not aim at proving or disproving an existing theory, but to provide deeper understanding of the complexities in the gendering of household and community-based fishery decision-making and practices (Smelik, 2018; Vannini, 2015). Following De Lander (2006), I do not explicitly formulate a priori hypothesis in the quantitative analysis, but I am guided by the study's theoretical framework as well as existing literature to organize and analyse the empirical evidence from the quantitative and qualitative data (Fox and Alldred, 2018b; Leander and Boldt, 2013). The methods used in the data production are discussed in the next sections.

### **3.2 Data production methods**

#### **3.2.1 *Reconnaissance stage***

Before the actual fieldwork data production began, reconnaissance visits were undertaken within the study areas within the first month of the fieldwork. This was done to familiarize with the fisherfolk (fishermen, fish processors and traders) and their activities, to identify key informants, build rapport with potential participants and identify key issues relating to the study to help improve the survey questionnaires and interview guide. The reconnaissance visits were therefore a crucial part of the fieldwork.



### 3.2.2 *Ethnographic approach to study*

According to Punch (2005 cited in Uzun and Aydin, 2012) the term ethnography comes from cultural anthropology, where ‘ethno’ means ‘people’, and ‘graphy’ means to ‘describe’. Thus, ethnography involves describing people’s culture and understanding their way of life from their own point of view (Uzun and Aydin, 2012). Ethnography involves the researcher ‘covertly or overtly participating in people’s life for an extended period of time, observing what happens, listening to what is discussed, asking questions and collecting other relevant data’ (Hammersley and Atkinson, 1995, pp. 1-10). Ethnography is also capable of capturing ‘the full richness of experience’ of multiple and simultaneous phenomena (Greene and Hill, 2005, p. 13). It is based on the premise that knowledge of the social world is acquired from ‘intimate familiarity’ with day-to-day practice and the meanings of social action (Brewer, 2000, p.11). To achieve this, ethnographers use several data collection methods. As argued by Brewer:

Ethnography is not one particular method of data collection but a style of research that is distinguished by its objectives, which are to understand the social meanings and activities of people in a given field or setting, and its approach which involves close association with, and often participation in this setting (Brewer, 2000, p. 11).

Ethnographic design has been one of the most preferred methodological approaches in the DeleuzoGuattarian assemblage analysis (Fox and Alldred, 2015, 2018a; Youdell and Armstrong, 2011; Feely, 2020; Lyttleton-Smith, 2015; Ringrose and Rawlings, 2015), and was crucial for this study to capture the contexts in which different events of women’s decision-making and practices occurred. The ethnographic method made it possible to examine the social and material intra-activity as it occurred, and for capturing the messiness of lived experiences as well as the different ‘material-discursive agential flows’ affecting women participation in community-based and household fishery decision-making (Lyttleton-Smith, 2015, p. 99). For instance, the ethnographic approach detailed how the physical environment within which fishery activities were undertaken contributed

to the assemblages, which may have been difficult to explore solely quantitatively. Hence, ethnography was adopted due to its capacity to provide deeper understanding of the everyday lives of the fisherfolk to examine how even the take-for granted by participants could be observed and analyzed.

As earlier indicated, ethnography encompasses the production of broad range of data on different aspects of the phenomenon under study using multiple methods – ‘multi-methods are part of the ethnographic gaze’ (Hammersley and Atkinson, 1995, p. 59). To examine the combined role of materialities, discourses as well as spatial and temporal factors, required not only identifying quantitatively these factors, but my immersion within the study community to identify and contextualize events in order to reveal the different ranges of relations that make up the assemblages (Fox and Alldred, 2015). The different data production methods used include interviewer-administered questionnaires, participant observation, in-depth interviews, photo elicitation and vignettes as discussed below.

#### ***3.2.2.1 Interviewer-administered questionnaire***

As part of the ethnographic approach, a survey was conducted using interviewer-administered open and closed-ended questionnaires. The questionnaires were administered by trained interviewers due to the high illiteracy rate among the target population (Akyeampon et al., 2013; Ghana Statistical Service, 2013). Individual women within the small-scale fisheries with different social and economic statuses, and attitudes may encounter different experiences, opportunities and obstacles in terms of participating in household and community-based decision-making. The questionnaire was used to collect sociodemographic data about participant’s age, academic qualifications, number of canoes owned, years of experience in the fishery business, religion, among others. The quantitative data also provided statistical inferences about factors affecting women’s household and community-based decision-making/practices (Creswell, 2009). The survey

was equally useful for identifying the female fishery entrepreneurs popularly known as the ‘fish mummies’<sup>8</sup>, after which some were selected for in-depth interviews individually and together with their spouses. The survey produced data on various material, discursive, spatial and temporal factors affecting women’s decision-making power as well as the incidence and prevalence of relations and the capacities they produced as they interacted (Fox and Alldred, 2015). Women’s participation in decision-making was measured by the extent of their involvement in decision-making within the two realms of interaction – household/couple-based fishery decision-making as well as the community-based fishery decision-making.

*a. Measuring women’s household decision-making (Dependent variable)*

Women’s household decision-making power (DMP) was measured based on the Women Empowerment in Agriculture Index (WEAI) developed by United States Agency for International Development (USAID), International Food Policy Research Institute (IFPRI), and Oxford Poverty and Human Development Initiative (Alkire et al. 2013). This scale measures the extent of women’s involvement in decisions and practices involving consumption and expenditure, agricultural activities and household management (Alkire et al., 2013). This was adapted and modified to suit the context of small-scale fisheries. To ensure that the set of decisions asked were fit for the context, key informant interviews were conducted to choose the most relevant fishery decisions that couples routinely made. Respondents were asked, ‘who usually had the final say?’ on 13 couple’s decisions regarding repairs and major purchases, fish processing and trading choices as well as the utilization of the income generated from the business. The responses were (me only (1), husband only (2), me and husband (3), others (4), me and others (5), and husband and

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<sup>8</sup> ‘Fish mummies’ refer to the female fisherfolk who own major fishery equipment such as canoes, outboard motors, fishing nets and mostly pre-finance fishing trips of their male counterparts. Such women own major parts of the fishery business, hence the name entrepreneurs (See Overa, 1998, 2003). For their important role in the Ghanaian fishery sector, these women were special focus of the current study.

others (6)). For every decision that a respondent fully or partially decided (i.e. me only, me and husband or me and others) is given 1 point and zero (0) for every decision that the woman is not involved. The decision-making power (DMP) scale showed good internal consistency with Cronbach alpha of 0.73.

**Table 1:** Measuring women's household decision-making (Dependent variable)

Variable	Operationalization	Question/item	Response and Codes
Decision-making power	The extent of women's decision-making in fishery-based household decisions.	<p>In your household who usually has the final say in the following decisions?</p> <p>How to spend money made from the sale of fish.</p> <p>When to go fishing</p> <p>How much fish caught should be kept for consumption</p> <p>Repair of faulty fishing equipment (e.g. canoe, canoe, etc)</p> <p>Repair of fish processing equipment (e.g. oven)</p> <p>Purchase of fishing equipment (e.g. canoe)</p> <p>Purchase of fish processing equipment (e.g. oven)</p> <p>Processing of fish</p> <p>Market locations to sell fish</p> <p>Pricing of fish at the beach</p> <p>Pricing of fish at the market</p> <p>Major purchases (e.g. cars, land)</p> <p>Daily purchases (e.g. food)</p>	<p>Me = 1</p> <p>Husband = 2</p> <p>Me and Husband.....= 3</p> <p>Others = 4</p> <p>Me and Others ... = 5</p> <p>Husband and others ...= 6</p> <p><b>Recoded as</b></p> <p>Not involved .....= 0</p> <p>Fully and partially involved = 1</p>

### ***b. Independent Variables***

Independent variables were measured as follows. First, women's household financial contribution (*financial\_contribution*) was assessed with a single item, 'On average how much money do you (respondent) contribute to household income?' Responses were no contribution (0), less than 50% (1), exactly 50% (2), more than 50% (3) and 100% (4). Those who indicated they could not tell their contribution were excluded from the analysis. Second, women's gender role attitudes (*gender\_attitudes*) was assessed based on the International Social Survey Programme (ISSP, 2012) family and changing gender role scale. The responses were collected on a five-point Likert-type scale of four items (see appendix). Negative statements were reverse coded to ensure that questions followed the same pattern. Using Varimax rotation, the principal component extraction method produced only one component with eigenvalues  $\geq 1$  and accounted for 68% of the variance. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was 0.79 and Bartlett's test of sphericity ( $p < 0.001$ ). These analyses showed that the four items were fit for the scale (Lever et al., 2017). A descriptive analysis of the gender role attitude scale is shown in the appendix. The ISSP gender role attitude scale showed good internal consistency with Cronbach's alpha of 0.84. Third, fishery business/equipment ownership status (*ownership*) was measured with the item: 'Do you own the fishery business/equipment such as canoes, fishing gears/nets and outboard motors?' The response options were no (0), yes, co-owner (1) and yes, sole owner (2).

To assess the influence of seasonality (seasonal variation in catch), respondents were asked the extent to which they participated in the decision-making of the set of 13 activities during the lean season based on the women empowerment in agriculture index (Alkire et al., 2013). The responses were (me only (1), husband only (2), me and husband (3), others (4), me and others (5), and husband and others (6)). A principal component reduction method was implemented using Varimax rotation index with extracts limited to

one factor loading (one component) and coefficient display  $>0.40$ . The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was 0.83 and Bartlett's Test of Sphericity ( $p < 0.001$ ), which explained 40.3% of the variance in seasonality. The rotated matrix is shown in the appendix. The seasonality scale showed a strong internal consistency with Cronbach's alpha of 0.87.

***c. Fishery activities/tasks***

Women's participation in fishery activities were measured by asking, 'who is mainly responsible' for nine fishery tasks with six options for each activity (me only (1), husband only (2), me and husband (3), others (4), me and others (5), and husband and others (6)). Every activity that a respondent fully or partially participated (i.e. me only, me and husband or me and others) was given 1 point and for every activity that the respondent is not solely or partially involved is allocated, zero (0).

***d. Moderators (Strenuous, and processing/trading activities)***

I spent one month as a participant observer prior to data collection and identified the nine fishery tasks described above which varied in terms of strength required to undertake them. Principal component analysis was implemented to reduce the nine fishery tasks into two subgroups of both meaningful and statistically sound measures. Using the Varimax rotation index with extracts limited to two factor loadings (two components). The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was 0.67 and Bartlett's Test of Sphericity ( $p < 0.001$ ), which explained 50.7% of the variance in fishery tasks (the rotated matrix is shown in the appendix). The two subgroups were categorised as strenuous activities, and processing and trading related activities. Strenuous activities are those fishery activities that require the use of strength or brawn and consists of activities involving - fishing, repair of fishing equipment, repair of fish processing equipment, purchase fishing equipment, purchase fish processing equipment and fish sale at the beach

(bulk purchases)<sup>9</sup>. Participation in strenuous tasks is used as a proxy for bodily materiality because it was comparatively more visible and easily measurable for the analysis. That is, through participant observations and in-depth interviews with fisherfolk it was found that the gender division of fishery tasks was most apparent based on the physical strength required to undertake different tasks. It was the most indicative factor and other bodily factors such as pregnancy and menstruation which were relatively difficult to measure were equally related to the bodily physical requirement. The processing and trading related activities are those that required relatively less strength or brawn and consists of activities involving - processing of fish, pricing/trading of fish at the market and fish marketing/transportation activities. Cronbach's alphas were 0.74 and 0.64 for strenuous and less strenuous activities respectively.

**Table 2:** Key independent variables (For fishery-based household decisions)

Variable	Operationalization	Question/item	Response and Codes
Household financial contribution	Women's financial contribution to determine their economic power in the home	On average how much money do you (respondent) contribute to household income?	No contribution = 0 Less than 50% = 1 Exactly 50% = 2 More than 50% = 3 Exactly 100% = 4
Gender roles attitudes	The level of women's egalitarian gender role attitudes on household/couple's decision-making	Both man and woman should contribute to household income	Strongly disagree = 1 Disagree = 2 Neither agree nor disagree = 3 Agree = 4 Strongly agree = 5
		A man's job is to earn money; a woman's job is to look after the home and family	Strongly disagree = 1 Disagree = 2 Neither agree nor disagree = 3 Agree = 4 Strongly agree = 5  <b>Recoded as.</b> Strongly disagree = 5 Disagree = 4 Neither agree nor disagree = 3 Agree = 2 Strongly agree = 1

<sup>9</sup> Beyond the money required to purchase fishing equipment such as canoes, it also requires the use of physical strength to carry logs from the forest, which usually requires the presence of the fisher/buyer. Such tasks are not only strenuous but considered dangerous for women to undertake, hence dominated by men.

		Being a housewife is just as fulfilling as working for pay	<p>Strongly disagree = 1  Disagree = 2  Neither agree nor disagree = 3  Agree = 4  Strongly agree = 5</p> <p><b>Recoded as.</b>  Strongly disagree = 5  Disagree = 4  Neither agree nor disagree = 3  Agree = 2  Strongly agree = 1</p>
		A job is alright, but what most women really want is a home and children	<p>Strongly disagree = 1  Disagree = 2  Neither agree nor disagree = 3  Agree = 4  Strongly agree = 5</p> <p><b>Recoded as</b>  Strongly disagree = 5  Disagree = 4  Neither agree nor disagree = 3  Agree = 2  Strongly agree = 1</p>
		A man should have the final word about decisions in the home	<p>Strongly disagree = 1  Disagree = 2  Neither agree nor disagree = 3  Agree = 4  Strongly agree = 5</p> <p><b>Recoded as</b>  Strongly disagree = 5  Disagree = 4  Neither agree nor disagree = 3  Agree = 2  Strongly agree = 1</p>
Ownership of fishery equipment/business	Respondent ownership of production assets such as canoes, fishing net and outboard motors	Do you own the fishery equipment such as canoes, fishing gears/nets and outboard motors?	<p>No = 0  Yes, co-owner = 1  Yes, sole owner = 2</p>



Fisheries Activities/practices	The extent to which women participate in fishery activities	<p>In your household, who usually undertakes the following activities?</p> <p>Fishing</p> <p>Repair of fishing equipment (e.g. canoe, fishing net)</p> <p>Repair of fish processing equipment (e.g. oven)</p> <p>Purchase of fishing equipment (e.g. canoe)</p> <p>Purchase of fish processing equipment (e.g. oven)</p> <p>Processing of fishing (e.g. frying)</p> <p>Transporting fish to market locations</p> <p>Sale/Pricing of fish (at the beach)</p> <p>Sale of fish at the market</p>	<p>Me = 1</p> <p>Husband = 2</p> <p>Me and Husband = 3</p> <p>Others = 4</p> <p>Me and Others = 5</p> <p>Husband and others = 6</p> <p><b>Recorded as</b></p> <p>Not involved = 0</p> <p>Fully and Partially involved = 1</p>
Seasonality	The extent of women's decision-making during the <b>lean fishing</b> season.	<p>During the lean season when fishing activities are minimised, who usually decides on the following?</p> <p>How to spend money made from the sale of fish.</p> <p>When to go fishing</p> <p>How much fish caught should be kept for consumption.</p> <p>Repair of faulty fishing equipment (e.g. canoe, canoe, etc).</p> <p>Repair of fish processing equipment (e.g. oven)</p> <p>Purchase of fishing equipment (e.g. canoe)</p> <p>Purchase of fish processing equipment (e.g. oven).</p> <p>Processing of fish</p> <p>Market locations to sell fish</p> <p>Pricing of fish at the beach</p> <p>Pricing of fish at the market</p> <p>Major purchases (e.g. cars, land)</p> <p>Daily purchases (e.g., food)</p>	<p>Me = 1</p> <p>Husband = 2</p> <p>Me and Husband = 3</p> <p>Others = 4</p> <p>Me and Others = 5</p> <p>Husband and others = 6</p> <p><b>Recorded as</b></p> <p>Not involved = 0</p> <p>Fully and partially involved = 1</p>

*e. Measuring women's community-based fishery decision-making*

Following Agarwal (2010), women's community-based fishery decision-making was measured by their, frequency of meetings attendance and position in fishery association. The first outcome variable was assessed by asking the question; 'how many times have

you attended community-based fishery meetings in the last twelve months?’ The responses were recorded on ordinal scale (Never = 0; 1-3times = 1; 4-6times = 2; 7-9times = 3; 10times+ = 4). The second dependent variable was obtained by asking; ‘do you hold any decision-making position in community-based fishery association?’ and responses were entered as a dichotomous variable and coded as ‘No’ = 0 and ‘Yes’ = 1.

**Table 3:** Measuring women’s community-based decision-making

Variable	Context	Operationalization	Question/item	Response and Codes
Community-based fishery decision-making	Frequency of meeting attendance	Number of times respondent attend meetings in a year	How many times have you attended Community-based fishery meetings in the last twelve months?	Never = 0 1-3times = 1 4-6times = 2 7-9times = 3 10times+ = 4
	Position in community-based fishery association.	Measures respondent’s extent of influence in community-based decision-making	Do you hold any decision-making position in community-based fishery association?	No = 0 Yes = 1

#### *f. Independent Variables*

The independent variables for women’s community participation were measured as follows: First, women’s community-based gender role attitudes were assessed based on the International Social Survey Programme (ISSP, 2012) family and changing gender role scale. The responses were collected on a five-point Likert-type scale of five statements relating to women’s participation in community-based decision-making. The ISSP scale showed a good internal consistency with Cronbach’s alpha of 0.83. Negative statements were reverse coded to ensure that questions followed the same pattern. Based on the civic voluntarism model (CVM) psychological factors (i.e., trust, interest and

qualification/efficacy) were assessed. Respondent's level of trust was measured by asking: 'To what extent do you trust community-based fishery committees/associations?' The responses were 1 = Not at all, 2 = Small extent; 3 = Medium extent; 4 = Large extent. For women's level of interest, respondents were asked: 'To what extent would you say you follow/are interested in community-based associations?' with responses, 1 = Not at all, 2 = Small extent; 3 = Medium extent; 4 = Large extent. Women's qualification/efficacy was measured by asking: 'To what extent are you qualified to participate or run for decision-making position in the community-based fishery association?' The responses were 1 = Not at all, 2 = Small extent; 3 = Medium extent; 4 = Large extent. Interpersonal and network variables were also assessed. Respondents were asked if they were members in other associations apart from the fisheries, with responses; 1 = Yes; 0 = No and whether they held positions in the other associations with responses; 1 = Yes; 0 = No. Institutional/structural factors were measured by asking: 'To what extent does system of recruitment limit your participation?' The responses were 1 = Not at all; 2 = Small extent; 3 = Medium extent; 4 = Large extent. Materiality was measured by asking: 'Do you own the fishery equipment such as canoes, fishing gears/nets and outboard motors?' with responses: No = 0, Yes co-owner = 1; Yes, sole owner = 2.

**Table 4:** Key independent variables for women's community participation

Variable	Operationalization	Question/item	Response and Codes
Gender role attitudes	The level of women's egalitarian gender role attitudes on community-based decision-making	To what extent do you agree with the following statements:	Strongly disagree = 1 Disagree = 2 Neither agree nor disagree = 3 Agree = 4 Strongly agree = 5
		Women are able to be good leaders just as men	
		A woman should take good care of her own children and not worry about other people's affairs	Strongly disagree = 1 Disagree = 2 Neither agree nor disagree = 3 Agree = 4 Strongly agree = 5
			<b>Recoded as</b> Strongly disagree = 5 Disagree = 4

			Neither agree nor disagree = 3 Agree = 2 Strongly agree = 1
		On the whole, men make better community leaders (e.g. local council leaders than women do	Strongly disagree = 1 Disagree = 2 Neither agree nor disagree = 3 Agree = 4 Strongly agree = 5  <b>Recoded as</b>  Strongly disagree = 5 Disagree = 4 Neither agree nor disagree = 3 Agree = 2 Strongly agree = 1
		Women should have the same chance of being elected to community-based decision-making bodies as men	Strongly disagree = 1 Disagree = 2 Neither agree nor disagree = 3 Agree = 4 Strongly agree = 5
		Women should take increasing responsibility for leadership in solving social problems	Strongly disagree = 1 Disagree = 2 Neither agree nor disagree = 3 Agree = 4 Strongly agree = 5
Trust	Assess respondent's level of trust in community-based associations to address their issues.	To what extent do you trust community-based fishery committees/associations?	Not at all = 1 Small extent = 2 Medium extent = 3 Large extent = 4
Interest	Assess respondent's level of interest in community-based associations to address their issues.	To what extent would you say you follow/are interested in community-based associations?	Not at all = 1 Small extent = 2 Medium extent = 3 Large extent = 4
Qualification/efficacy	Respondent's perceived ability to influence community-based decisions	To what extent are you qualified to participate or run for decision-making position in the community-based fishery association?	Not at all = 1 Small extent = 2 Medium extent = 3 Large extent = 4
Membership in other associations	Interpersonal and network variables to assess respondent's social connectivity	Are you a member of any other association apart from the fishery?	Yes = 1 No = 0
Position in other associations	Measures the extent of respondent's influence in other associations	Do you hold any position within other associations?	Yes = 1 No = 0
Institutional /	Extent to which the rules in selecting respondents influence	To what extent does system of recruitment limit your participation?	Not at all = 1 Small extent = 2 Medium extent = 3 Large extent = 4

structural factors	women's community decision- making		
Material factors	Women's ownership of fishery equipment/ material assets	Do you own the fishery equipment such as canoes, fishing gears/nets and outboard motors?	No = 0 Yes co-owner = 1 Yes, sole owner = 2

***g. Socio-demographic factors (control variables)***

Based on the literature review, I controlled for several factors which could affect women's decision-making power other than the main variables. These included age (in years), length of marriage (years), living with spouse (no, yes), age of children (in years), education, spouse's education, years of work, monthly income, household decision-making arrangement growing up (father decided, parents shared, mother decided, others decided).

**Table 5:** Measures of socio-demographic factors

Variable	Operationalization	Question/item	Response and Codes
Age (Continuous)	Number of years of respondent on last birthday	What is your year of birth?	
Religiosity (Dichotomous)	Religious faith of respondent	What is your religion?	Catholic = 1 Protestant = 2 Islam = 3 Traditional = 4 Do not belong = 5  <b>Recoded as</b> Religious = 1 Non-religious = 0
Residence status (Dichotomous)	Whether respondent is a migrant or indigene in area of residence	What is your place of birth?	Indigene = 1 Migrant = 0
Length of marriage (Continuous)	Number of years respondent has been in marriage with current husband	How long have you been married?	
Living with spouse (Dichotomous)	Whether respondent lives in same house with husband or not	Are you currently living with your husband?	Yes = 1 No = 2
Number of Children (Continuous)	Number of children (biological and non-biological) living with respondent	What is your number of children, if any?	
Age of youngest child (Continuous)	Age of biological children living with respondent	Ages of children	

Education (Rank)	Respondent's highest education attained. (Categorised into low, medium and high education for community-based decision-making analysis)	What is your highest level of education?	No formal education = 0 Primary = 1 Secondary = 2 Tertiary = 3
Spouse Education (Rank)	Husband's highest education attainment. (Categorised into low, medium and high education for community-based decision-making analysis)	What is your partner's highest level of education?	No formal education = 0 Primary = 1 Secondary = 2 Tertiary = 3
Years of work (Continuous)	Number of years respondent has worked in the fishery business	How long have you worked in the fishery business?	
Income (Continuous)	Respondent's financial transfers received solely from the fishery business within the past three months	In the past three months, your estimated monthly income would be?	
Other source of income (Dichotomous)	Respondent's financial transfers received from other regular sources apart from fisheries within the past three months	Do you have any other source(s) of regular income?	Yes = 1 No = 0
Household arrangement growing up (Norminal)	Arrangement of decision-making of respondent's parents during childhood, as a measure of family socialization	When you were growing up, what description best characterises the decision-making arrangements in your household?	Father decided = 1 Parents shared = 2 Mother decided = 3 Others decided = 4
Social class (Rank)	Respondent's self-rated social and economic position in society	Below is a scale that run from bottom to top. Where would you put yourself in this scale?	Top = 1 to Bottom = 10

Whilst the quantitative data provided important information about participant's characteristics and factors affecting women's decision-making, a deeper understanding of equally important but complex factors such as name-calling in co-determining the different contexts of women's fishery decision-making and practices and experiences (including those of the researcher while in the field) were difficult to capture quantitatively. Different qualitative data sources discussed in the next sections were employed to provide detailed account of the dynamics of women's decision-making.

### 3.2.2.2 *Participant observation*

An important aspect of ethnographic research is to observe the study community through active engagement with the participants in order to investigate and experience participant's social worlds in their natural setting to provide written accounts of such experiences (Jorgensen, 2003; Atkinson and Hammersley, 1998). I was an active participant observer by helping in some fishery activities and had spontaneous informal conversations with both men and women fish workers as they engaged in their activities. I participated in various fishery activities including helping the women lift heavy fish processing equipment (e.g. metal net), helping the male fishers in the pulling of fishing nets and canoes, among others.

**Figure 3:** A walk on landed canoe being prepared for another trip



**Figure 4:** Fishermen teaching how to mend net



**Figure 5:** Helping women lift smoked fish metal net



**Figure 6:** Helping woman package smoked fish



Participating in such activities were very crucial as I obtained firsthand information and gained understanding of male and female fisher folk's working arrangements and the various decisions they made. The 'day-by-day accounts of observations, reflections and analysis' concerning various aspects of women's decision-making participation were captured in my notebook (Atkinson, 1992, p. 5; Emerson et al., 2011). However, there were instances in my participant observations where it was difficult to write accounts of observations and occurrences in the notebook at some locations on the field such as the fish landing beach, due to the uncondusive nature of the place. In such situations, I resorted to verbally recording my observations and when I got home, I would type these notes and things I could remember in my research diary. Following Lyttleton-Smith (2015), I used the period of typing these self-recorded data to reflect on my relationships with the participants, possible follow-up questions and the overall research methodology.

I also participated in various community-based fishery meetings and discussions, mainly as an observer. During my first meeting attendance, I was introduced by the *Apofohene* (chief fisherman), who also served as the representative of the paramount chief of the towns on fishery matters. During such meetings, I was given a seat at the front to sit with



the leaders as I observed meeting proceedings. Although I did not directly share my views on issues discussed, knowing the ethical and methodological implications, I clapped when everyone was clapping and possibly laughed as everyone laughed. My participation in such meetings provided me with the opportunity to easily identify potential informants, especially after my introduction in the first meeting, which made it easier to approach these participants. Using participant observation was a crucial means to provide an insider view, for instance, on what it takes to be a fisherman or fish trader and to observe the phenomena of fishery decision-making and practices in their natural setting (Jorgensen, 2003). It was also an opportunity to establish rapport with the informants, as they became comfortable to share their lived experiences with me.

**Figure 7:** Observation of community-based fishers meeting in Axim



Observing people in their natural work settings with little or no interruptions can provide deeper understanding of the gender dynamics and how the different forces play in in fishery decisions and practices (Jorgensen, 2003). However, there are questions about the reliability and validity of such observer (researcher) oriented accounts as the researcher's biases and cultural differences may result in misrepresentation of what is observed (Mackellar, 2013). This is particularly so when researchers have limited understanding of the culture (e.g. language, practices, etc.) of the study community. Despite my in-depth

knowledge of the study communities and strong connection with the people during fieldwork which addressed some of these concerns, I included other modes of data collection such as in-depth interviews to capture informant's perspectives as well as photo elicitation to provide graphical illustrations and corroborating evidences (Cresswell and Miller, 2000).

### **3.2.2.3 *Photo elicitation***

Photo elicitation involves using photographs to obtain verbal commentary on issues captured by participants especially during interviews to promote their active involvement in the research process (Harper, 2002; Wells, Ritchie and McPherson, 2013). As part of the interview with participants, photographs taken during my participant observation while working with some of the participants were utilized. These photographs served as an ice breaker for the actual interviews and served as references during the interviews. The aim for using photo elicitation was to minimize disparity of power between the participants and the researcher, as most part of the data production was controlled by the researcher (Epstein et al., 2006). Photo elicitation enhanced participant's engagement and offered flexibility for the participants to select and discuss issues of importance to them in relation to the research topic (Wells et al., 2013; Jorgensen and Sullivan, 2010).

Besides, studies show that 'images evoke deeper elements of human consciousness' (Harper, 2002, p. 13). Hence, combining photographs with texts in the interview triggered deeper conversations to explore participant's experiences, memories and reflections of the various decisions they had participated in the past with regards to their fishery activities and decisions (Harper, 2002; Meo, 2010). For instance, it was during one of these photo conversations that reminded a participant (fisherman) in an interview to also share a video he had recorded with some women during a sea expedition with me, which was a very crucial data source as would be later discussed in Chapter 6. Using photos also provided

an important medium through which the various material objects and spatial factors entangled with discourses on women decision-making participation could be depicted for richer interpretation of the informant's perspectives and provided readers with visual accounts of such materialities (Becker, 2002), as such photos are shown in later chapters of this thesis.

#### **3.2.2.4      *In-depth Interviews***

Interview was another important data production method to explore the material-discursive intra-activity in fishery decision-making assemblages as done by other new materialist scholars (Mazzei, 2013; Feely, 2016). According to Webb and Webb (1932 in Legard et al., 2003, p. 138) interview is 'a conversation with a purpose'. Talking and listening to people provided an important resource for the depiction of my informant's lived worlds through their answers to series of questions (Longhurst, 2010). Two main forms of interviews were conducted – key informants/individual in-depth interviews and couple interviews, using semi-structured interview guide. Key informant interviews are in-depth interviews with people considered to have wide range of information about the community and the topic under study, who provide first-hand information about the research questions (Tremblay, 1957 in Bernard, 2011; Bernard and Bernard, 2012).

The in-depth interviews provided opportunity for a face-to-face conversation with selected informants, including the female fisherfolk and their husbands as well as local fishery leaders such as '*Apofohene*' (chief fisherman) and '*Konkohemaa*' (chief fish trader) in the small-scale fisheries of the selected communities. The couple interviews examined responses from both spouses at the same time and was used in addition to the individual in-depth interviews with each spouse to explore couple's fishery decision-making dynamics. The wives were first interviewed followed by the husbands after which a couple interview followed for selected couples. One advantage of using a couple interview approach was to understand the couple level discrepancies between men and women's

reports of knowledge, attitudes, and behaviors relating to the different aspects of fishery-based household decisions and practices (Shu et al., 2012).

**Figure 8:** In-depth interview with fisherman fixing his net at home



**Figure 9:** Couple interview in the fish processing kitchen of fisher couples



Interviews were also conducted with selected officials (governmental and non-governmental) to provide information with regards to women's participation in the community-based fishery decision-making from their perspective. Through the couple and key informants' in-depth interviews, I was able to identify the different processes through which the material, discursive, spatial and temporal factors may limit or enhance women's participation in household and community-based decision-making from the viewpoints of the informants (Creswell, 2009). The face-to-face in-depth interviews also gave participants the opportunity to share some fishery practices and terms with me as there were instances during the interviews that I exhibited limited knowledge in local terms such as '*Bosun*' (canoe owner), '*dzinam*' (fish for household consumption) and '*ahyekon*' (neck trap) – a type of fishing net for trapping fish by its neck (drift gill net), among others. These were very important as my understanding of such terms made our conversations much easier. Details of the interview participants is provided in the summary Table 6. Like the other data collection methods, in-depth interviews also had some limitations as such

as the difficulty in getting participants describe how some decisions are made as further discussed in the next section.

#### **3.2.2.5 Vignettes**

Although vignettes are mostly utilised in quantitative studies as used by Finch (1987), they are also useful in qualitative research where ‘stories about individuals, situations and structures which can make reference to important points in the study of perceptions, beliefs and attitudes’ (Hughes, 1998, p. 381). There were difficulties in directly observing how participants decide on who did what as their activities were largely automatic. In some instances during interviews, couples were reluctant to share their actual decision-making arrangements, especially in instances of deviation from what is considered socially appropriate. Hence, for deviant cases which could not be observed directly such as use of income earned from the business, various hypothetical scenarios or stories regarding the selected couple’s decision-making arrangements were included in the interview guide, and informants were asked to make judgment about such scenarios (Finch, 1987; Hill, 1997). These short stories also helped to explore both wives and husbands’ perceptions and attitudes towards women’s participation in such decisions (See appendix for the different scenarios). Using vignettes fostered less personal and less threatening ways of exploring sensitive topics relating to couple’s decision-making which some participants found it difficult or somewhat embarrassing to share (Barter and Renold, 2017).

### **3.3 Sampling techniques**

According to Barreiro and Albandoz (2001), it is often impossible to produce data from a whole population. Thus, sampling is an effective way to select a relatively small part of a larger group or population relevant for the study (Rice et al., 2010). Sampling therefore ensures that data is manageable and comparatively easily produced. The lack of official data on the number of fisherfolk in Ghana’s small-scale fishery, rules out probability

sampling techniques (Adjei and Overå 2019; Overå 2003). Two non-probability sampling methods were used for this study. These are purposive sampling and snowball sampling techniques as described below.

### **3.3.1 *Purposive and snowball sampling***

Purposive sampling was used based on its capacity to allow researchers to access participants who had prior experience relating to the phenomenon under study (Rice, 2010; Ball, 1990 cited in Cohen, 2007). Based on the research aim, people known to be knowledgeable in fishery activities (such as fishermen, fish traders and their leaders) within the fishing communities as well as governmental and non-governmental officials, were purposively selected for their experience in small-scale fishery related issues. The biggest group selected were the female fish processors and traders who were the focus of the study. I used purposive and snow-ball sampling to identify key informants who referred potential participants, who in turn recommended others within their networks. The strong social connectivity among fisherfolk in Ghana's small-scale fisheries makes this an effective sampling strategy.

### **3.3.2 *Sample size***

As earlier indicated, the study used both survey and in-depth interviews in the data production with total (N = 428) participants. The survey comprised of women who were in partnered relationships, and owned and/or engaged in the fishery business with the husbands (n = 400). The in-depth interview involved female fish processors and traders (fish mummies) selected from the sampled survey who had specific characteristics – owned major fishery equipment such as fishing net, canoe, outboard motors (n = 20), husbands of the selected women who were willing to participate (n = 18), and local fishery leaders (e.g., *apofohene* and *konkohemaa*), governmental and NGO officials (n = 10). These participants were selected to provide different perspectives and in-depth accounts

of the issues discussed. Despite the triangulated methods and data produced, the study used a cross-sectional approach, hence findings from the study cannot be generalized. Table 6 provides detailed description of sampled participants.

**Table 6:** Summary of the sample for the survey

Method	Participants	Number of participants
<b>Survey</b> (Open and closed ended questionnaires)	<b>Married women</b> fish processors and traders – Own fishery equipment (e.g., Canoe) and/or husband is involved in fishery.	400
<b>Interviews</b> (Semi-structured interview guide)	<b>Women fish processors and traders</b> (Single own, co-own or husband owns fishery equipment)	20
	<b>Husbands</b> of selected fish traders	18
	<b>Total</b>	<b>38*</b>
	<b>Key informants</b> - 1 Chief fisherman - 2 Chief fish traders - 4 government officials** - 3 NGO officials**	1 2 4 3

\* Seven (7) couple interviews from total.

\*\* Interviewed mainly on issues relating to women's participation community-based fishery Decision-making.

### 3.4 Data Analysis

As earlier indicated, from the new materialist framework, social problems are viewed as produced through a combination of material (human and non-human), discursive and other spatio-temporal factors (Feely, 2020; Pickering, 1995). This departs from the dualistic thinking to a monist or flat ontology, where none of the factors influencing women's participation are privileged over the other, but as having equal ontological status to co-producing such outcomes (Frost, 2011). In addition, my own understanding of the world, the fishery sector, among others plays a key role in the knowledge produced, data analyses and interpretation of results (Barad, 2003).

This study utilized assemblage and diffractive analysis proposed by Deleuze and Guattari (1988), and Barad (2003, 2014) respectively to examine the material, discursive, spatial, temporal including the researcher's multidirectional entanglements that co-produce the opportunities for and obstacles to women's participation in community-based and household fishery decision-making and practices. As the findings would show, such analytical approach revealed the web of material relations in fishery decisions and practices, without rejecting the importance of discourse, social institutions, norms and other social forces with the assumption that these factors have the 'same ontological status' (Grosz, 1994, p. 167; Feely, 2020). That is, the 'relationships of culture, history, discourse, technology, biology and the environment were explored without privileging any of these elements' (Alaimo and Hekman, 2008, p. 7). An assemblage therefore consists of complex forces belonging to different orders of existence which encompasses the 'physical, psychological or cultural as well as the material products of thought of feelings, desires and abstract concepts', which combine to produce an outcome (Braidotti, 2000, p. 159; DeLanda, 2005; Feely, 2014). As such, an assemblage is not a fixed entity, but is always in a process of *becoming* as the diverse components intra-actively enable and constrain its components, creating different outcomes in space and time (Feely, 2020). Following DeleuzoGuattarian assemblage analysis, Feely (2020) identify three steps to be followed in analyzing data based on the new materialist approach.

The first step involves 'identifying the different component forces and relations that make up the phenomenon' – in the context of this study, women's participation in household and community-based fishery decision-making and practices (Feely, 2020, p. 7). It is assumed that household and community-based decision-making participation is a phenomenon that is co-produced by material, embodied, discursive, spatial and temporal factors. Identifying the most pertinent factors would involve different data production techniques. As earlier discussed, the reconnaissance stage of the research as well as survey



questionnaires, in-depth interviews and participant observations helped in identifying these key factors and how they co-determine the extent of women's decision-making participation. This helped answer the question: *What material, discursive, spatial and temporal factors influence women's participation in household and community-based fishery decision-making and practices in Ghana?* The quantitative data was then analyzed using IBM-SPSS to identify the relationship between these factors and women participation in fishery-based household and community-based decision-making using multiple linear and logistic regression models as shown in Chapters 5 and 7. First, I performed Pearson's correlation analysis (See appendix 1) to select significant correlates of women's decision-making power (household and community-based) for inclusion in a subsequent regression analysis. For household decision-making, I conducted three-step hierarchical regression models to identify the relationship between women's financial contribution, gender role attitudes, ownership of equipment, seasonality and decision-making power. The first model included only the control variables. The second model added the key independent variables to estimate their specific impact on the dependent variables. The third added the six interaction terms (see Chapter 5 for details).

The qualitative data from audio-recorded in-depth interviews and field notes were transcribed for analysis. Since assemblage analysis involves identifying forces of relations, some scholars argue that coding and categorizing entities based on fixed identities prevents creative thinking about the countless number of things such entities could do (Deleuze and Guattari, 1988; Feely, 2014), making coding and categorization inconsistent with the new materialist theoretical approach. Based on this premise, some new materialist scholars totally abandon any form of coding and categorization in their qualitative data analysis (Choi, 2018; Jackson and Mazzei, 2012).

Unlike the above scholars, I found coding and categorization more productive. As done in conventional qualitative data analysis, this study involved coding and categorization of

the qualitative data into themes for onward analysis. While this is done, I consider the codes and categories generated not as discrete or static representations but relational, intermingling and overlapping into each other (MacLure, 2013). The coding and categorization are therefore ephemeral and ‘partial taxonomies formed’ mainly for analytical purposes (MacLure, 2013, p. 181). Unlike the conventional qualitative coding process where themes may be generated with the use of computer assisted software (e.g. NVivo), I found manual coding by familiarizing myself with the data by reading, re-reading and colouring related narratives and themes to identify orders of existence, more useful and consistent with the assemblage analytical approach.

The second stage of the analysis involved mapping the flows (Feely, 2020). According to Deleuze and Guattari (2004 cited in Feely, 2020, p. 9), ‘an assemblage in its multiplicity, necessarily acts on semiotic flows, material flows and social flows simultaneously’. This involved mapping the material flows of human bodies (male/female bodies) and non-human objects (fishing net, canoes, etc.) in fishery decision-making processes as well as the discursive flows on how gender discourses, historical, cultural, economic and spatio-temporal factors, among others are communicated at various levels and how these flows intra-actively create opportunities for and obstacles to women’s decision-making power. Mapping the flows helped in answering the question: *How does the combined material, discursive, spatial and temporal factors produce the opportunities for and obstacles to women’s participation in fishery-based household and community-based decision-making?* Answering this question through assemblages would involve mapping these flows in a visual (e.g., regression models and graphs/maps), as well as verbal manner in the form of interview outcomes and observations from field notes as recommended and used by other scholars (Feely, 2020; Fox and Alldred, 2015; Haggerty and Ericson, 2000).

The third stage of assemblage analysis involves exploring the processes of territorialization and deterritorialization (Feely, 2020). According to Feely, the process of territorialization serve to stabilize and maintain order within an assemblage, whereas deterritorialisation is a subversive process that seeks to destabilize the order of things and allow for change or creativity within the assemblage (Feely, 2020, p. 12). At this stage, I analyzed how the complex intra-activity of the various factors/forces identified in stage 2 work to create opportunities for women's participation at some periods or events and locations, and constrained participation at other periods or events (Barad, 2007, p. 340; Dolphijn and Van der Tuin, 2011).

Once these forces of territorialization and deterritorialization have been unpacked, the affective flows of the fishery decision-making assemblage revealed in its micropolitics provide the means by which such assemblages can be re-engineered, manipulated, disentangled or modified to unsettle its affect economy, and thereby address the problem of women's decision-making power in household and community-based fishery decision-making and practices (Feely, 2020; Fox and Alldred, 2018a). This helped to answer the final research question: *How could the assemblage be unsettled?*

Before I discuss the research ethical issues, a related topic which has been widely discussed especially in most qualitative research is the positionality of the researcher in the data collection/production process. In new materialist accounts, we consider the researcher as an important component of the research assemblage just like the data collection and analysis (Fox and Alldred, 2015, 2018a; MacLure, 2013). The peculiarities of my positionality in the data production assemblage from the new materialist perspective are discussed below after which the chapter would be concluded with research ethical issues.

### **3.5 New materialism and researcher positionality in data production**

Social researchers pay considerable attention to their position in the data production process and its impact on the research outcomes (Crang and Cook, 2007). Conventionally, there are two opposing discourses about the position and role of the researcher in data production - the positivist and the constructivist's accounts. First, to the positivists, 'humans and objects preexists meaning and reality' (Nordstrom, 2015, p. 389), and interviews are neutral encounters in which a value-free researcher collects and analyses data from informants (Marn and Wolgemuth, 2016). As such, the researcher is considered as a totally objective, impartial observer unaffected by meanings, and realities collected using materials such as recorders, interview guides and photographs as gestures towards objectivism (Lee, 2004; Hammersley, 2003).

Social constructionists on the other hand question such researcher-value-free claims and consider the researcher as an active part in the data production, who affects and is affected at various stages in the research process (Haraway and Teubner, 1991; Mullings, 1999). They argue that researchers focus on what is relevant for the research objectives and rely on their own understanding of the data to make them visible or invisible and this affect the outcomes or meanings generated from the interviews (King and Horrocks, 2018). As argued by Mullings (1999, p. 337), 'a researcher's knowledge is always partial because his or her positionality...influence how the world is viewed and interpreted'. Such positionalities or researcher's inherent identities as insiders or outsiders are assigned through various 'signifiers of difference' such as age, educational background, gender, race and language (Mullings, 1999, p. 339).

The existing literature has thoroughly examined the positionalities of researchers, informants and their existing power relations in the data collection process and its impact on research outcomes (Mullings, 1999; Merriam et al., 2001; Briggs, 2002; Ellis, 2021). Whilst anthropological and sociological research have shown that the researcher does not

necessarily occupy a fixed insider or outsider positionality on the field (Merriam et al., 2001; Adjei, 2017), such studies have been human-centered, focusing on the power dynamics between the researchers and the researched in creating different positional spaces for the researcher (Nordstrom, 2015). Such anthropocentric accounts however ignore the roles of the materialities which form active part of the data production process such as the human bodies (researcher and informant's bodies), non-human objects (the audio-recorder, photographs, notebooks, etc.) and how these factors combine with other social forces (e.g. age, gender, social norms or social class of respondents and researcher) to co-create fluid, non-static subjective positions of the researcher and the researched in their interview encounters and the entire research process (Nordstrom, 2015; Marn and Wolgemuth, 2016; Fox and Alldred, 2018a).

In this section, I illustrate how the new materialist framework helps in examining such material-discursive intermingling to co-created different subjective positions for myself (researcher) and the informants during my fieldwork encounters and how these impacted on the data collection process and outcomes produced. I discuss how my body (male body, slim body, baby face) participants own material bodies (male/female, matured/muscular bodies, etc.), non-human objects (the dress I wore, wedding ring on my finger, the audio-recorder, interview guide/questions, field notes, photographs, etc.) as well as discourses of appropriate gender roles, social status (doing PhD, married, a Ghanaian and native of Western region (study location)) and other spatial forces (e.g. interview locations), co-created different subjective positions for myself, the interviewees and co-produced the interview outcomes generated as data on women's participation in fishery decision-making and practices. In some instances, these material-discursive co-implications created opportunities for participants to share their views openly while in other instances such outcomes were foreclosed. In the next section, I focus on how human body - the researcher

(myself) and participant's bodies combined with other factors to co-create different positional spaces for myself and influenced the interview outcomes produced.

### ***3.5.1 Researcher/participants body co-implications in data production assemblage***

First, my body's entanglement with other interview materialities (including participant's bodies) created different positional spaces for myself and the interviewees in the data production assemblage. Here, I explore how my male body combined with social expectations of masculinity and femininity co-influenced my interview conversations and participation in the different fishery activities during participant's observations. For instance, my inability to participate fully in fishing related activities such as pulling the heavy fishing nets and the canoe as done by the male fishers was greeted with laughter from both the male and female fisherfolk. As a male, I was expected to have a strong muscle to easily help in pulling the fishing nets and landed canoes, but my struggle to fully participate marked by heavy breathing after helping the fishers pull a canoe resulted in my outsider positioning by the informants who referred to me as a male with too soft female-like body – not a real male.

Such essentialized positioning of my body as 'weak female body' coupled with the social expectation of men to be strong, co-created a temporary subjective position of me as an outsider – 'fake male' with little knowledge in fishing. This seeming outsider position rather had positive impact on my ability to understand and capture the different roles of fisherfolk in the fisheries. It was an opportunity for the male fisherfolk to explain in detail the reasons for the gendering of fishery activities and division of fishery labour among the crew workers when offshore. Participant's ability to explain such different roles was also empowering as it gave them the opportunity to lead discussions in the interviews and to teach me local fishery terms and practices such as *Bosun* [canoe owner], *Bosco* [crew leader] and *dzinam* [fish for household consumption], that I did not know. This created

rapport between us and spurred participants overall interest in the research work as we mostly used these local terms in our conversations, which temporarily positioned me as an insider.

Besides, interviews with some male participants coupled with my insider positionality as a male and native of the Western region (study area) resulted in participant's expectation that I share with their view that women were subordinate to men in household decision-making. My resolve to follow my interview guide rather than cultural values knowing the implications, usually created a problematic situation. Whenever I probed such views, these male participants asked questions such as 'you know this so why ask me?' or end their statements with questions such as 'you know right?', while others even questioned my sexual orientation for questioning their views on women's subordination to men. Although some of these male participants were not too happy with my somewhat outsider positionality which may have affected the data produced in such instances, it was also an opportunity to further probe into participants own gender role attitudes and for participants to explain why some fishery decision-making roles were for men and others for women. While my human intentionality was apparent in the above discussion, other factors such as my biology (male), participant's own biology (males), our similar cultural backgrounds, and interview guide (words in a book – material object) exhibited potency as they combined in co-creating my different positional spaces and the research outcomes. This would be discussed in the next section.

Furthermore, my 'baby face' physical appearance made some female and male participants consider me as an outsider and not ready to share some family life experiences with me, as they thought I was too young to know. For instance, during a couple interview session, the female participant indicated that I would understand her point if I was married. After the husband prompted her to check the wedding ring on my finger, my seeming outsider position suddenly changed. The wife was more open to share her experiences in

marriage especially on why most couple's decisions were shared with quotes like 'as you are married, I am sure you know that marriage goes beyond money'. Here, we see the co-implication of my physical facial appearance (baby face) that affected the woman's interpretation of my age, coupled with discourse about children's subordinating position in Ghanaian families (Adinkrah, 2011), which foreclosed interview outcomes at early stages of the interview as participants were reluctant to share certain family experiences. We also see the affective role of the 'wedding ring' as a material object on my finger (human body) in opening-up possibilities for participants to share their family experiences.

My positionality in the data production assemblage and research outcomes in this context therefore results from not only discourses, but the co-implication of my 'baby face', the wedding ring, my finger, participants own bodies, coupled with discourses of appropriate roles of children in the family and other discursive forces which co-created my different positionalities during the interview session and the data produced as discussed above. I argue that it is the assemblage of these material-discursive forces that co-created my different positionalities and the resultant outcomes of the interview data produced.

### **3.5.2 *Non-human objects co-implication in data production assemblage***

The role of the wedding ring as discussed above echoes the important role of non-human objects in co-creating different positional spaces for the researcher and the researched in the data production assemblage. In this section, I show how other non-human objects such as the dress I wore during fieldwork as well as data production tools or what Barad (2007) might call apparatuses in qualitative enquiry such as the audio-recorder, photographs/camera and the interview guide/questions were all crucial in the data production assemblage. I focus on how these tools were not distinct but active part of the data production assemblage in which interview outcomes, meanings and validity were emergent and sometimes foreclosed (Nordstrom, 2015).



For instance, at the early stages of my fieldwork, I was easily identified as an outsider among the fisherfolk, especially during my visits to the landing beaches partly due to my dressing. While most of the male workers were either bare chested or in their working attire (working gear), I looked different with my well-ironed shirts. I was mostly considered a journalist, a government official or a local NGO official. There were instances where I was denied participation in activities such as pulling of fishing nets at the beach by the fisherfolk, with their view that my shirts would be dirty or get wet. As time elapsed, I had to change my clothes to more casual ones which enabled me to participate more in their fishery activities to better understand the fishery practices. It also made me look more like the fishers at the beach and reduced the skepticism about my status which facilitated my easy penetration into different groups especially at the beach – a temporary insider positionality.

From the above, I consider my seeming outsider positionality at the early stages of fieldwork as temporary and emergent from the intermingling of the non-human materialities such as the shirts (non-human material) I wore to the fish landing beach (spatial force) – a work place which required a specific kind of dressing, participant's own dress, our (male) human bodies with shared expectations, social expectations (discourses) of dressing in a setting way to the beach as a male, which made it easier to distinguish between fishers and a non-fishers. None of these factors can be singled out as the sole determinant of my positionality as in outsider or insider, but their collisions and 'machinic assemblage' co-created my different positional spaces and that of the participants (Mazzei, 2015, p. 737). For instance, without the spatial factor (the landing beach) where male fish workers dress in a certain way to work, the capacity of the dress I wore in co-creating my outsider positionality may not have materialized. As was observed that dressing well to the homes of potential participants was an important first impression to gain their attention and somewhat showed that one was not a criminal. Hence, in another spatial context - the

home, dressing casual may rather co-create an outsider positionality and potentially prevent a researcher from having access to participants and perhaps useful information.

As many scholars would have done, I initially took for granted the active role of non-human material objects such as the audio-recorder, interview questions (as earlier discussed), field notes, photographs used in the interview and considered them as mere tools for capturing data (Brewer, 2000). However, with my Deleuzian lens, I realized the entanglement of these data recording devices (audio recorder, camera and field notes) with participant's account. It also influenced my (researcher's) ability to capture the messiness of the different accounts and how these intermingling co-produced the different positional spaces I occupied with the interviewees and the interview outcomes produced. For instance, although the audio recorder and camera allowed for rich and easy capturing of interview events and observations, there were instances where participants requested that I turned off recorders for some comments to be made off-the-record. Others (especially the men) declined to my capturing of their involvement in the female dominated activities (e.g., frying fish), because they contradicted discourses of appropriate gender roles, though I found such observation as very important to the study. As Nordstrom (2015) rightly indicates, the audio-recorder and camera may capture important information and images during data collection but may not address the cultural dynamics that comes with their use. Some participants who declined being captured or recorded indicated that such recordings may expose aspects of their lives which would come back to haunt them, despite my assurance of their anonymity and protection of the data. I therefore resorted to writing their responses instead of recording in some instances.

The above shows that data recording devices or apparatuses are not 'mute or innocent entities that simply record interviews' (Nordstrom, 2015, p. 389). That is, the audio recorder and camera were 'not mere observing instruments but boundary drawing practices – specific material (re)configurings of the world – [which] came to matter' in

the data production process (Barad, 2007, p. 140). They played active role in the data production assemblage and co-created different positional spaces for researchers and the researched as well as what data could be generated. As such, what participants may be able to talk about, what I was able to capture, the different positionalities I occupied, the power dynamics involved and the outcomes of interviews, resulted from the complex co-implication of the material factors (the audio-recorder and camera), norms of gender appropriate behavior of researchers (research ethics), the human bodies (researchers and participants) working together territorialize research outcomes in some contexts and deterritorialize such outcomes in other context. Although human intentionality (e.g. researcher/researched negotiation) is important, it is only a part of the material-discursive-spatio-temporal forces in the data production assemblage. In short, what is made visible or invisible by participants, recording devices, and researchers focus on what is relevant for the research objectives, co-determined the outcomes or meanings generated from the interviews (King and Horrocks, 2018; Nordstrom, 2015).

From the above, the data collection cannot be thought as a wholly objective processes as if the data is out there waiting to be collected as suggested by the positivists neither is it solely a creation of the intentionality between the researcher and the researched, as if nothing ever existed outside human constructs. We cannot deny the reality of objects and the things around us, the lived reality of participants and how they co-influenced the outcomes of the researcher/researched interactions and interview outcomes (Nordstrom, 2015; Murriss and Bozalek, 2019). As I refer to it as data production, it is a process that emerge from entwinement or intra-actions (Barad, 2003) of the actual materiality – human bodies (researcher and researched), the non-human objects (audio recorders, the camera, the shirts worn, the field notes), discourses (appropriate gender roles in community, research ethical principles (seek consent before you record or take a picture), the spatial force (locations or physical space where interviews are conducted). These forces could no

longer be thought apart from each other in the data production assemblage. As such, the interview process and outcomes emerge from an assemblage of forces, as Mazzei posits:

There is no longer a division between a field of reality (what we ask, what participants tell us and the places we inhabit), a field of representation (research narratives constructed after the interview) and a field of subjectivity (participants and researchers). Instead, these are to be thought as acting on one another simultaneously (Mazzei, 2013, p. 735).

Therefore, while it is important to reflect on the impact of researcher's positions on the researcher-informants power relations shaping how interview is conducted and the outcomes (Mullings, 1999; McNess et al., 2015; Ergun and Erdemir, 2010), such positionalities, the power relations and the outcomes produced should not be seen as solely produced by the self-reflectivity of the researcher who determines what tools to use to generate an outcome (Hammersley and Atkinson, 1995). Rather, we need to map the connections or assemblage of forces at work in co-creating such outcomes.

In the preceding discussions, I have shown how my body, the informant's body and interview materials or tools are not isolated from the interview assemblage but 'live and breathe theory' (Marn and Wolgemuth, 2016, p. 9). It is the co-implication of these forces that created opportunities for participants to share their views openly in some instances, while in other instances, such outcomes were foreclosed. Hence, data production in the context of the new materialist theory demand attention to materialities, power relations, and the production of complex, multi-layered data and analysis, rather than positioning the researcher as an objective and dispassionate observer (Coffey, 1999; Lyttleton-Smith, 2015).

As earlier indicated, the new materialist research approach considers the research process as an assemblage (Fox and Alldred, 2015). Deleuze and Guattari (1988, p. 4) refer to assemblages as 'machines that links affects together to do or produce something'. In this

way, the research assemblage can be thought of as a ‘web of forces and encounters’ (Braidotti, 2006, p. 41) or set of interconnected machines including the events to be researched, the research tools (data collection methods such as questionnaires, interview encounters, and recording and analysis technologies), theoretical frameworks, research literatures, reviewers (e.g. supervisors) and the researcher (Fox and Alldred, 2015). As such, the data production or interview assemblage discussed above is a molecular assemblage (only a part of the research assemblage) that ‘plugs in’ the larger, molar research assemblage to achieve specific methodological objectives (Jackson and Mazzei, 2013, p. 261; Fox and Alldred, 2017). In the next section, I show how research ethical issues – another molecular assemblage also played an important part of the data production and formed part of the entire research assemblage.

### **3.6 Ethical issues**

This study involved human subjects (male and female fisherfolk) and produced information about participant’s decision-making dynamics with their partners as well as community-based participation. To reduce the possibility of harming the participants or community under study, ethical considerations and approval for the study were crucial (Drew et al., 2007). Ethical approval for the study was granted by the Research and Ethics Committee, Lingnan University, Hong Kong. Besides, in-country ethical clearance was provided by the Committee of Human Research Publication and Ethics at the School of Medical Science, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana (Ref: CHRPE/AP/554/19) (see appendix). Aside these documents confirming that the study met the required ethical standards, several measures were undertaken to ensure that the process of data production, recruitment of participants, locations of interviews, and the type of data captured were less harmful. Other ethical measures undertaken included participants informed consent, confidentiality and some level of anonymity as discussed below.

### ***3.6.1 Recruitment of participants and informed Consent***

Before selecting participants, I informed community leaders including the paramount chief, the chief fishermen and local fishery government office about my desire to conduct research within the communities. In addition to the ethical clearance letter, I provided copies of my introductory letter which contained descriptions of my research purpose to the key community leaders. This was an important first step in entering the community as some of the leaders I contacted put me in touch with some key informants. My contact with the chief fisherman at this stage was also important as he later introduced me to his subordinates and other fisherfolk in the first community meeting I attended.

To ensure participants informed consent, I provided potential participants with the information sheets which contained details of the projects in addition to the consent form before they were included in the survey. Participants approved the consent form mostly by verbal agreement after I had read to them or signed the consent form after which copies were handed to them for reference. Although going through the processes of participant's informed consent was ethically necessary and gave some level of assurance to participants, others felt that by signing to such agreement could mean something else they may not be aware of and were quite skeptical. Although most of these people participated upon assurance that the study was only for academic purposes, some informants declined signing. Frequent debriefings were also undertaken to minimize and possibly avoid misquoting or misrepresentation of informant's opinions. All these measures were undertaken to ensure that information provided represented participant's opinions as much as possible.

### ***3.6.2 Anonymity and confidentiality***

Maximizing anonymity and confidentiality of participant's details was important (Drew et al., 2007). All participants in the study were assigned pseudonyms and relevant details

which could be easily traced were omitted or changed. Produced data were stored in a password secured computer to prevent unapproved access to enhance the anonymity of all participants and locations.

### **3.6.3 Privacy**

In addition to the information sheet which captured privacy details, I reiterated in most part of the survey and interview sessions that participants could voluntarily decide to skip any question they were uncomfortable to answer or even withdraw from the project at any time. Being mindful of participant's privacy, informants were interviewed at locations that they were comfortable to share their decision-making roles and other opinions. While most of the participants were found at their workplaces - at the landing beach and fish processing tents/kitchen, these locations (especially landing beaches) were not suitable to discuss participant's family issues as third parties could hear of such arrangements which may be damaging. As such, meetings were mostly scheduled in the homes of informants where such private matters could easily be shared. Even in the individual interviews, conversations were temporarily halted in situations where the other partner was close to us such that he/she could hear our conversation. Again, as earlier indicated, permissions were sought before photographs could be taken or recordings could be done. Even in situations where participants agreed that such recordings could be done, I halted recording midway the interview whenever requested by the participants. All these were measures taken to ensure that the privacy of informants was maximized.

### **3.7 Data validity and reliability**

Ensuring validity and reliability is a crucial part of social research methodology, and several measures were taken to assess and enhance these key requirements. Although evidence of validity and reliability can be provided in both qualitative and quantitative research, questions of validity and reliability generally belong to the positivist's school

(Golafshani, 2003; Smallbone and Quinton, 2004). According to Drost (2011, p. 106) reliability is 'the extent to which measurements are repeatable' and consistent over different conditions and time, whereas validity examines whether the instruments used measured their intended social characteristics. In the quantitative aspect of this study, various assessments were undertaken to enhance the validity and reliability of the instruments used for the study. Reliability was tested by examining the internal consistency using the Cronbach's alpha to assess whether the items used measured their respective characteristics/scales before these items were used (Drost, 2011). Reliability of the various scales were also improved by ensuring that statements measuring the various items were clearly understood by the participants by writing items clearly, easily understandable and by stating rules for scoring as explicit as possible with the help of the research assistants who were familiar with study location and the content of the study (Creswell, 2014; Oluwatayo, 2012).

Unlike the quantitative data, the qualitative aspect focuses on human characteristics, emotions and perceptions that are ever changing hence difficult to repeat or replicate under same conditions as the positivist would require (Shenton, 2004). Hence, Sandelowski, (1986 in Clonts, 1992, p. 995) posit that the qualitative research is considered valid when it provides accurate description of participant's views such that these participants would easily recognize those descriptions as their own when produced. As largely followed by the current study, Guba and Lincoln (1981 in Clonts, 1992), suggest the need for researchers to consider whether other researchers getting same results would agree that such results make sense. In this way, even different results would not be seen to refute the earlier result but as being complementary (Merriam, 1988 in Clonts, 1992). This ensures credibility, dependability, transferability and trustworthiness of the entire research process and the results produced (Guba and Lincoln, 1994; Shenton, 2004). My presence in the field was an avenue to have a personal experience of most of the issues discussed which



improved my understanding and explanation of the events. In the data analysis, I repeatedly referred to my interviews through follow-up phone calls for clarification on unclear responses to ensure that data analysis was consistent with participants' responses.

In addition, my use of different qualitative research methods such as participant observation, in-depth interviews and photo elicitation were important tools for confirming interpretations in each method. According to Jakob (2001), method triangulation helps reduce research bias by ensuring that the different methods cover the weaknesses of each other. Thus, my use of different qualitative methods helped to ensure rigor and reduce the possible bias associated with the use of a single data production method (Denzin, 1970 in Merriam, 1995). Besides, the mixed research method is another form of method triangulation where quantitative and qualitative methods were to complement each other and provided depth and rigor to the study findings (Jakob, 2001).

### **3.8 Conclusion**

This chapter presented the research methodology and techniques used in answering the research questions. In doing so, I followed Fox and Alldred (2015), and Feely (2020) description of new materialist research design and data analysis which call for attention to the affective flows within a research assemblage rather than individual subjects. By paying attention to everyday mundane things in participant's intra-acting narratives, we see how matter acts as potent yet sometimes hard to detect ways because we are not used to looking for or at matter as an active force (Feely, 2020). Assemblage and diffractive approaches highlight how materiality persistently acts, helping to produce shifts in meaning at every turn and through all facets of female fisher folk's lives (Barad, 2003).

Thinking with data is a non-representational approach where the researcher pays less attention to what a particular event or data means, but rather what the data or event can do in the research assemblage (Dernikos, 2019; Jackson and Mazzei, 2012). Hence,

data produced is not merely used to show that the events within the different contexts described represent or signify a singular reality. By reading the data while ‘thinking with theory’ (Jackson and Mazzei, 2012, p. 261), I attune myself to the various processes of fishery decision-making as affective in order to explore the emergent opportunities for and obstacles to women’s decision-making both as fisherfolk and human beings.

My hope is to create a novel account of gender inequality in decision-making and practices using the small-scale fishery sector as a case example which can be transferred into other similar spheres of social interactions and events, so that we may begin to rethink the notion of gendered decisions and practices. I do not view my data – the 1-2 hours interviews with the selected fisherfolk as autonomous and self-contained units of truth, rather I consider them as emerging, co-constituting events and part of the research assemblage that provided explanations for the gendering of fishery decision-making and practices (Taguchi, 2012; Pomerantz and Raby, 2020).

## CHAPTER 4

### PERCEPTIONS AND DYNAMICS OF WOMEN’S FISHERY DECISION-MAKING AND PRACTICES

#### 4.1 Introduction

Extant research indicates that accounts of women’s household decision-making power vary by spouse (Bertocchi et al., 2014; Tichenor, 2005). However, the meanings (perceptions and attitudes) attached to women’s decision-making roles have received limited attention in the existing literature especially from a developing country context. Again, there is a dearth of research on husband’s perceptions and attitudes towards women’s decision-making roles (Bertocchi et al., 2014; Medved, 2016). In this chapter, I explore how both women and men make sense of women’s household fishery-based decision-making in Ghana’s small-scale fishery sector. Understanding gaps in women and men’s accounts would be crucial for understanding the inconsistencies in the outcomes of programs targeted at enhancing women’s decision-making in the fisheries sector (Mutimukuru-Maravanyika et al., 2017).

Before I discuss the perceptions and dynamics of women’s fishery decision-making, I provide a descriptive analysis of the socio-demographic characteristics of respondents in the survey (stratified by study locations) as well as the interviews. Next, I provide a descriptive analysis of the main variables used for the multivariate regression analysis of women’s household fishery decision-making and practices. These include women’s gender role attitudes (*gender\_attitudes*), household financial contribution (*financial\_contribution*), ownership of fishery equipment (*ownership*), seasonality, and the type of fishery activities women do. I will also provide qualitative data to support or qualify the descriptive findings in instances where the survey fails to capture the nuances or dynamics in fishery decisions and practices.

## **4.2 Socio-demographic characteristics of study population (Survey)**

For the quantitative data, Table 7 provides the following details. A total of four hundred respondents (N = 400) participated in the survey from the three fishing towns with Axim (N) = 179 (44.8%), Sekondi (N) = 116 (29.0%), and Dixcove (N) = 105 (26.2%). The respondents were aged 49.08 years on average which was relatively older compared to the national mean age of 30.3 years for the female working population aged 15-64 (Ghana Statistical Service, 2016). Besides, majority of the participants were migrants (70.3%) and mostly belonged to the Fante ethnic group (70.5%). The Fantes are popularly known fishers and fish traders not only along the coast of Ghana, but across the entire West African coast as far back as the twentieth century (Overå, 2001; Odotei, 1991). More than half (67.5%) of the respondents lived with their husbands. 40.8 percent of the respondents had no formal education, which was comparatively better than their spouses with 53.8% without formal education. However, as reported by the women, their male counterparts have higher educational attainment, with almost 8% high school education compared to the women with 4% high school education. All three study communities had more than 50% of their household size 5-10 people, which was slightly higher than the 2014 average national household size of 4 people (Ghana Statistical Service, 2014). This could also stem from the fact that the small-scale fishery business is based on family labour and a large family size is desirable especially during the bumper fishing season (Kraan, 2009; Overå, 1998). Majority (84.5%) of the survey respondents had no other source of regular income and the few (15.5%) who had other source of income engaged in small-scale businesses such as food vending and mini provision stores to serve as alternatives, especially during the lean fishing season.

**Table 7: Socio-demographic characteristics for survey**

Codes	Characteristics	Axim N (%)	Sekondi N (%)	Dixcove N (%)	P- Value	Total N (%)
	<b>Age</b>				<b>0.25</b>	
1	16-25	2 (2.6)	3 (2.6)	2 (1.9)		7 (1.8)
2	26-35	28 (15.6)	13 (11.2)	9 (8.6)		50 (12.5)
3	36-45	35 (19.6)	17 (14.7)	11 (10.5)		63 (15.8)
4	46-55	73 (40.8)	45 (38.8)	50 (47.6)		168 (42.0)
5	56-65	34 (19.0)	33 (28.4)	30 (28.6)		97 (24.3)
6	66+	7 (3.9)	5 (4.3)	3 (2.9)		15 (3.8)
	<b>Residential Status</b>				<b>0.41</b>	
0	Indigene	59 (33.0)	30 (25.9)	30 (28.6)		119 (29.8)
1	Migrants	120 (67.0)	86 (74.1)	75 (71.4)		281 (70.3)
	<b>Length of stay</b>				<b>0.03</b>	
0	Born in comm.	59 (33.0)	27 (23.3)	30 (28.6)		116 (29.0)
1	Less than 10yrs	23 (12.8)	28 (24.1)	14 (13.3)		65 (16.3)
2	11-20yrs	31 (17.3)	29 (25.0)	16 (15.2)		76 (19.0)
3	21-30yrs	32 (17.9)	12 (10.3)	17 (16.2)		61 (15.3)
4	30yrs +	34 (19.0)	20 (17.2)	28 (26.7)		82 (20.5)
	<b>Ethnicity</b>				<b>0.00</b>	
1	Nzema	37 (20.7)	4 (3.4)	4 (3.8)		45 (11.3)
2	Ahanta	22 (12.3)	19 (16.4)	22 (21.0)		63 (15.8)
3	Fante	117 (65.4)	87 (75.0)	78 (74.3)		282 (70.5)
4	Ewe	1 (0.6)	3 (2.6)	0.0 (0.0)		4 (1.0)
5	Others (Ga, etc.)	2 (1.1)	3 (2.6)	1.0 (1.0)		6 (1.5)
	<b>Religion</b>				<b>0.02</b>	
1	Catholic	41 (22.9)	27 (23.3)	7 (6.7)		75 (18.8)
2	Protestant	124 (69.3)	80 (69.0)	92 (87.6)		296 (74.0)
3	Islam	1 (0.6)	0 (0.0)	0 (0.0)		1 (0.3)
4	Traditional	3 (1.7)	2 (1.7)	3 (2.9)		8 (2.0)
5	Do not belong	10 (5.6)	7 (6.0)	3 (2.9)		20 (5.0)
	<b>Length of marriage</b>				<b>0.41</b>	
1	Less than 10yrs	81 (45.3)	41 (35.3)	47 (44.8)		169 (42.3)
2	10 - 20 years	28 (15.6)	25 (21.6)	14 (13.3)		67 (16.8)
3	21-30yrs	46 (25.7)	25 (21.6)	25 (23.8)		96 (24.0)
4	31-40yrs	23 (12.8)	23 (19.8)	17 (16.2)		63 (15.8)
5	41yrs +	1 (0.6)	2 (1.7)	2 (1.9)		5 (1.3)
	<b>Living with Spouse</b>				<b>0.77</b>	
0	No	50 (27.9)	37 (31.9)	43 (41.0)		130 (32.5)
1	Yes	129 (72.1)	79 (68.1)	62 (59.0)		270 (67.5)
	<b>Number of Children</b>				<b>0.66</b>	
0	None	4 (2.2)	3 (2.6)	4 (3.8)		11 (2.8)
1	1-5 children	100 (55.9)	69 (59.5)	67 (63.8)		236 (59.0)
2	6-10 children	73 (40.8)	44 (37.7)	33 (31.4)		150 (37.5)
3	11 +	2 (1.1)	0 (0.0)	1 (1.0)		3 (0.8)
	<b>Ages of Children</b>				<b>0.01</b>	
0	No child	4 (2.2)	3 (2.6)	5 (4.8)		12 (3.0)
1	Less than 10yrs	71 (39.7)	29 (25.0)	22 (21.0)		122 (30.5)
2	11 - 20yrs	66 (36.9)	46 (39.7)	38 (36.2)		150 (37.5)
3	21 - 30 years	34 (19.0)	33 (28.4)	31 (29.5)		98 (24.5)
4	31 years	4 (2.2)	5 (4.3)	9 (8.6)		18 (4.5)

Codes	Characteristics	Axim N (%)	Sekondi N (%)	Dixcove N (%)	P-Value	Total N (%)
<b>Level of Education</b>					<b>0.02</b>	
1	No formal education	65 (36.3)	51 (44.0)	47(44.8)		163 (40.8)
2	Primary	54 (30.2)	25 (21.6)	36(34.3)		115 (28.7)
3	Junior High Sch (JHS)	47 (26.3)	39 (33.6)	19(18.1)		105 (26.3)
4	Secondary/Vocational	12 (6.7)	1 (0.9)	3(2.9)		16 (4.0)
5	Tertiary (Under/postgrad)	1 (0.6)	0 (0.0)	0(0.0)		1 (0.3)
<b>Spouse' Education</b>					<b>0.01</b>	
1	No formal education	89 (49.7)	56 (48.3)	70(66.7)		215 (53.8)
2	Primary	36 (20.1)	20 (17.2)	22(21.0)		78 (19.5)
3	Junior High Sch (JHS)	36 (20.1)	28 (24.1)	11(10.5)		75 (18.8)
4	Secondary/Vocational	18 (10.1)	11 (9.5)	2(1.9)		31 (7.8)
5	Tertiary (Under/postgrad)	0 (0.0)	1 (0.9)	0(0.0)		1 (0.3)
<b>Household size</b>					<b>0.1</b>	
1	Less than 5	46 (25.7)	47 (40.5)	36(34.3)		129 (32.3)
2	5-10years	107 (59.8)	63 (54.3)	63(60.0)		233 (58.3)
3	11-15years	20 (11.2)	6 (5.2)	6(5.7)		32 (8.0)
4	16 +	6 (3.4)	0 (0.0)	0(0.0)		6 (1.5)
<b>Years in work</b>					<b>0.82</b>	
1	Less than 10yrs	18 (10.1)	10 (8.6)	10(9.5)		38 (9.5)
2	10-19yrs	40 (22.3)	28 (24.1)	17(16.2)		85 (21.3)
3	20-29yrs	56 (31.3)	33 (28.4)	29(27.6)		118 (29.5)
4	30-39yrs	40 (22.3)	28 (24.1)	32(30.5)		100 (25.0)
5	40yrs +	25 (14.0)	17 (14.7)	17(16.2)		59 (14.8)
<b>Monthly income - Fishery</b>					<b>0.00</b>	
1	Less than GHS 200	87 (48.6)	43 (37.1)	39(37.1)		169 (42.3)
2	GHS 200-400	41 (22.9)	48 (41.4)	42(40.0)		131 (32.8)
3	GHS 401-600	26 (14.5)	21 (18.1)	19(18.1)		66 (16.5)
4	GHS 601-800	10 (5.6)	3 (2.6)	2(1.9)		15 (3.8)
5	GHS 801-1000	10 (5.6)	1 (0.9)	2(1.9)		13 (3.3)
6	GHS 1001 +	5 (2.8)	0 (0.0)	1(1.0)		6 (1.5)
<b>Other regular income source</b>					<b>0.00</b>	
0	No	139 (77.7)	107 (92.2)	92(87.6)		338 (84.5)
1	Yes	40 (22.3)	9 (7.8)	13(12.2)		62 (15.5)
<b>Social Class</b>					<b>0.00</b>	
1	Lower class	76 (42.5)	68 (58.6)	74(70.5)		218 (54.5)
2	Middle class	84 (46.9)	40 (34.5)	28(26.7)		152 (38.0)
3	High class	19 (10.6)	8 (6.9)	3(2.9)		30 (7.5)
<b>Decision-making growing up</b>					<b>0.00</b>	
1	Father Decided	59 (33.0)	10 (8.6)	5(4.8)		74 (18.5)
2	Parents Shared	78 (43.6)	83 (71.6)	71(67.6)		232 (58.0)
3	Mother Decided	35 (19.6)	20 (17.2)	24(22.9)		79 (19.8)
4	Others Decided	7 (3.9)	3 (2.6)	5(4.8)		15 (3.5)

**Total (N) = 400; 1 US\$ = GHS 5.7.**

#### **4.3 Socio-demographic characteristics of study population (Interviews)**

For the qualitative data, a total of 20 women from the surveyed informants were interviewed. 18 husbands of the selected women were also interviewed. Finally, seven

couple interviews were conducted after the individual in-depth interviews. Table 8 provides a summary of participant's (wives and husband's) socio-demographic characteristics.

**Table 8:** Socio-demographic characteristics of Participants in the interviews

Characteristics	Wives N (%)	Husbands N (%)
<b>Age</b>		
26-35	1 (5.0)	0 (0.0)
36-45	4 (20.0)	1 (5.6)
46-55	11 (55.0)	9 (50.0)
56-65	2 (10.0)	6 (33.3)
66+	1 (5.0)	2 (11.1)
<b>Level of Education</b>		
No formal education	6 (30.0)	9 (50.0)
Primary	11 (55.0)	6 (33.3)
Junior High Sch. (JHS)	2 (10.0)	1 (5.6)
Secondary/Vocational	1 (5.0)	1 (5.6)
Tertiary (under/postgrad.)	0 (0.0)	1 (5.6)
<b>Own Fishery Business</b>		
No	1 (5.0)	1 (5.6)
Yes-Co-owner	15 (75.)	8 (44.4)
Yes-sole owner	4 (20.0)	9 (50.0)
<b>Years in work</b>		
Less than 10yrs	2 (10.0)	1 (5.6)
10-19yrs	4 (20.0)	3 (16.7)
20-29yrs	9 (45.0)	2 (11.1)
30-39yrs	2 (10.0)	4 (22.2)
40yrs +	3 (15.0)	8 (44.4)
<b>Social Class</b>		
Low class	11 (55.0)	3 (16.7)
Middle class	6 (30.0)	10 (55.6)
High class	3 (15.0)	5 (27.8)
<b>Hse. dec. arrangement growing up</b>		
Father took major decisions	4 (20.0)	6 (33.3)
Mother took major decisions	6 (30.0)	3 (16.7)
Parents shared decisions	9 (45.0)	7 (38.9)
Others Decided	1 (5.0)	0 (0.0)
Cannot tell	0 (0.0)	2 (11.1)
<b>Total (N)</b>	<b>20</b>	<b>18</b>

#### 4.4 Women's financial contribution, gender role attitudes and ownership of equipment

Table 9 shows that in terms of household financial contribution, majority (64.1%) of the respondents said they contributed more than 50% (i.e. more than 50% and 100%) of their household's finances. Respondent's demonstrated high gender role attitudes with mean

score (15.00), which indicates that they tend to hold egalitarian gender role attitudes. In terms of ownership of fishery equipment, more than half (51.2%) of the women indicated co-ownership with their husbands, whilst 23.5% indicated single ownership. 25% of the respondents indicated that they did not own any major fishery equipment. Such women indicated their husbands were sole owners of the major fishery equipment. In-depth interviews with the women revealed that the percentage of single and co-owners could be more, as some women who co-owned with their spouses were found to mostly associate ownership to their husbands. For instance, a indicated in an interview that she was the sole owner of the business, but in the survey, she had selected being a co-owner. When the woman was asked as to why the difference, she indicated, *‘even if I am the owner, he [the husband] is the one who uses the canoes, the nets, and the rest to fish, and when there is fault, he repairs them... claiming single ownership will not do anything’*.



**Table 9:** Descriptive analysis of independent and dependent variables used in study

Variables		Frequency	Percentage				
Financial contribution							
No contribution		13	3.3				
Less than 50%		74	18.5				
Exactly 50%		57	14.2				
More than 50%		157	39.3				
100%		99	24.8				
Ownership of equipment							
No		101	25.3				
Yes – Co-owner		205	51.2				
Yes- Single owner		94	23.5				
Gender role attitudes							
Mean (SD)		15.00 (3.71)					
Minimum-Maximum		(5-20)					
Fishery Activities		Fully involved	Partially involved	Not Involved	Mean	SD	Min-Max
		N (%)	N (%)	N (%)			
A	Fishing	3 (0.8)	4 (1.0)	393 (98.3)	0.01	0.10	(0-1)
	Repair equipment (e.g. Canoe, nets)	0 (0.0)	3 (0.8)	397 (99.2)	0.01	0.09	(0-0.5)
	Repair fish processing equip (e.g. oven)	137 (34.3)	101 (25.3)	162 (40.5)	0.47	0.43	(0-1)
	Purchase fishing equipment (e.g. canoe)	58 (14.5)	144 (36.0)	198 (49.5)	0.33	0.36	(0-1)
	Purchase fish processing equip. (canoe)	197 (49.3)	107 (26.8)	96 (24.0)	0.63	0.41	(0-1)
B	Pricing at the beach (bulk sales)	126 (31.5)	105 (26.3)	169 (42.3)	0.45	0.43	(0-1)
	Processing of fish (e.g. smoking, frying)	374 (93.5)	16 (4.0)	10 (2.5)	0.96	0.41	(0-1)
	Marketing locations/transporting	354 (88.5)	29 (7.2)	17 (4.3)	0.92	0.23	(0-1)
	Pricing at the market (retail)	330 (82.5)	56 (14.0)	14 (3.5)	0.90	0.24	(0-1)
		Solely decides	Partially involved	Not Involved	Mean	SD	Min-Max
Fishery Decisions		N (%)	N (%)	N (%)			
Spend income		128 (32.0)	225 (56.3)	47 (11.8)	1.20	0.63	
When to go fishing		78 (19.5)	145 (36.3)	177 (44.3)	0.75	0.76	
Fish for consumption		154 (38.5)	130 (32.5)	116 (29.0)	1.10	0.82	
Repair of fishing equipment (e.g. Canoes)		48 (12.0)	147 (36.8)	205 (51.2)	0.61	0.69	(0-2)
Repair fish processing equip (e.g. Oven)		267 (66.8)	79 (19.8)	54 (13.5)	1.50	0.72	
Purchase fishing equip (e.g. Canoe, nets)		63 (15.8)	162 (40.5)	175 (43.8)	0.72	0.71	
Purchase fish processing equip (e.g. Oven)		273 (68.3)	79 (19.8)	48 (12.0)	1.56	0.70	
Processing fish		374 (93.5)	16 (4.0)	10 (2.5)	1.91	0.36	
Marketing location		354 (88.5)	29 (7.2)	17 (4.3)	1.84	0.47	
Pricing at the beach		147 (36.8)	100 (25.0)	153 (38.3)	0.98	0.87	
Pricing at the market		333 (83.3)	54 (13.5)	13 (3.3)	1.80	0.47	
Major household purchases (e.g. cars)		79 (19.8)	189 (47.3)	132 (33.0)	0.87	0.72	
Minor household purchases (e.g. food)		215 (53.8)	172 (43.0)	13 (3.3)	1.50	0.56	

Seasonality	Involved N (%)	Not Involved N (%)	Mean	SD	Min-Max
Spend income	154 (38.5)	246 (61.5)	0.38	0.49	0-1
Fishing	207 (51.7)	193 (48.3)	0.52	0.50	
Fish for consumption	165 (41.3)	235 (58.8)	0.41	0.50	
Repair of fishing equipment (e.g. Canoes)	178 (44.5)	221 (55.8)	0.42	0.50	
Repair fish processing equip (e.g. Oven)	142 (35.5)	258 (64.5)	0.45	0.50	
Purchase fishing equip (e.g. Canoe, nets)	211 (52.8)	189 (47.3)	0.52	0.50	
Purchase fish processing equip (e.g. Oven)	114 (28.5)	286 (71.5)	0.29	0.45	
Processing fish	94 (23.5)	306 (76.5)	0.23	0.42	
Marketing location	116 (29.0)	284 (71.0)	0.29	0.45	
Pricing at the beach	162 (40.5)	238 (59.5)	0.41	0.49	
Pricing at the market	155 (38.8)	245 (61.3)	0.39	0.49	
Major household purchases (e.g. cars)	147 (36.8)	253 (63.2)	0.37	0.48	
Minor household purchases (e.g. food)	147 (36.8)	253 (63.2)	0.37	0.48	

**Note:** **A** = List of strenuous fishery activities

**B** = List of processing and trading related activities

#### **4.5 Women's participation in fishery decision-making and practices**

In terms of women's participation in fishery decision-making and practices, Table 9 shows that only a small proportion of women engaged in strenuous activities such as fishing (0.8% and 1.0% for full and partial participation respectively). Similarly, in terms of repairs only 0.8% partially participated with none fully involved. These activities were considered to belong to the male domain of work. Similar patterns were found in fishery decision-making, as women participated the lowest in decisions relating to fishing (19.5%), repair of fishing equipment (12.0%) and purchase of fishing equipment (15.8%) as compared to processing (93.5%) and pricing at the market (83.3%). These findings indicate that women do less of strenuous fishery activities, and more processing and trading related activities and decisions. In terms of seasonality, women's participation in the male dominated activities were relatively high with fishing (51.7%), repair of equipment (44.1%), and purchase of equipment (52.8%). This is partly so due to the fact that during the lean season, women mostly depend on imported fish, which requires that they travel to buy. Hence, the male role of being the main supplier of fish is reduced. Besides, fishermen's frequent migration to other fishing locations during the lean season means that most repair and purchasing activities of fishery equipment would likely increase even though there are exceptions as further discussed in the next chapter.

Despite the fact that some women are involved in fishing, the gendered division of fishery activities and decisions was apparent. Activities such as fishing were considered male-domain activities as they required the use of strength and considered dangerous. The women involved in such male dominated activities played more supportive roles. In an interview with a fish trader, Akosua (57 years), she indicated:

*We [women] used to go the sea [to fish] with our boyfriends when we were young, even though we only sat to observe them as they [boyfriends] worked and we could also do the cooking...so some women can go and fish but for me I cannot.*

Hence, even in situations where women may join men, as in the above example, their ‘boyfriends’ to fish, they (women) may not necessarily engage in the fishing act. The statement ‘*some women can go, but for me I cannot*’ was repeated in almost every interview I had with the women. This indicates that while some women may be able or willing to go fishing, almost none was prepared to do so in the context of this study. Another interesting finding from Table 9 is the differences in the extent to which women are involved in the pricing of fish at the market (95.8%) compared to the pricing of fish at the beach (57.8%).

As described by a *Bosco* (canoe crew leader):

*The beach is no man’s land [not controlled by man or woman] ... that is where we negotiate with the women. If you are not hard, they [women] would take it [the fish] cheaply...you [the fisherman] will only be lucky if the price of your fish has been determined from the previous sales in the morning.*

In the fishing communities, the price of a particular species of fish is determined by the *Konkohemaa* (Chief fish trader), the canoe owner and the crew leaders of the first landed canoe. Once agreed, that becomes the price of that fish for the day. However, the price could change based on the total landings and the demand as the day progresses. My observations at the fish landing beaches visited provided a clearer picture of the phenomena where both men and women were seen arguing over fish pricing, categorizing and re-categorizing fish based on sizes, among others for pricing as Figure 10 illustrates.

**Figure 10:** Landed tuna categorized into sizes for price negotiation



A visible division of work could also be observed at the beach among all workers from old to young, where young ladies were seen helping their mothers, serving as bookkeepers by taking notes of the various groups of fish counted or parking their fish, while young males were seen carrying fish from the landed canoe to the shore in pans or helping their fathers mend their nets. I also observed older women fish traders lined up at the shore, either waiting for their yet to be landed canoes or waiting for fish to buy as shown in Figure 11.

**Figure 11:** Women lined-up at the coast waiting for fish, whilst men carry fish to shore



My visit to the main marketing centres where processed (usually smoked) fish were sold in smaller quantities revealed that men were absent in this domain. Throughout my visits to the retail markets, I never sighted a male adult sell fish. The possible reasons behind the differences in involvement of women (and men) within the two domains of fish trade are further discussed in Chapter 6.

Despite their limited participation in fishery practices and decisions, in-depth interviews with especially the men indicated that the women equally played important part in the male dominated decisions. For instance, Shaibu, a fisherman who doubled as a *Bosun Banyin* (male canoe co-owner) indicated:

*Women have their own work to do and we [men] also have our work to do in the fishing work...But when it comes to decisions to buy food items to go sea, or on how to use the money to buy nets, we take the decisions together... we decide on how to use the money...we mostly take such decisions together (Shaibu, 58 years, Axim).*

In another interview with Agya-Kojo, a *Bosun Banyin* (male canoe co-owner) who doubled as *Apofohene* (Chief fisherman) on the question, who usually had the final say on repairs and major purchases, he indicated:

*Immediately there is a problem, if I am not around, my wife would ask them to repair it. Sometimes, she calls me on phone, and I tell her to carry on. I don't have anything that should solely be done by me or by my wife. I can also call and tell her what is happening if she is not around (Agya-Kojo, 54 years, Axim).*

On the question of whether he (Agya-Kojo) had ever had a disagreement with his wife on any fishery decision, he further narrated:

*I don't know but we agree on almost everything we do...you know we may disagree on something little things... Sometimes we disagree to agree. One time I travelled to Accra to buy some papers for my printing press. When I got there, she asked that*

*I used the money to buy fishing nets. I initially disagreed that how could I use the money for printing to buy nets, but she convinced me that if we buy the net, I can get more money to buy more papers. I was convinced and I agreed.*

A key observation from interview excerpts above is that the men considered their wives as partners in the fishery business. Whereas women's decision-making roles were well recognized by their male counterparts as above, women on the other hand did not always recognize their important roles in terms of decisions regarding such fishery activities. The few women who indicated their participation also revealed that they usually had to convince their spouses that such decisions were the best or they would mostly have high decision-making only in situations when their husbands had travelled, was sick or had no strength due to age. This suggests that although women may make significant contributions in terms of fishery decisions, their decision-making power may only emerge in specific social contexts, such as when the husband is unavailable. The situation where couples perform the same work with complementary roles presents the opportunity for the wife to take certain decisions in the husband's absence. Such scenarios may not prevail in the case of dual earner homes of most advanced countries where couples usually engaged in different formal economic activities (Meisenbach, 2010; Tichenor, 2005; Levanon and Grusky, 2016; Bartley et al., 2005).

On the question of whether she had ever bypassed the husband in taking decisions relating to fishing, Eno, a fish trader who doubled as a canoe owner narrated:

*It does not always happen...if my memory serves me right, I remember some months ago when my husband had travelled, I directed the crew to move to Sekondi [fishing town] because I heard there were lots of fish there. He [husband] had warned them [crew members] not to go to that area to fish, so when he heard that I had directed, he became angry. When they returned with fish, he was okay. I was vindicated! [smiles] (Eno, canoe co-owner, 54 years, Axim).*

The above excerpts from Eno further shows that, although she did not take part in the actual fishing activity, she directed the crew to fish at a different location to ensure they can get some catch despite the husband's disapproval. However, such decision was only taken by her when the husband had travelled. A simple cross tabulation from the survey among women about their overall household decision-making arrangement showed a similar outcome. From the responses of the surveyed women, their husbands generally dominated household decision-making when in the home, while the women tended to show high decision-making power in the absence of the husband. From the Table 10, 39 and 41 women indicated not living with their spouses, out of which 30% and 31% indicated they take all important decisions and most important decisions respectively, compared to those living with their spouses with 6 women out of which only 2.2% and 5 women out of which only 1.9% indicate they take all and most important household decisions respectively. On the other hand, instances where the 'spouse takes all or most important household decisions' were when the women lived with their spouses, suggesting that the husbands have high decision-making power in both cases when women lived with their spouses.

**Table 9:** Household decision-making arrangement\*living with spouse cross tabulation

		Living with spouse		Total
		No	Yes	
<b>Household decision-making arrangement</b>	Respondent takes all important decisions	39	6	45
	Within living with spouse	30.0%	2.2%	11.3%
	Respondent takes most important decisions	41	5	46
	Within living with spouse	31.5%	1.9%	11.5%
	Division of decisions evenly shared	18	186	204
	Within living with spouse	13.8%	68.9%	51.0%
	Spouse takes most important decisions	27	62	89
	Within living with spouse	20.8%	23.0%	22.3%
	Spouse takes all important decisions	5	11	16
	Within living with spouse	3.8%	4.1%	4.0%
	<b>Total</b>	<b>130</b>	<b>270</b>	<b>400</b>
		100.0%	100.0%	100.0%
Pearson's chi square	P < 0.001; N = 400			



However, the most dominant response from the women surveyed was that household decision-making was equally shared when living with spouse, with 186 out of which 68.9% indicated the sharing of household decision-making. The above findings suggest that while women may have high household fishery decision-making power, their increased decision-making did not necessarily mean that they had more power than the husbands. Husbands seem to maintain their decision-making power in the home while that of the women increased and at best equally shared. This finding extends existing research on female breadwinning which suggest increased women's decision-making power but have been limited to the accounts of either solely women (e.g. Meisenbach, 2015) or men (e.g. Hoang and Yeoh, 2011). Examining the accounts of both couples as done in the qualitative and quantitative analysis above shows that the extent of women's decision-making power is conditional and does not necessarily imply higher decision-making when compared to their husbands.

#### **4.6 Conclusion**

A key finding from the above analysis is that women do less in fishery activities such as fishing and repair of fishing equipment which required the use of physical strength as compared to the relatively less strenuous fishery activities such as fish processing and trading. These findings corroborate existing research on the gendered division of labour in the dominant small-scale fisheries in most developing countries including Ghana, where men are mainly responsible for fishing and women are responsible for fish processing and trading (Britwum, 2009, Kraan, 2009; Overå, 1998, 2003). From a more developed country perspective, it also coincides with the findings by Zhao et al. (2013) in their study of female fisherfolk in Northern England. Despite being more formalized, similar accounts of women's participation was found as the authors revealed that 'while women are a very small minority in capture fishing (4%), women's participation in processing...are significant at 66%' (Zhao et al., 2013, p. 70). Even in studies which found women to be

actively involved in fishing, such activities were mostly concentrated in nearshore areas where women collected shellfish - a process known as gleaning (Harper et al., 2020; Kleiber et al., 2015; Fröcklin et al., 2014). Similar accounts of involvement in other aspects of economic activities such as the informal sector in Ghana (Overå, 2007), the division of farm labour in Tanzania (Anderson et al., 2017) and division of labour in Balinese rice agriculture (Jha, 2004) have been found. Explanations for what could have accounted for such trends of division in fishery practices remain inconsistent, which this thesis attempts to address in the context of Ghana's small-scale fisheries.

Similarly, in terms of decision-making, whereas women showed high level of participation in decisions relating to spending of income, fish for consumption, fish processing, market locations, pricing at market and minor purchases, their levels of participation in strenuous decisions relating to fishing, repairs of fishing equipment and major purchases and sales decisions were relatively low. Findings from the survey support studies in family sociology, that wives in dual-earner families usually perceive themselves as exerting greater influence in minor decisions than their husbands (Meisenbach, 2010; Bartley et al., 2005; Coltrane, 1996).

Findings from the study equally show that women seem to understate their influence on such household fishery decisions, especially when such decision-making power is compared with their husbands. This implies that the decision-making power of women could be more than what they actually indicated. Clearly, there were attempts by some women to portray a socially desirable behavior to show respect to the husbands and portray the character of a good wife, as found in other studies (Tichenor, 2005; Meisenbach, 2010). For example, there were instances during the couple interviews where women who had already indicated being solely responsible for providing housekeeping money were silent and waited for their husbands to declare who was in charge of such duties. Providing money in a patriarchal society like Ghana is considered a male role and the performance

of such roles by most women fish traders is considered a contravention of the generally accepted social behaviour, hence their seeming silence. As would be discussed in detail in Chapter 6, women (and men) who contravene such socially gendered roles may be ‘punished’ through various discursive practices. Finally, the spatial difference in the gendered division of fishery decisions and practices was equally apparent. While women dominated the sale of fish at the fish market, the landing beach was often considered a ‘no man’s land’, where both men and women negotiated for higher price of fish. Existing literature have considered such gendered roles as resulting from social norms and expectations (e.g. Kraan, 2009; Britwum, 2009; Kleiber et al., 2015). Findings from the above indicate that the spatial differences coupled the material objects and the activities undertaken within the different locations (i.e. landing beach and market) played active role in the gendering fishery decisions and tasks such as sale of fish. These dynamics would be discussed in detail in Chapter 6.

This chapter demonstrates gender inequality in fishery decision-making and practices where women participated more in decisions/activities relating to the processing and sale of fish, whilst their participation is limited in strenuous fishery activities/decisions such as fishing and repair of equipment. In the next chapter, I examine the forces that affect women’s household fishery decision-making/practices by arguing that the differences in the kind of fishery activities women (and men) do are best understood as produced in, and by the material (e.g. strength), discursive (e.g. gender norms), economic and spatio-temporal assemblages working together (Feely, 2015, 2016; Barad, 2007, 2014). These forces combine simultaneously to co-create opportunities for and obstacles to women’s household fishery decision-making and practices in different contexts.

## CHAPTER 5

### HOUSEHOLD FISHERY PRACTICES AND DECISION-MAKING ASSEMBLAGE

#### **5.1 Introduction**

The current thesis focuses on how we can understand the complexities of women's participation in household fishery decision-making and practices by paying attention to the role of materialities and its co-implications. The preceding chapter provides accounts of gender inequality in household fishery decision-making and practices. Drawing from the new feminist materialist approach, I argue that problems around women's participation in household fishery decisions and practices are produced or come into being, not simply by and within, language or human intentionality, but by the complex intra-action of actual material entities (e.g. the fish, the sea, canoes, fishing nets, seasonality, and biological bodies such as the male and female bodies with different capacities) and linguistic constructions (e.g. discourses around masculinity/femininity, gender norms, religion, historical accounts, etc.). In other words, I show how the problem of gender inequality in couple's fishery decision-making and practices are produced by a network of material-discursive forces within what Foucault might call an apparatus (Foucault, 1977), what Deleuze and Guattari (1988) call machinic assemblage and Barad (2007, 2014) calls material-discursive intra-action practices.

According to Bossen (1989 in Jha, 2004, p. 552) 'understanding gender division of labour is useful for identifying the points at which men and women can create leverage on the basis of the tasks they perform to secure a greater measure of influence for themselves'. I follow Deleuzian ontology, focusing on the capacities of bodies by asking the questions, 'what can bodies do?', or what can division of fishery labour do? (Deleuze, 1992 in Feely, 2014, p. 43; Fox and Alldred, 2016).

As indicated in the methodology chapter, the qualitative data is the core component which is supplemented with the survey to help highlight points of convergence, divergence, or

contradictions from the two data sources (Sweeney et al., 2016). In this chapter, I present findings from the multivariate regression analysis to help examine the extent to which the material, discursive and economic factors are associated with women's decision-making as well as the directions of their relationships. Although, the regression analysis provides important complementary data, a deeper understanding of equally important but complex factors such as *name calling* in co-determining the different contexts of women's fishery decision-making may be difficult to capture quantitatively. Thus, I present findings from the qualitative data to support, contrast or extend the findings from the regression analysis to provide a more nuanced and extended account of how the material, discursive, spatial and temporal components produced different outcomes of women's fishery decision-making and practices through their entanglements.

With these considerations in mind, I begin the chapter by identifying the components of forces or micro-political conditions at work and their effects on women's participation in household fishery practices and decision-making. Specifically, I focus on four key component forces: Materialities (human bodies and non-human objects), spatial forces, discursive forces as well as embodied affects and emotions, and how they simultaneously combine to affect the extent of women's household fishery decision-making and practices. After this, I would examine the micro-political processes of women's participation in household fishery decision-making and practices, and map how different components of forces combine to create opportunities for and/or obstacles to women's participation in household fishery decision-making/practices in the next chapter.

## **5.2 Micro-political conditions of division of fishery labour and decision-making assemblage**

In this section, I turn my attention to the micro-political conditions of possibility in which gendered patterns of household fishery decision-making and practices emerge following Feely (2020). I do this by outlining the component forces at work in the household fishery

decision-making assemblage along a material-discursive-spatio-temporal-economic assemblage. These component forces were identified from the quantitative data based on multivariate linear regression models as well as the stories from the qualitative data relating to women's participation in fishery activities and decisions from the ethnographic accounts and continually asking the question: *How are the material, discursive, spatial and temporal forces affecting these outcomes or stories?*

### **5.2.1      *Material Components of fishery decision-making and practices***

The material components associated with the gendered fishery decisions and practices from the quantitative analysis and as narrated by participants (both women and men) and obtained from the ethnographic accounts were identified as below.

**A. *The human biology/biological bodies with different capacities:*** This includes the human (women/wives and men/husbands) bodies, which are involved in fishery decisions and practices with different capacities. Understanding the role of biological or human bodies is crucial for understanding 'what is in the nature of bodies that opens them up to cultural transcription, social immersion and production' (Grosz, 2004, p. 2; Barad, 2003). Each of these biological bodies (i.e., women and men, fish, etc.) have actual capacities (e.g., physical prowess/strength, pregnancy, menstruation, breastfeeding, and daintiness) and virtual capacities (by asking the question, what else can bodies do?) to engage in the fishery practices and decisions (Feely, 2020). It should be noted however that these actual capacities are not fixed or brute truth, but subject to change in different social contexts (Barad, 2014; Coffey, 2013).

**B. *Embodied affects and emotions:*** That is, the embodied affects and emotions (e.g., love, fear, courage, shame, respect, etc.) that are experienced by biological bodies (women and men) in relation to household fishery practices and decision-making. Affect is distinguished from emotions. According to Hook and Wolfe (2018) 'affect is the

somatic shadow of another entity on [a] body...it is scarred, shaped and marked (consciously and unconsciously)'. Bodies respond differently to this marking as they intra-act and emotion is the expression of this marking (Fox, 2015). Thus, affect is considered to be visceral and pre-discursive (Hickey-Moody and Malins, 2007; Fox, 2015), without demoting the epistemological value of emotions or as oppositional to affect, but as a constitutive part in influencing behaviours and different social outcomes (Boler, 2015).

**C. *Non-human material objects*:** The non-human components identified in influencing the fishery practices and decision-making assemblage include: the fishing nets, metal nets (for processing), canoe, outboard motor, the fish, the deep sea, the waves, the gentle lagoon as well as the architectural structures within which various fishery practices are undertaken and decisions are made (such as the bedroom, fenced versus non-fenced houses) and Technology (use of mobile phones, television images, etc.). All these objects and bodies play constitutive role in influencing the extent of women's participation and the gendering of household fishery decisions and practices.

### ***5.2.2 Discursive forces in household fishery practices and decision-making***

The household fishery practices and decision-making assemblage is over-coded with discourses about appropriate gender roles and attitudes (forming social norms and values), which divide bodies into hierarchies creating different subjective positions as strong or weak humans, husband and wife (in marriage), among other social stratifications with different expectations (Feely, 2020). These discursive hierarchies of humanity work together with additional discourses such as historical accounts of the division of fishery decisions and practices, and Biblical accounts (man as head of the house, Victorian legacies, etc.) to influence fishery practices and decision-making outcomes.

### ***5.2.3 Spatio-temporal forces***

Stories about differential patterns of fishery decision-making and practices were also found to be affected by the differential spaces or locations within which different fishery activities and decisions occur such as selling of fish at the market versus the beach or restaurant, fish processing in the tent/kitchen (detached from home) versus tent/kitchen within the home—fenced/not fenced), residential locations/living arrangements of spouses (living together/separate locations), the bedroom where certain disagreements are resolved, which creates different subjective positions and decision-making arrangements. Temporal forces such as seasonality and the resultant migration of fishers, differential time required to undertake fishing and fish processing were equally important.

### ***5.2.4 Economic, demographic forces and familial arrangements***

Different sociodemographic and economic characteristics of women and between men and women, women's education, age, income, fishery business ownership status, length of marriage as well as socialization factors such as household decision-making arrangement growing up, were also crucial in the fishery household practices and decision-making assemblage.

The above components in the fishery decision-making/practices assemblage have been identified as co-determining instead of individual determinate factors. The hierarchical multiple regression analysis (Table 11) shows the relevance of each of these components in explaining women's household fishery decision-making power as well as the extent of women's participation in different forms of household fishery decision-making in different contexts. It should be noted however that while such statistical analysis may provide important understanding of the social world, they do not grant final causality to these factors, but rather as an assemblage of forces which these factors play constitutive part through their intra-actions. Notwithstanding, these quantitative analyses provided useful



supplementary information on the extent to which each of these forces affect women's participation in fishery decision-making as detailed below.

### **5.3 Identifying Components: Quantitative Analysis**

#### ***5.3.1 Sociodemographic factors***

Socio-demographic factors had significant effects on women's fishery household decision-making power. From model 1 as shown from the Table 11, women's age had positive and significant effects on their household decision-making power ( $\beta = 0.713$ ,  $p < 0.01$ ). In fact, women's age was positive and significant throughout the models, with model 2 ( $\beta = 0.588$ ,  $p < 0.01$ ) and model 3 ( $\beta = 0.552$ ,  $p < 0.01$ ). This implies that younger women tended to have low decision-making power. However, as women grew older their decision-making power increased. Young women may not have important resources (e.g. ownership of canoes) to propel their decision-making power especially decisions within the male domain of work. Besides, wives tend to be younger than their husbands and showing respect to the decisions of their older husbands may come naturally (Overå, 1998). What is interesting here is that the findings seem to suggest that as women grew older, the decision-making power differences between them and their spouses may narrow.

Familial characteristics such as length of marriage and living arrangement with spouse (husband) also had a significant bearing on women's decision-making power. Years in marriage and living with spouse (husband) had negative and significant effects on women's decision-making power with ( $\beta = -0.262$ ,  $p < 0.05$ ) and ( $\beta = -0.785$ ,  $p < 0.05$ ) respectively. These results mirror the findings on general household decision-making arrangement in the preceding chapter, where women living with their spouses reported having low decision-making power compared to those not living with their spouses (See Chapter 4). Perhaps, the presence of the male partner brings to bear forces of masculinity and femininity and discourses of appropriate male and female roles (Overå, 2003; Kleiber et

al., 2017), which is further discussed in the later part of Chapter 6. Further, women whose fathers had more decision-making power on fishery-based household decisions when they (the women) were growing up, had negative and significant effects on their decision-making power ( $\beta = -0.628$ ,  $p < 0.10$ ). This highlights the role of family socialization on women's decision-making power (Ciabattari 2001).

### ***5.3.2 Effects of women's financial contributions, gender role attitudes, ownership of equipment and seasonality on decision-making***

In Model 2, I included women's *financial\_contributions*, *gender\_attitudes*, *ownership*, *seasonality* and the type of fishery activities (strenuous, and processing and trading). Women's *financial\_contribution* was positively and significantly associated with their decision-making power ( $\beta = 0.302$ ,  $p < 0.01$ ). That is, women who contributed more money than their spouses had more decision-making power than those who contributed less than their spouse, which buttresses the relative resource arguments (Sullivan, 2011; Blood & Wolfe, 1960). Findings from the qualitative data provide evidence of the above results. Interviews (with both male and female participants) showed that wives with higher financial contribution than their spouses were more capable of maneuvering decisions to their favour or more likely to share decision-making with their spouses:

*For most fishermen our wives are our treasurers. In fact, it is from their sale that we get money for our [fishing] trips. They pay for our expenses, so if there is something fishy, she can object it* (Wofa, 62years, retired fisherman/canoe co-owner, Axim).

Another male informant indicated:

*There is a saying that you cannot advice a rich man. But in instances where both the man and the wife have suffered to co-create the family wealth like most cases in this community, do you think I can have control...no, no, no.* (Ato, 46years, co-canoe owner, Axim).

Women's ownership of fishing equipment was positively and significantly associated with their decision-making power ( $\beta = 0.363$ ,  $p < 0.05$ ), whilst seasonality was negatively and significantly associated with decision-making power ( $\beta = -0.142$ ,  $p < 0.01$ ). Besides, women's participation in *strenuous* activities positively (though insignificant) associated with their decision-making power, whereas *processing/trading* activities was negatively and significantly associated with their decision-making power ( $\beta = -0.208$ ,  $p < 0.05$ ). However, the association between *gender\_attitudes* and *decision\_power* (though positive) did not reach statistical significance in both model 2 ( $\beta = 0.040$ ,  $p > 0.10$ ) and model 3 ( $\beta = 0.037$ ,  $p > 0.10$ ). Though the effects of *gender\_attitudes* are not significant, interviews with participants indicate that gender role attitudes have an important bearing on what women (and men) do and their extent of decision-making as it intra-acts with other forces.

**Table 10:** The interaction effects of strenuous, and processing and trading activities in the relationship between *financial\_contribution*, *gender\_attitudes*, *ownership* and decision-making power by multiple hierarchical regression analysis.

Variable	Decision-making power (DMP)		
	Socio-	Main Effects	Interactions
	demographics Model 1	Model 2	Model 3
Age of respondent	0.713 (0.138)***	0.588 (0.132)***	0.552 (0.133)***
Length of marriage	-0.262 (0.124)**	-0.289 (0.119)**	-0.269 (0.118)**
Living with Spouse	-0.785 (0.313)**	-0.340 (0.325)	-0.381 (0.332)
Age of Children	0.017 (0.138)	-0.050 (0.131)	-0.036 (0.130)
Education of respondent	0.181 (0.127)	0.157 (0.121)	0.197 (0.120)
Spouse Education	-0.034 (0.127)	0.103 (0.123)	0.078 (0.122)
Years of work	-0.180 (0.110)	-0.145 (0.104)	-0.112 (0.104)
Income	0.186 (0.094)**	0.099 (0.091)	0.074 (0.090)
Household arrangement growing up			
<i>Father decided</i>	-0.628 (0.339)*	-0.652 (0.322)**	0.579 (0.321)*
<i>Decision shared</i>	0.423 (0.276)	0.309 (0.262)	0.282 (0.260)
<i>Others decided</i>	0.862 (0.588)	0.620 (0.565)	0.652 (0.560)
Financial_contribution ( <i>Financial_cont.</i> )		0.302 (0.102)***	0.323 (0.101)***
Gender role attitudes ( <i>Gender_attitude</i> )		0.040 (0.027)	0.037 (0.027)
Ownership of equipment ( <i>ownership</i> )		0.363 (0.156)**	0.306 (0.157)*
Strenuous activities ( <i>Strenuous</i> )		0.054 (0.127)	0.112 (0.131)
Processing/Trading acts. ( <i>processing</i> )		-0.208 (0.102)**	-0.172 (0.104)
Seasonality		-0.142 (0.037)***	-0.131 (0.036)***
Financial_cont. x Strenuous			-0.103 (0.112)
Financial_cont x Processing			0.110 (0.092)
Gender_attitude x Strenuous			-0.167 (0.093)*
Gender_attitude x Processing			0.168 (0.098)*
Ownership x Strenuous			0.209 (0.095)**
Ownership x Processing			0.184 (0.097)*
R <sup>2</sup>	0.195	0.292	0.322
Adj. R <sup>2</sup>	0.172	0.261	0.280
Unstandardized regression coefficients are reported, with standard errors in parentheses			
N=400; *p < 0.10    **p < 0.05    ***p < 0.01			

### 5.3.3 *Intra-actions of material-discursive-economic forces in women's decision-making power*

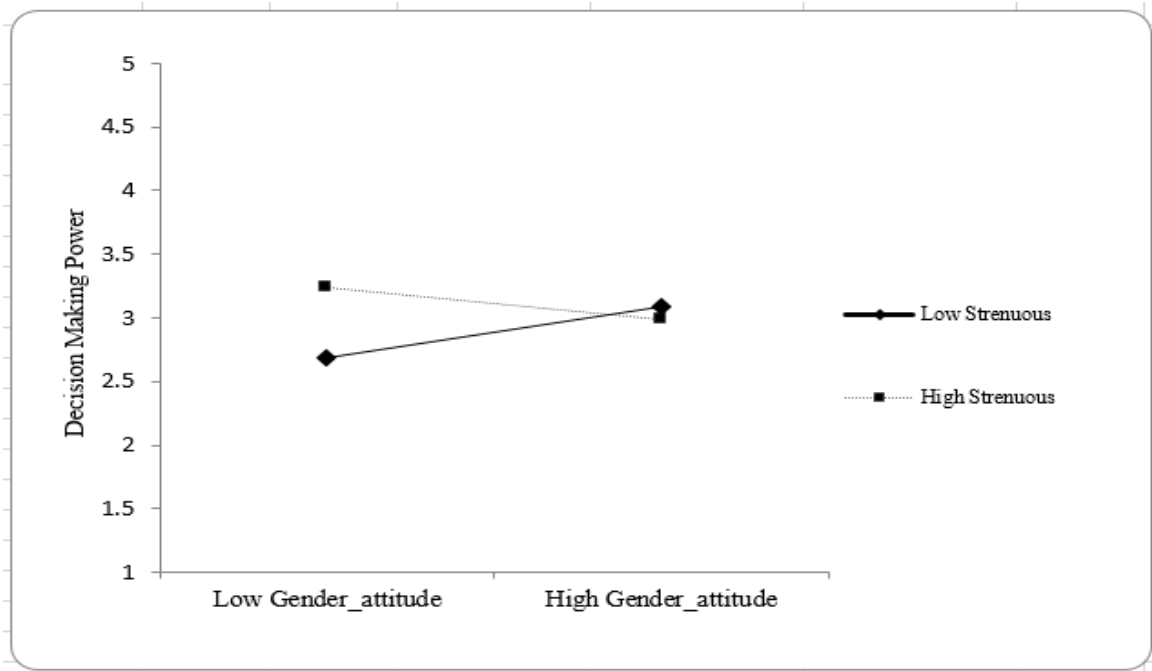
The interaction terms provide crucial details. As shown in model 3 of Table 11, strenuous activities significantly alter the positive relationship between *gender\_attitudes* and decision-making power ( $\beta = -0.167$ ,  $p < 0.10$ ), whilst *processing/trading* activities significantly strengthens the positive relationship between *gender\_attitudes* and decision-making power ( $\beta = 0.168$ ,  $p < 0.10$ ). In terms of ownership, both strenuous and

*processing/trading* activities significantly strengthened the positive relationship between *ownership* and decision-making power ( $\beta = 0.209$ ,  $p < 0.01$ ) and ( $\beta = 0.184$ ,  $p < 0.10$ ) respectively. However, the interactions of both *strenuous* and *processing/trading* in the relationship between *financial\_contribution* and *decision\_power* did not reach statistical significance.

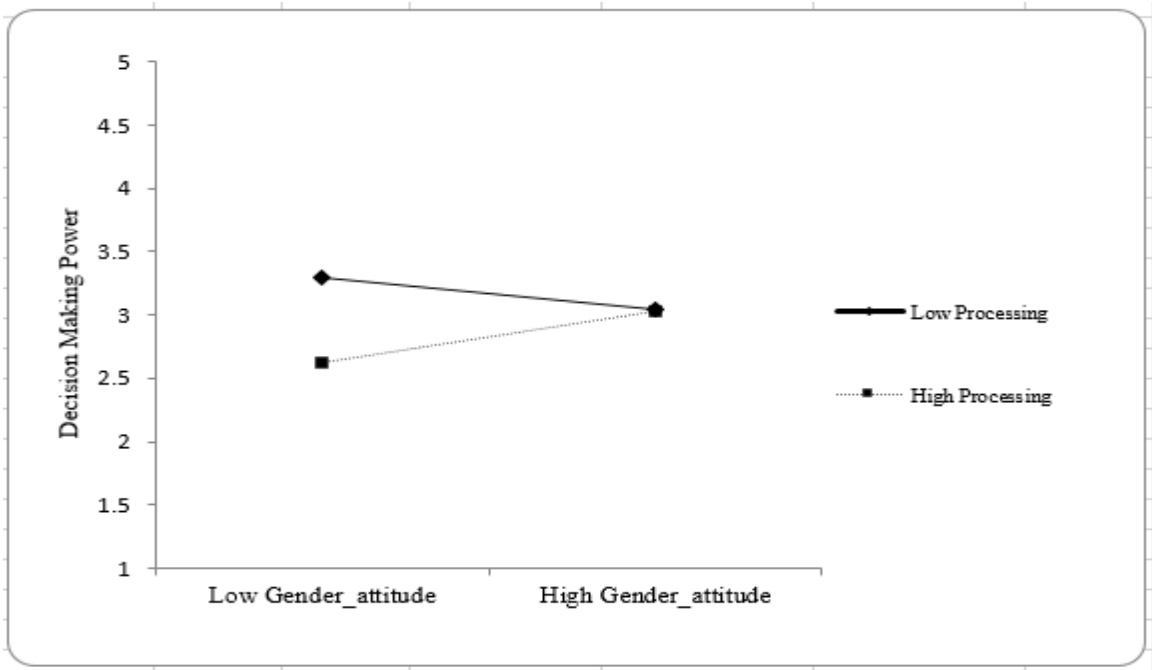
Interestingly, the interaction terms revealed that women's participation in strenuous activities weakened the extent to which their household financial contribution and gender role attitudes are translatable into decision-making power – so much so that household financial contribution became insignificant. In short, when it comes to fishery decision-making power, the physicality of activities women do matter, just as much as how much they contribute or what they believe in. With strenuous activities, women tended to have limited decision-making power regardless of their household financial contribution and gender role attitudes, whilst in processing and trading activities, women's decision-making power is enhanced when combined high financial contribution and gender role attitudes. The differences in the effects of strenuous and processing/trading indicate that physical bodily strength matters in women's decision-making. The association between women's participation in strenuous activities and decision-making power was insignificant, but its relevance is exposed when interacted with the other economic and discursive factors. This implies that while such materialities are important, they are not the sole determinant of decision-making power and must be considered as constitutive of the labyrinth of factors affecting women's household decision-making power (Feely 2019). Following Dawson (2014), a simple slope analysis confirmed the interaction effects of strenuous as well as processing and trading related activities as shown in Figures 12, 13, 14 and 15. The interaction of strenuous activities with *gender\_attitudes* and *ownership* provides important details. For instance, from Figure 12, the slope analysis shows that strenuous activities damping the positive relationship between women's *gender\_attitudes* and decision-making

power. At low strenuous activities, women's decision-making power increases with increasing *gender\_attitudes*. However, at high strenuous activities, women's decision-making power decreases with increasing *gender\_attitudes*. Increasing gender attitudes connotes egalitarian gender roles attitudes, which suggest that women who participate in strenuous fishery activities ought to limit their egalitarian attitudes in order to have high decision-making power. Conversely, at all levels of strenuous, and processing and trading activities, the relationship between women's ownership of fishery equipment and decision-making power is strengthened as shown in Figures 14 and 15. These findings provide support for the value of incorporating a new materialist perspective because it reveals the complexities that constitute women's fishery decision-making and practices.

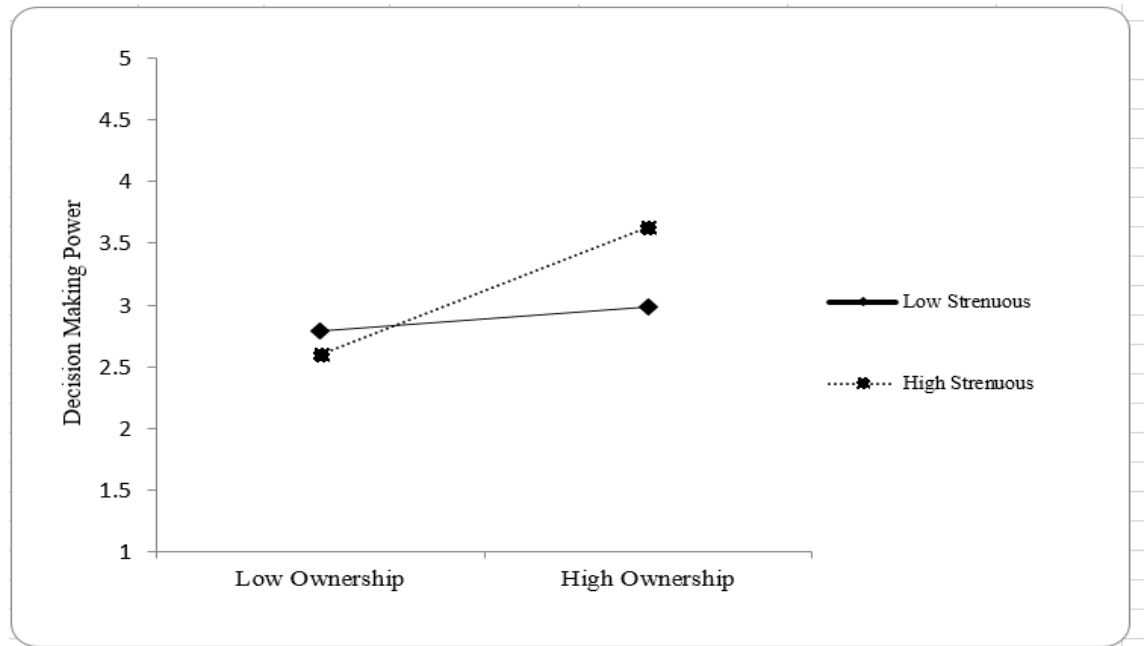
**Figure 12:** The moderating role of strenuous fishery activities in the relationship between gender role attitudes and decision-making power



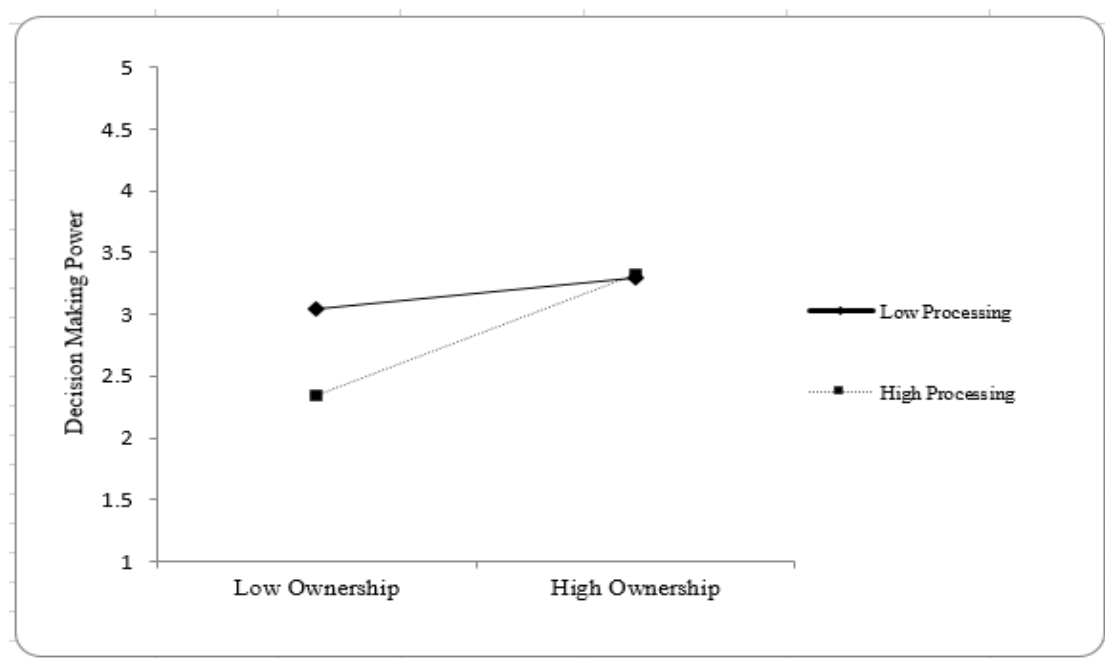
**Figure 13** The moderating role of processing and trading activities in the relationship between gender role attitudes and decision-making power



**Figure 14:** The moderating role of strenuous fishery activities in the relationship between ownership of fishery equipment and decision-making power



**Figure 15:** The moderating role of processing/trading activities in the relationship between ownership of fishery equipment and decision-making power



The findings from the above interaction terms run counter to the predictions of relative resource and gender theories, which suggest that women's high household financial contributions (Sullivan 2011; Blood and Wolfe 1960) and egalitarian gender role attitudes (Agarwal 1997; Tichenor 2005; Kleiber et al. 2015) would invariably enhance their



decision-making power. They make more sense when combined with the type of fishery activities women do.

Besides, the interaction terms of strenuous and processing and trading, and *ownership* shows that women who own fishery production assets such as canoes, fishing nets and outboard motors have high decision-making power *regardless* of the type of activities they are involved in. This adds to the findings by Overå (2003) that women who owned major fishery equipment were able to manoeuvre decisions in their favour and have higher decision-making power than those who do not. Apart from the economic benefits that come with such ownership, these women would have more at stake to ensure that this equipment is in good condition to work, which would propel their participation in such decisions. As actants in the fishery tasks, fishing equipment such as canoes can float, break, leak or drown with or without human intervention. Instead of being considered as mere tools, such equipment are ‘life force[s]’ which can make ‘[themselves] felt’ as they entangle with humans (women) and other bodies (Barad, 2012, p. 59). As would be discussed in detailed in the next chapter, the agentic capacities and dynamism (both economically and physically) of such material forces, as they entangle with humans (women’s) intentionality to ensure that such equipment work, co-determined the extent of women’s fishery decision-making. This also implies that the ability to participate in strenuous fishery activities in determining decision-making power can be overridden by ownership of key fishery equipment. Non-human materialities such as seasonality also play a crucial role, as it is negatively associated with women’s decision-making power. During the lean fishing season, fishing activities are limited and women’s domain of influence in fisheries decisions are likely to be limited as well. While women may continually engage in the sale of imported fish during the lean season, their male counterparts may find alternative jobs, such as working in the rubber plantation or farming (Owusu, 2019). Thus, they would have limited or no decision-making power on how those activities are conducted by their

husbands. The new materialist framing highlights the important role of seasons or temporal factors in these gender dynamics. There were instances where women indicated they rather had higher decision-making power during the lean season as their husbands were incapable of finding other businesses and solely depended on the wives' income. The migration of their husbands to other fishing towns rather enhanced women's household decision-making powers, though the husbands may occasionally be consulted via mobile phone calls on certain critical decisions, as indicated by Araba, a co-owner of fishery business with her husband below:

*We do the business together, so we mostly take decisions together... I may take decisions alone only when he is not around [has migrated to other fishing communities]. He sometimes travels to Moree [a fishing town] to fish. I know how to handle issues when he is not around. There are also times I would need to call him because he has to know, he is the man.* (Araba, 38 years, Axim).

Interviews with the male counterparts provided similar accounts of their migration. In the interviews above we see the effects of the temporal force of seasons in the gendering of household fishery decisions. Seasonality may limit women's decision-making power in a context where husbands provide *money* (economic force) or when a "mobile phone" (technology) is used to seek husband's opinion in some decisions even in his absence because 'he is the man' (norms of femininity and masculinity). Hence, a simple decision-making assemblage based on the above interview excerpt could be summarized as comprising:

Human's bodies—temporal force (seasons)—economic force—technology—discourses

Starting with human bodies in the assemblage above does not imply that human bodies come first, but only for illustration purpose. Any of the forces could be at the starting or end point of the assemblage. This means that the effect of seasonality in limiting women's

decision-making power materializes in relation to other forces such as women's economic dependence on their husbands (economic force) or their use of mobile phones (technology) to inform their husbands in situations where the husband has migrated. This suggests that women may resist the limiting role of seasonality in other contexts where the above assemblage is disrupted. For instance, the absence of forces such as the use of mobile phones (technological force), may disrupt the above assemblage into say, human bodies – temporal force – economic force – discourses assemblage to enhance women's decision-making. This means that women's resistance to gendered outcomes is equally transient and is product of the assemblage of forces. As argued by Fox and Alldred (2018b, p. 9), what is considered 'resistance is a flux of forces or affects in an assemblage that produce micropolitical effects contrary to power or control'. Thus, the events around which the outcome of women's decision-making may be territorialized (limited) or deterritorialized (enhanced) – what may conventionally be considered as resistance result from the co-implication of contingent forces - as further examples in the next chapter will illustrate (Fox and Alldred, 2018b; 2021).

The findings on the capacity of the type of fishery activities women do (strenuous and processing and trading) in altering the impacts of other forces on women's decision-making power gives important indication of biological determinist's arguments on the role biological forces (e.g., strength required to undertake certain activities) in influencing women's decision-making power (Murdock, 1949 in Holborn et al., 2004; Bossen, 1989 in Jha, 2004). Such biological factors gain their potency in specific social contexts such as when the fishing net would need to be pulled as interview excerpts in the next chapter would show. Thus, while such biological forces play crucial roles, the fluid and contingent contexts within which they gain their relevance as they combine with other forces to co-create gendered outcomes should be foregrounded.

Further, women's fishery decision-making power is subject to change and varies in different material-discursive contexts. Findings from the descriptive analysis showed that women's household decision-making power varied according to the kind of decision to be taken. The next section discusses the extent to which the above factors (socio-economic, material, discursive, temporal, etc.) co-determine the different categories of fishery decisions, using a simple linear regression as shown in Table 12.

#### **5.4 Women's participation in decision-making across different household fishery decisions**

Table 12 examines the extent to which the aforementioned factors affect women's decision-making power across different fishery-based household decisions. Based on principal component analysis, the nine list of fishery decisions used were categorised into three main decisions (see appendix 5). That is, repairs and major purchases, spending and consumption decisions, processing, and trading decisions after which bulk sales decisions (which did not fit the principal component analysis) was added for comparison purposes to make four sub-categories of decisions for analysis.

##### ***5.4.1 Women's financial\_contribution, gender\_attitudes and decision-making on repairs and major purchases***

As shown from Table 12, on decisions relating to repairs and major purchases, model 1 shows a positive and significant relationship between women's *financial\_contribution* and decision-making power ( $\beta = 0.174$ ,  $p < 0.005$ ). A similar relationship was found for *ownership* ( $\beta = 0.254$ ,  $p < 0.005$ ) and *gender\_attitudes*, though weakly significant ( $\beta = 0.028$ ,  $p < 0.10$ ). On the other hand, seasonality was negatively associated with women's decision-making power on repairs and major purchases ( $\beta = -0.072$ ,  $p < 0.005$ ). These findings imply that holding other factors constant, the individual factors play significant roles in the extent to which women participate in decisions relating to repairs and major purchases. However, the extent of their individual effects is also dependent on certain other

(socio-demographic) factors as shown in model 2. After controlling for the socio-demographics (i.e. age, education, etc.) in model 2, it is observed that the pattern of strength and direction of the relationship between women's *financial\_contribution* ( $\beta = 0.134$ ,  $p < 0.05$ ) and ownership ( $\beta = 0.173$ ,  $p < 0.10$ ) drastically reduced, such that *gender\_attitudes* became insignificant ( $\beta = 0.024$ ,  $p > 0.10$ ). Meanwhile, seasonality had the strongest association ( $-0.065$ ,  $p < 0.005$ ).

**Table 12: Factors affecting women's decision-making power across different fishery-based household decisions**

Variables	Decision-making Power							
	Repairs and Major Purchases		Spending and Consumption Decisions (Minor Purchases)		Processing and Trading Decisions (market)		Bulk sales (Pricing at the Beach)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Financial_contribution	.174 (.054)***	.134 (.060)*	.091 (.025)***	.057 (.027)*	.033 (.018)+	.027 (.020) .013	.030 (.022)	.013 (.024)
Gender_attitudes	.028 (.016)+	.024 (.016)	-.008 (.008)	-.006 (.007)	.013 (.005)*	(.005)*	-.006 (.007)	-.006 (.006)
Ownership	.254 (.088)***	.173 (.092)+	.037 (.041)	-.004 (.041)	-.014 (.029)	-.030 (.031)	.068 (.035)+ -.020	.083 (.036)*
Seasonality	-.072 (.022)***	-.065 (.022)***	-.043 (.010)***	-.037 (.010)***	.000 (.007)	.000 (.007)	(.009)*	-.018 (.009)*
<b>Controls</b>								
Age		.323 (.080)***		.079 (.036)*		.041 (.026)		.040 (.031)
Length of Marriage		-.155 (.071)*		-.014 (.032)		.014 (.024)		-.037 (.028)
Living with spouse		.090 (.186)		-.280 (.084)***		.003 (.062)		-.156 (.073)*
Age of children		-.151 (.079)+		.023 (.036)		.017 (.026)		.010 (.031)
Level of Education		.031 (.073)		.093 (.033)***		-.004 (.024)		.060 (.029)*
Spouse Education		.018 (.074)		.047 (.033)		-.005 (.025) -.036		.055 (.029)+
Years of Work		-.028 (.063)		-.009 (.028)		(.021)+		-.035 (.025)
Income		.091 (.055)+		-.014 (.025)		.008 (.018)		-.008 (.022)
Household arrangement growing up								
<i>Father decided</i>		-.167 (.194)		-.230 (.087)**		.033 (.064)		.003 (.076)
<i>Decision shared</i>		.328 (.158)*		.028 (.071)		.047 (.052)		-.074 (.062)
<i>Others decided</i>		.470 (.338)		-.050 (.152)		.112 (.113)		.157 (.133)
<b>R<sup>2</sup></b>	.105	.172	.103	.217	.026	.047	.040	.121
<b>Adj. R<sup>2</sup></b>	.096	.140	.094	.186	.016	.009	.030	.087
Unstandardized regression coefficients are reported, with standard errors in parentheses								
Total Respondents (N)=400; +p < 0.10 *p < 0.05 **p < 0.01 ***p < 0.005								

#### 5.4.2 *The effects of socio-demographic factors on repairs and major purchase Decisions*

As found in the preceding analysis, socio-demographic factors and familial arrangements had significant bearing on women's decision-making power on repairs and major purchases. While most of these sociodemographic factors have been explained in the previous section, an interesting point I wish to emphasize is the relationship between age of children and women's decision-making power on repairs and major purchases. From model 2, women with older children were less likely to have decision-making power on repairs and major purchases ( $\beta = -0.151$ ,  $p < 0.10$ ). Findings from interviews provide evidence of this relationship especially in situations where women with male adult children depended on their sons to perform such strenuous fishery activities as Ekua indicated:

*For the metal nets, it's our men who fix it for us. We call them to help us...it [the metal net] is hard. For the oven I do it myself, though he [husband] sometimes helps me in mixing the mud when he is at home...if my [24-year-old] son is at home, he also helps (Ekua, 54 years, Axim).*

Undertaking such repair works comes with taking various decisions including purchasing the items to be fixed (e.g., wire gauze, the wooden pallet, etc.), decisions that are usually taken by the repairer. There were other instances where women indicated their sons took charge of such repair works in the absence of their husbands because in some circumstances, men were needed to follow up on the wood carvings or logs in the forest, which was not only strenuous but also considered risky for a woman. Having older children to take up the repair and major purchases contributed to the limited participation of women in such activities and decisions. In terms of decisions on minor purchases (spending and consumption), only two main variables, household financial contribution and seasonality had significant effects on women's decision-making power ( $\beta = 0.091$ ,  $p$

$< 0.005$ ) and ( $\beta = -0.043$ ,  $p < 0.005$ ) in the same directions as the previous models. After controlling for the socio-demographic variables, the predictive capacity of household financial contribution is reduced ( $\beta = 0.057$ ,  $p < 0.05$ ) while seasonality remains robust ( $\beta = -0.37$   $p < 0.005$ ).

#### ***5.4.3 Women's financial\_contribution, gender\_attitudes and sale decisions across space***

Processing and trading decisions were divided into two groups – processing and retail of fish at the market and bulk sales of fish at the beach to highlight the effects of spatiality in women's fishery decision-making. In terms processing and retail decisions at the market which were mostly undertaken by women, household financial contribution had positive but weakly significant effect on women's decision-making ( $\beta = 0.33$ ,  $p < 0.10$ ), while *gender\_attitudes* was positively and significantly associated with processing and retail at the market ( $\beta = 0.013$ ,  $p < 0.05$ ). However, both ownership and seasonality had insignificant effects on retail decisions at the market. After controlling for the socio-demographic and familial factors, *gender\_attitudes* remained robust and had significant effect on processing and retail decisions ( $\beta = 0.013$ ,  $p < 0.05$ ), while *financial\_contribution* had positive, but insignificant effect on women's processing and trading decisions ( $\beta = 0.027$ ,  $p > 0.10$ ).

In terms of decisions on bulk sales at the beach, both *financial\_contribution* and *gender\_attitudes* were insignificant in models 1 and 2. Ownership of production assets was positively and significantly associated with decisions on fish sales at the beach ( $\beta = 0.068$ ,  $p < 0.10$ ), whilst seasonality was negatively and significantly associated with fish sale at the beach ( $\beta = -0.020$ ,  $p < 0.05$ ). The above findings further stress the point that factors affecting women's participation in household fishery decision-making may vary across different spatial contexts – the fish market and the beach, which highlights the importance of space in the extent of women's decision-making.



The above findings reveal the importance of contextualizing our understandings of gendered decision-making and practices and highlights the crucial but often unnoticed agentic role of mundane materialities such as seasonality and spatiality in the extent of women's participation in fishery decisions and practices. While women's household financial contribution and income (economic force) had significant effects on their participation in decisions relating to repairs and purchases as well as spending and consumption decisions, such economic factors had no significant effects on processing and trading decisions. While gender role attitudes (gender norms) and ownership of fishery equipment (material/economic force) show mixed results across the different types of fishery decisions, seasonality (temporal force) was consistently negative across all decisions, except for fish trading and processing decisions. Seasonality may have limited effects on fish trading decisions as women may depend on imported fish during the lean season (Owusu, 2019). Finally, the variation in women's decision-making power across space (the beach and the market) shows that space is not merely a physical passive container utilized by self-conscious human/fisherfolk (Taylor, 2013). As would be further discussed in the next chapter, spatiality was an active agent saturated with gendered meanings within and through which specific fishery tasks were undertaken, coupled with the material objects contained in them co-determined the extent of women's fishery decision-making.

## **5.5. Conclusion**

The analyses above provide important schematic understanding of the extent to which women's household financial contribution, gender role attitudes, ownership of fishery equipment, seasonality and other sociodemographic factors affect women's decision-making power. As found in the interaction models, a combination of the different forces enhances our understanding of the complexities relating to the gendering of fishery decisions and practices. However, it is in the nature of quantitative data that the output

above does not provide great details about the fluid and contingent processes of events around which women may or may not be able to undertake certain decisions and activities (Fox and Alldred, 2015, 2018). Situating the effects of factors such as women's gender role attitudes as discrete forces betrays and masks the ways in which the material, discursive, spatial and temporal forces are entwined and intra-related (Hyde, 2019; Barad, 2007). In Deleuzian assemblage analysis, I move from static understandings of social categories and identities towards the contingent processes of gendered fishery decisions and practices through the intra-activity of the forces identified (Youdell and Armstrong, 2011; Barad, 2007, 2014). My aim is to emphasize how the materialities (e.g. physical bodily strength required to undertake certain fishery tasks), gender norms and values (e.g. women's gender role attitudes), spatiality (e.g. sale of fish at the beach and the market) and temporal forces (e.g. seasonality) around the events of fishery practices and decisions matter.

In the next chapter, I show how these factors are 'overlapping, interlaced, co-constitutive' and affect each other in usually unpredictable manner to territorialize (limit) and deterritorialize (enhance) women's participation in fishery decisions and practices in different contexts (Ringrose and Rawlings, 2015, p. 10). As the above analysis partly indicates, issues of gender inequality in fishery decision-making and women's resistance to such inequalities emerge from the micropolitical intensities of forces of relations rather than an underlying structure or a self-contained human agency (Fox and Alldred, 2021). I illustrate this in greater detail by mapping the flows of forces through ethnographic accounts of the dynamics in fishery decisions and practices as well as in-depth interviews with both wives and husbands engaged in fishery activities (without explicitly comparing their views) in the next chapter.

## CHAPTER 6

### MAPPING THE FORCES: HOW THE MATERIAL-DISCURSIVE FORCES RHIZOMATICALLY COMBINE TO PRODUCE AN OUTCOME

#### **6.1 Introduction**

In this chapter, I show how the entangled relations of material, discursive, spatial, temporal, economic forces work to territorialize (limit) and deterritorialize (enhance) the extent of women's participation in household fishery decisions and practices. As they coalesce, the material-discursive forces work to 'enable flows in certain directions and constrain flows in other directions' – serving the interests of some groups over others (Feely, 2020, p. 9; Haggerty and Ericson, 2000). According to De Lander (2006), although the capacities emerging from assemblages are irreducible, the component forces making up assemblages are decomposable. This means that the different component forces making up events or outcomes such as gender (in)equality in decision-making can be mapped and intervened to achieve specific social outcomes (Nail, 2017; Buchanan, 2007; De Lander, 2006; Jackson and Mazzei, 2012). To address the problem of gender inequality in fishery decisions and practices, I discuss how the mapped forces of territorialization could be unsettled or intervened to enhance women's participation in fishery decision-making and practices.

The descriptions by both male and female informants showed similar patterns. During the early phase of the interviews, it appeared that the informants had internalized normative gender discourses and the idea of 'a dualistic oppositional maleness and femaleness' (Davies, 1997, p. 231). Most of the participants indicated such things as, women and men are different, and they undertake different fishery activities and decisions. Certain fishery practices were thought to be 'natural' for men and others for women, initially suggesting that it was wrong or a taboo for women (and men) to undertake certain fishery tasks and decisions. However, as the interviews progressed, most respondents provided situations where women could undertake some tasks considered male and vice versa. The

ethnographic accounts showed that the gendering of fishery decisions and practices emerged through the individuals in the space, through space itself and the non-human objects contained within such spaces as well as the social norms and values shaping their interactions. In the section which follows, I focus on the role of human and non-human forces and their co-implications with other forces as named above in the gendering of fishery decisions and practices.

## **6.2 Mapping entangled Human and Non-human bodies and gendering enactments**

*‘We know nothing of a body until we know what it can do, in other words, what its affects are’ (Deleuze and Guattari, 1988, p. 284).*

Deleuze and Guattari posit that in assemblage analysis, we examine bodies based on their affects. That is, their capacities to affect and be affected (Coleman, 2008; Ringrose, 2011). In this section, I discuss how the physical bodily differences (male/female bodies with different capacities) and the materials or non-human objects in the fishery sector played an active and constitutive role in the events of women’s participation in household fishery decision and practices through intra-activity. I begin by thinking through the role of differential human body capacities in enacting differences in fishery decisions/practices using both interviews and extracts from participant observations produced at the fish landing beaches and homes of participants. I use the case of Saa (a 54-year-old fish trader) and her 62-year-old husband, Kweku as they navigated through different aspects of fishery decisions and practices. Saa and Kweku managed six canoes, two solely purchased by Saa before her marriage to Kweku, three solely purchased by Kweku and the last one purchased by the couple. This was quite a typical case as in most cases such production assets were co-owned or solely owned by either of the couples. From this case, I show how differential strength between Saa and her husband became an important human factor which appealed to understanding gendering and gender inequalities in fishery decision-making and

practices. Next, I move on to consider the active and constitutive role of non-human material objects such as canoes and fishing nets in the gendering of fishery practices and decisions. I focused on the constitutive and emergent properties of the material (human and non-human) objects themselves and their active roles in those intra-actions.

### ***6.2.1 (In)capable bodies: Differential strength (brawn) and gendered fishery practices***

Findings from the quantitative analysis in Chapter 4 indicated that women participated less in strenuous fishery activities and decisions compared to the less physically demanding fishery processing and trading related activities and decisions. The ethnographic accounts below show in elaborate fashion how the differential bodily capacities in terms of physical strength between men and women in Ghana's small-scale fishery were instigated in different ways by both men and women in the performance of different fishery tasks and decisions.

At the fish landing beach, I observed fishery roles well divided along gender lines where male fisherfolk were often seen on their canoes either offloading their landed catch or preparing for the next trip, mending their faulty fishing nets, repairing their faulting canoes or outboard motors (see Figures 11, 16, 17). Young male workers were also found helping to carry the landed fish from the canoe to the shore or supporting their older males (mostly fathers) in mending fishing nets. Behind the shoreline were women fish traders negotiating prices of landed fish or waiting for their canoes to be landed while the younger female counterparts also supported the women (usually mothers) in carrying the fish to their homes or taking stock of fish caught/purchased. Such division of labour where men fish and women process and sell were often considered natural by most participants while most studies consider such divisions as socially constructed (Overå, 1998, 2003, 2007; Britwum, 2009; Kraan, 2009), which is consistent with existing debates on binary gender roles.

**Figure 16:** Man mending net with male children



**Figure 17:** Girl assisting mother sales by taking records



Based on the ethnographic account below, I argue that we cannot ignore the role of the materiality of human bodies with different capacities as they intra-acted with other objects, bodies and discursive forces to co-create different outcomes for women (and men) in their fishery decisions and practices.

August 14, 2019

*After agreeing to my participation in their daily fishery activities, I followed Saa and Kweku to the beach as they prepared their first canoe for the next trip. Saa could be seen busily carrying food and other items needed for the trip to be sent to the canoe while Kweku and his crew were undertaking “few patches” on the fishing net. Moments later, it was time for the mended fishing net to be pulled back into the canoe after which the canoe would be pushed into the water for the trip. Although Kweku was not part of the trip, he was actively at the helm of affairs, directing the crew members on what needs to be done. While I was an observer as Saa carried the food items, Kweku asked that I join them in pulling the nets. I fully participated in the pulling of the fishing net and the subsequent pushing of the canoe into the*

*water as more 'men' were required to undertake such activities. These were indeed arduous tasks - the net was wet and heavy, with some sand particles and pulling required not only strength, but a special skill where we were lined up from the beach to where the canoe was docked. Then the net was pulled at a very fast pace which I found daunting. My heavy breath after the job resulted in laughter from the crew members. Perhaps, they were happy that I had a firsthand experience following my series of questions on why women do not fish, in our informal conversations (a question some found funny to answer), or they expected more from me as a male. However, my position as student researcher meant that such laughter did not result in ridicule as they knew I did not have the skill and perhaps the required strength to undertake such task, as a crew member asked that I touch his arm to see how tough his muscles were. 'You have soft skin and muscles like a woman, touch mine and see', he said to me. The women at the scene, including Saa were all spectators as Kweku called for help from other male friends at the beach including me. Right after pushing the canoe, I enquired from Saa why she would not help us push the canoe, which she indicated 'I have done my part...I can't pull the net, I give them food'.*

The scenario above illustrates how Kweku and his crew members dominated the acts of pulling fishing nets and pushing canoes by virtue of their muscular physique and the strength required to undertake such activities. Saa's dominance in activities such as cooking food for the crew and focusing on fish sale at the beach may also be considered as naturally suited to her body as indicated by the informants. This mirrors findings in the quantitative analysis where women participated less in the strenuous fishery activities, while their male counterparts dominated the strenuous activities (such as fishing and repairs).

The role of bodily physicality also reflects the decision-making dynamics. The interaction terms in the quantitative analysis revealed that strenuous activities dampened the positive relationship between two main effects (that is, gender role attitudes and women's household financial contribution) and women's decision-making power (DMP) (see Chapter 5). Such gendered division of fishery labour and decisions may therefore be considered unquestionable and as naturally given as argued by the biological determinists.

**Figure 18:** Helping fishermen push canoe to shore



**Figure 19:** Fishermen fixing landed as male children look on.



Using the feminist new materialist's lens, we see from the ethnographic account that indeed the differential bodily capacities of Saa and her husband (as well as the other fisherfolk) in terms of strength plays an active role in what they do at the beach. For instance, to pull the heavy fishing net requires not just skills but physical strength marked by muscular physiques (see figure 21) on the bodies of fishermen. However, the effects of their differential bodily capacities are amplified when considered in relation to pulling material objects such as the heavy *fishing nets* or pushing *the canoe*. My 'heavy breath' after pulling the fishing net shows that not only humans but non-human matter (e.g. fishing net) has a 'life force' with each 'making itself felt' and applies to fisherfolk irrespective of their gender (Barad, 2012, p. 59). The above analyses show that gendered division of labour as described above at the beach is not transcendental or universal but emerge through the



human body – non-human objects entanglements and relations. Without the use of material objects such as ‘the heavy fishing net’ and ‘canoes’, the value or effects of human strength in the gendering of fishery activities and decisions and women may actually engage in activities such as fishing and repairs. The forces of relations through which the human body (with different strength) affect gendered fishery practices is therefore crucial in understanding the complexities of such inequalities.

**Figure 20:** Helping fishermen to pull net into canoe



**Figure 21:** Fisherman asks that I feel his muscles



We also see how the social expectations of men to be strong has been ingrained and served as an important discursive tool for policing normative masculinity such that a man's inability to undertake such activities could result public ridicule, laughter or name calling. From the ethnographic account, we see how participants compared my (male researcher) *soft skin and muscles* to the crew member's *tough muscles* to embody ideal femininity and masculinity (Coffey, 2013). It was therefore taken for granted that a tough skin is male and soft one is female, which is contradicted by my (male researcher's) own soft skin as described by the informants. As would be discussed in later sections of this chapter, the

use of universal terms or languages such as soft skin for women and tough skin for men were powerful and connected to binary gender norms which played an important constitutive role in what men and women could do (Butler, 1993; Coffey, 2013). The above analyses show how the material and discursive forces co-create such social outcomes not only for women but also for men. The focus here is to show that we cannot ignore the important role played by human material bodies with different capacities in the extent of women's participation in different fishery activities as further explained in the interview excerpts below.

In an answer to a follow up question to her narration of the division of fishery labour between herself and her husband, Ekua (pseudonym), a 54-year-old fish trader who doubles as a canoe co-owner (*Bosun Besia*) indicated:

**Ekua:** *The kind of work done on the sea is too hard and dangerous that I cannot do. I do not have the strength to pull the heavy [fishing] nets. So, when he [husband] brings the fish, then I also process it and sell.*

**Interviewer:** Okay

**Ekua:** *Yes, even not every man can go fishing (...). The issue is not really about being a man or woman...it is about strength, skills, experience...things like that.*

Hence, for Ekua, fishing is a no-go area for her because she does not have '*the strength*' (human bodily capacity) to pull the '*heavy fishing net*' (non-human material object) at the time of the interview. She however indicates it was not solely a matter of whether one was a male or female but had to do with 'strength, skills [and] experience'. Ekua's exposition provides an important explanation to why I (though a male) was unable to take active role in the pulling of nets and pushing the canoe as the crew members did. My brief participation drew the attention of many people at the shore that I did not have the required

strength and skill at that moment in time. Like the women, my inability to pull the canoe/net does not suggest a naturally given limitation. It may only require some training, constant practice and perhaps my desire to do such jobs. As such, my subjective position as an inexperienced, incapable ‘fisherman’ is not fixed but is momentary, which runs counter to biological determinist’s arguments. In the next section, I show how other bodily (in)capacities in terms of birthing and menstruation combine with other forces to co-create different subjective positions for women (and men) in their fishery decision-making and practices.

### **6.2.2     *Birthing and ‘bad luck’ menstruating bodies, and gendered fishery decisions and practices***

In addition to the differential physical strength of fisherfolk, other bodily differential capacities such as menstruation and birthing/pregnancy co-created gendered fishery decisions and practices. For instance, Adjoa, a 42-year-old canoe co-owner indicated in an interview that it was possible for women to participate in fishing, but also stressed on specific (in)capacities of the female body which served as potential impediment to her participation as she indicated:

**Adjoa:** *If you are a woman and looking at your strength, you can fish then you can go fishing [smiles].*

**Interviewer:** Looking at your strength?

**Adjoa:** *Yes, if only you can pull the fishing net or you can swim when the boat capsizes, then you can go. For me, if I look at myself, I cannot... I think it’s because of the hard work involved that makes women not to go fishing. For instance, a pregnant woman cannot pull the net.*

Apart from the strength required to undertake fishing, an important human bodily capacity stressed by Adjoa was ‘pregnant[cy]’, which she indicated could further serve as a

limitation for women to fish. At the current level of technology, it is only women who can get pregnant. Such bodily capacity of women and an incapacity for men, rather play a key role in limiting the ability of women to engage in strenuous fishery activities such as pulling heavy fishing net during fishing as Adjoa indicated. Apart from the human biological requirement, Adjoa also stressed on the affective capacity of non-human material bodies such as the fishing net, the canoe and the sea as their relations with different human bodies create different outcomes for both men and women. The limited capacity of Adjoa's material body to pull a non-human material object such as the heavy fishing net or swim the sea coupled with her body's capacity to conceive/get pregnant co-create the event of her inability to engage in fishing. As such, an interruption of the human (pregnant body) – non-human (canoe/heavy fishing net) relations could alter the gendered fishing assemblage to create something else – something we do not know yet until it is done (Barad, 2007; Feely, 2020).

In another interview, Agya-Kojo equally stressed on how a 'menstruating' female body and its resultant weakening of the female body and capacity to pollute water bodies could serve as a limitation for women to engage in certain kinds of fishery activities. He also stressed on the spiritual implications of a menstruating woman getting closer to the canoe or the sea:

**Agya-Kojo:** *Our fishing work is a spiritual work (...) you know women can make your [a fisherman's] canoe unclean, they can bring bad luck, you know right? [he asked]. (...) That is why it is said that anytime you have intercourse with even your wife, you need to cleanse yourself. In the past, you needed to pacify the gods before you go to the sea, else you may not get anything [fish] or you might never come back [die offshore]. Apart from the period [blood] pollution, the gods would be angry.*

**Interviewer:** Really?

**Agya-Kojo:** *Yeah, but you should know this! Are you saying that you do not know it is a taboo for a woman to step into any water body in her [menstrual] period? The canoe that you see there, it is a spirit, the sea as well. You know Bosompo [sea god] right? [He queried again]. It is now that things are changing but in the past women were not allowed to go close to any stream in their period (...) or touch the canoe. But even if we allow them, what strength would they work with?* (Agya-Kojo, 54 years, Axim)

In the above interview excerpts, we see the affective role of the female menstruating body and how it combines with discourses of women's uncleanness in the time of menstruation to prevent them from getting close to non-human material objects such as the canoe or the sea. According to Ringrose and Rawlings (2015), there is the need to foreground the historical contingencies through which material processes manifest in assemblage analysis. Informal conversations with some participants revealed that historically, most Ghanaian communities depended on rivers and streams as the main source of drinking water. Hence, allowing a menstruating woman to fetch water from the stream, coupled with the fact that there were no improved sanitary pads as we have currently, could result in pollution of the river body. As such, it became a taboo for a menstruating woman to step into the stream to fetch water during those times (Interview with Chief Fisherman, Axim).

Similar line of thinking was translated into the small-scale fishery where menstruating women were considered unclean and a taboo for such women to get close to the sea or canoe, which was in constant touch with the sea. Since, it was difficult to determine which woman was menstruating and who was not, it was made a taboo for any woman to go close to the canoe or sea. As Agya-Kojo indicated, such beliefs are gradually diminishing. This could stem from the improved technology in terms of improved sanitary

pads, improved source of drinking water and perhaps reduced discrimination against women. Here, we see the affective capacities of not only women's menstruating bodies, but that of the sea, the canoe and discourses of appropriate women's role as they entangle with each other. While social norms and discourses of women's uncleanliness may limit their participation in fishing as highlighted by critical feminists, the biological determinists may focus on how women's menstruation and the consequent weakening of their bodies and pollution of water serve as limitations (Feely, 2020; Fox and Alldred, 2018a). However, as shown from Agya-Kojo's interview above, the role of discourses about women's uncleanliness or weakness gain their potency through their co-implications with non-human objects such as the menstrual blood, the canoe and the sea. It is when these forces combine simultaneously that the event of women's limited participation would emerge. As rightly argued by Barad (2007, p. 135), agencies (such as gendered fishery decisions and practices) do not preexist their interactions, but rather emerge through their 'intra-actions' (Barad 2007, p. 141). The different material, discursive, spatial and temporal forces above came to matter through specific agential intra-actions to enact outcomes of gendered fishery practices (Clark and Thorpe, 2020).

Whereas the human body matters in the participation of women in fishery activities, we cannot ignore the active role of the non-human objects in co-creating such social outcomes. In fact, in the preceding section, the affective capacities of non-human objects such as canoes were apparent. In the next section, I discuss in detail the affective roles of the canoe, fishing net, the fish, the sea, lagoon, among others to show how 'matter matters' in the fishery practices and decision-making assemblage and events around gendered fishery decisions and practices (Barad, 2003, p. 803).

### 6.2.3 Mapping entangled object's affects: Canoes, fishing nets, the sea and sea Waves

*'Without the nonhuman, the humans would not last for a minute'* (Latour, 2004, p. 91)

As indicated in the earlier sections, the non-human material bodies or objects within the small-scale fishery equally mattered in enacting possible becomings as both men and women utilized and negotiated different practices and decisions as they entangled with these objects. As argued by Latour (2004) and Fenwick (2014), the body does not operate in isolation, but in relation to non-human material forces. In this section, I show the role of the non-human objects in the plethora of forces at work in fishery practices and decision-making assemblage. I focus on the affective roles of the uncondusive canoe, heavy fishing net and the dangerous sea and waves as powerful examples of non-human objects through which gendered fishery tasks and decisions are manifested. Such material objects were crucial in narratives around gendered fishery tasks and gendered power relations in fishery decision-making. In the interview excerpts that follow, although other forces may manifest, I pay particular attention to how non-human material forces entangle with the body and other forces to co-create gendered outcomes in fishery decision-making and practices. This is done to illustrate that agency is not simply located in the human, but rather manifested through the material-discursive-spatio-temporal enmeshment (Ringrose and Rawlings, 2015).

In the interview with Ekua as shown in the previous section, her body had important effects on her participation in fishery practices. However, the effects of non-human objects were equally apparent. Focusing on the non-human material object in the same interview extract, we find the presence of *'heavy fishing net'* intra-acting with the capacity of Ekua's body *'not have[ing] the strength (capacity)'* to pull, which could have prevented her participation in fishing and its related activities as she indicated. Similarly, Adjoa stressed on the material role of the *'heavy fishing net'* intra-acting with her body creates a situation

of ‘hard work’ which results in her inability to participate in fishing and its related activities such as pulling the fishing net. Hence, the agentic heavy fishing net creating a barrier for Ekua and Adjoa to participate in fishing only makes sense in relation to the larger extended ‘apparatuses’ at work such as Ekua’s body, gender norms and values, and other spacetime-matterings which would be discussed in later sections (Ringrose and Rawlings, 2015, p. 13; Barad, 2007; Taguchi and Palmer, 2013). In an interview with Nana, a 56-year-old canoe owner who had had experience in fishing with both canoe and fishing boat, he indicated conditions under which women may be able to fish:

*I have worked on fishing boat before. The conditions on a boat are far better than that of the canoe. There is discipline on the boat and the conditions are better. For the canoe there is no discipline. Let’s assume I am on the same canoe with my father-in-law. It means that if he would want to ease himself or I want to do same, it means I would have to do it in the full glare of my in-law. With time you would realize that even our respect for each other would vanish. That is also the reason why women cannot go fishing. The canoe is not conducive for them. Besides, there is no tree nor land. It’s only that small, open canoe that we are all in working. Women cannot work in that.*

From the above, we see the affective capacities of the different material objects (e.g. the canoe and boat) and the human bodies involved in creating different outcomes for women. One may assume that the unconducive nature of the canoe as indicated above creates unfavourable conditions for women to engage in fishing. This may be true but only partly. We see how these material objects combine with discourse of socially appropriate conducts such as respect for in-laws, which could inhibit the participation of certain groups of people (both men and women) on the same canoe. While a boat may combine with certain bodies to permit women’s participation in fishing, it is even possible that some women would still not participate even with the introduction of a boat. The boat may not be immune to heavy



sea waves, which may prevent some women or even men from fishing. What is apparent from the above discussions is that ‘neither discursive nor material forces (e.g. canoe, boat or fishing net) are ontologically or epistemologically priori... [Rather], matter and meaning are mutually articulated’ in the above assemblage (Barad, 2007, p. 152). Hence, we need to unpack the affective roles of all these forces at work for a broader understanding of the gendered fishery practices.

The interview excerpts below show how such relations of forces work to the extent that certain gendered fishery practices could be regarded as natural and unquestioned as the various forces combine to repeatedly reproduce such outcomes as interview with Yaa would show:

**Yaa:** *That is what we came to meet. I have not seen a woman fishing before. (...) I think that is how God made it...when you read the Bible, you would know that when Jesus met his disciples who were fishing...did you hear about any woman fishing? It was Peter and other men who were fishing. I think that is how God made it...that men will fish for women to smoke and sell.*

**Interviewer:** Do you think women would go fishing in our current time?

**Yaa:** *Some women have courage and may be able to fish. For me I cannot... even if they ask me to do that I won't. I don't have the courage to be on that vast sea. Even at the beach how do you see it? Let alone stay on the deep sea, I cannot. I will fall into it [the sea]. Fishermen sometimes take 3 to 5 days on the sea. Sometimes they leave very early around 2 [Am]. Imagine if a have a child at home waiting for me to breastfeed, how do you expect the child to eat? What if I am pregnant? How do you expect a pregnant woman to fish? With what strength? Oh brother. Women cannot do any proper fishing.*

**Interviewer:** Okay.

**Yaa:** *Even with the men, sometimes we hear that those who are not used to being on the sea [fishing], the sea can cause them to vomit continuously offshore. Some of the men go fishing with medicine and chewing gum. So, it is not easy.*

Hence, for Yaa, fishing is not for women because ‘that [the gendered arrangement] is what [they] came to meet’. She discursively gives a Biblical account to support her claims that fishing is not for women and that the division of fishery labour was ‘how God made it’ – it is natural hence unquestioned. Though such Biblical discursive accounts about women’s and men’s roles in society may have influenced Yaa’s account of fishery division of labour, when probed further as to whether women could go fishing, she indicated that women with ‘courage’ (a visceral or gut feeling) may be able to fish but for her on the ‘vast, deep sea’, coupled with the violent ‘sea waves’ (spatial / non-human object), she cannot fish because she may drown. She further described how the ‘3 to 5 days’ spent at sea, setting off at ‘2Am’ (temporal factors) to fish coupled with women’s ‘breastfeeding’ and ‘pregnancy’ capacities, and the strength required to fish (human bodies with different capacities), may limit women from engaging in ‘any proper fishing’. Proper fishing here refers to deep sea (offshore) fishing. Studies have shown that in instances where women have been involved in fishing, they have mainly focused on gleaning and other nearshore fishing activities (Tilley et al. 2020; Harper et al. 2013; Kleiber et al. 2015).

More importantly, the above example shows how the extent of women’s participation in fishery labour and decision is co-produced through the discursive agents of Biblical and historical accounts by Yaa as they entangle with non-human objects such as the unconducive canoes, the danger posed by the deep sea and its violent waves; biological considerations of pregnant and breastfeeding bodies, and temporal contexts of time when fishing is undertaken and the length of time spent offshore, among others. The entanglements of these material-discursive-temporal forces in a complex, nonlinear fashion co-create the gendered fishery practices. Thus, what Yaa thought as natural, goes

beyond her discursive Biblical account or even biological essentialism of her body. The event of Yaa's decision not to participate in fishing becomes more meaningful when the assortment of the intra-active forces creating such outcomes are considered. For instance, the intra-action of a pregnant body with violent sea waves in a deep ocean may cause miscarriage due to the additional force which may be required for the pregnant body to swim when the canoe capsizes. However, such outcomes of a pregnant woman's limited participation in say fishing, is ephemeral and only exist in the material-discursive context analysed. As would be discussed in the later part of this chapter, an intervention in such assemblage with say, non-pregnant body means that outcomes such as miscarriage may not prevail – deterritorialising the limiting capacity of such assemblage. Such unpredictable intra-activity of material-discursive forces provide a novel way of thinking about the limited participation of women in activities such as fishing beyond human intentions.

#### ***6.2.4 Entangled non-human objects and relations in fishery decision-making***

Similar intra-action of material-discursive forces can be realized as intra-actively creating different outcomes in the different events around household fishery decision-making assemblage. For instance, on the question of who usually has the final say in decision on when to go fishing, Adjoa indicated:

*The decision to go fishing is not straight forward. It depends on several factors. It depends on the availability of premix fuel, whether the canoe is in a good state or faulty, whether the men [crew members] required for the trip are available. Even sometimes the movement of the sea waves, the stars, the moon and birds can tell you whether you will get fish or not...it depends on many things. Usually it is the men who decide because they go to the sea and know about these things. They know the conditions to decide whether to go or not...so I cannot force them (Adjoa, Axim).*

From the above account, Adjoa discursively mobilized materialities such as premix fuel and movement of sea waves to support the gendered fishery decision-making and practices, suggesting that the man decides on when to fish because he undertakes the activity and better knows such conditions at sea – showing some evidence of the specialization theorist's arguments (Shu et al., 2012). However, what we need to ask is the processes through which such specialization of roles emerge for the man to decide. Such an approach shows the co-implication of various material-discursive forces that work to engender male dominance in fishery decisions as indicated above. Informal conversations with fishermen revealed that the gathering of birds at specific areas offshore indicates the presence of schools of fish which can prompt fishermen where to fish. Again, the brightness of the moon at night also scares away fish (especially the pelagics) which could also affect the times fishermen could go fishing. Such non-human forces (i.e. the moon, birds, fish, etc.) entangle with fishermen's cognitive knowledge to anticipate the sea environment, which become sedimented in their conscious and unconscious actions (Couper, 2018), including fishing plans (discursive force) in the overall fishing decision-making assemblage. This fishing decision-making assemblage co-determines the extent to which fishermen can get bumper catch. An interruption of such assemblage with the introduction of say, Adjoa (a non-fisher) who may not be privy to such bird-fish-human (fisherman) intra-action may rather result in low catch and possibly a collapse of the fishery business. Attention to material-discursive intra-activity provides extended and novel way of thinking about such gendered fishery arrangements and the specialization of roles and decisions within the fishery.

In terms of decisions on fish processing and repairs of fish processing inputs, Ekua provided similar account of material discursive affectivities but with somewhat different forces as quoted in the earlier section. She indicated that despite her dominance in fish processing decisions, when it came to repairs of metal nets used for smoking fish or mixing

the mud to repair the oven, it was her male counterparts (the husband or the son) who usually decided on the materials to be purchased and how to fix them because the metal net was hard and mixing the mud was a hard work. Such decision-making arrangement can therefore be thought to emerge from the co-implication of the hard metal nets (non-human material objects) and Ekua's 'weak' body to limit her decision-making power in the context of repairing a faulty metal net. This opens-up our analysis to look beyond hegemonic discourses about women's weak bodies compared to men, to how such forces gain their relevance in specific social contexts such as fixing a metal net (non-human materiality). It is the simultaneous combination of these material-discursive-spatial-temporal forces and their affective capacities that makes the new feminist materialists account a novel approach to understanding gender inequality in fishery decision-making and practices. In the next section, I show in detail how the spatial and temporal forces within which events and bodies intra-act play an active part in the gendering of fishery decisions and practices.

### **6.3 Gendered spaces, fishery decisions and practices**

In this section, I examine how the material environment within the fishery plays an active role in the gendered experiences of fisherfolk in Ghana's small-scale fishery sector. The data draws on different spaces within the fishery sector where specific fishery activities are undertaken with specific focus on: The landing beach, the fish processing site/kitchen, the sea and the fish market. I argue that these locations or spaces, the material objects contained in them and the practices undertaken within them intra-actively contribute to what gender subjectivities in fishery decisions and practices are made possible and which are foreclosed. An analysis of space which originate from human geography (Massey, 2005), in this context goes beyond analyzing how places are given meaning by people to examining how the actual material spaces combined with other non-human and discursive forces generate place-making (Wainwright et al., 2020; Barad, 2007).

In the educational literature for instance, Taylor (2013) and Lyttleton-Smith (2017) have examined how classroom spaces play an active role in the gendering of classroom experiences and viewed classrooms as an entangled mosaic of ‘vibrant matter’ (Bennett, 2010, p. 22), which proposes a general understanding of space as a material ‘multiplicity’ (Massey, 2005, p. 9). I argue that taking a new feminist materialist approach can add significantly to our understanding of the diverse spaces that constitute the fisheries and how these spaces play a constitutive role in the gendering of fishery decisions and practices. In the next section, I share interview data and field notes extracts describing fisherfolk’s (both men and women) encounters with spaces within Ghana’s small-scale fishery such as the landing beach, the fish market, the fish processing site/kitchen, the ocean space and the bedroom to explore how gender as an ‘iterative, fluid and multiple phenomenon’ is manifested and challenged through their encounters within these spaces (Lyttleton-Smith, 2017, p. 9).

### ***6.3.1 The fish landing Beach and the fish processing site/kitchen***

In this section, I describe the material features of two spaces (The fish landing beach and fish processing kitchen/site) within which different but complementary fishery activities were undertaken and share extracts produced from my field notes through participant observations. I consider how the physical features of the two locations entangle with different levels of women and men’s participation in fishery activities that occurred within and through these locations. I would then present ethnographic accounts and interviews showing fisher folk’s (with focus on women) encounters with those spaces and analyze how women’s participation is enhanced and/or foreclosed through their intra-activity.

#### ***6.3.1.1 The Fish landing beach***

The fish landing beach is the most utilized fishery space, where both men and women are engaged in different but complementary fishery activities. Except Tuesdays when the

landing beach turns empty as it is a taboo to fish<sup>10</sup>, the landing beach was filled with fishermen, fish traders and bystanders almost all other days of the week. The landing beach was mainly filled with materials such as canoes, fishing nets and head pans for carrying landed fish. While there was no strict enforcement of movement, men (old and young) could navigate in and out of the water where landed canoes were mostly docked. Women on the other hand rarely crossed the coastline into the water – they were mostly lined up along the beach waiting for their yet to land canoes or surrounded landed fish to buy. Besides, the landing beach was close to the fish market where both processed and unprocessed fish were sold. Unlike the landing beach, the fish market was dominated by the women fish traders who came from far and near to purchase or sell fish. In the fish market there were only few instances where men could be seen in cold stores (shops where frozen fish and meat are sold) and were mainly involved in cutting the hard-frozen fish into smaller pieces to be sold.

**Figure 22:** Women gathered along the coast as fishermen prepare their canoe for fishing trip



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<sup>10</sup> Along the western coast of Ghana, fishing on Tuesdays is prohibited by custom as it is considered a day for the sea god to rest. This is also considered a local fishery conservation mechanism.

### 6.3.1.2 *The fish processing kitchen/site*

The fish processing kitchen/site was of two kinds - one found within the fisher's home and others found close to the coast away from the homes. Regardless of the location, the fish processing kitchen as the name suggest had its content and layout similar to that of the kitchen in a typical home. In fact, most of these fish processing kitchens also served as the kitchen where other domestic chores (e.g. cooking) were undertaking, especially those found within the homes. It was the site for fish processing activities such as smoking, salting and frying and mostly filled with thick smoke. It contained the fish processing oven (usually made of clay), the metal net and fuelwood, used for smoking. It was also the storage area for the processed fish and was mostly filled with women fish workers but also in some occasions, their spouses or male counterparts supported in the processing when large quantity of fish is caught.

**Figure 23:** Interview with woman in fish processing



**Figure 24:** Processed fish kitchen stored in kitchen



As such, the two spaces (that is, the landing beach and fish processing kitchen) differed significantly in terms of content, material arrangements, activities undertaken, and the



people involved. The landing beach was more of a public space where both men and women were engaged in different but complementary fishery activities. However, the processing kitchen was themed around homemaking, dominated by women and involved comparatively limited number of people who were family related in most cases.

### **6.3.1.3 *Landing beach spaces, and material-discursive entangled practices***

The ethnographic account below were generated during the main fishing period when gender division of labour was at its strongest levels. The excerpts were taken from field notes on observations made at the landing beach, as I followed Saa and Kweku in their fishery activities.

August 15, 2019

*At the beach, fisherfolk (men and women) were observed undertaking different activities along the fish landing beach. Most male workers were found seated on their canoes either mending their nets, preparing for the next fishing trip or offloading their landed fish. At about 8.30 am, Saa's canoe had returned. The canoe was pulled close to the shore by the men including myself, while Saa and the other women anxiously lined up along the beach watched and waited for their catch. The landed catch was carried in big pans from the canoes to the shore by male teenagers who were mostly bare chested and in short pants. Women (old and young) on the other hand mostly in long gowns were not involved in the carrying of fish from the canoe to the shore. The teenage girls either took stock of the landed fish or helped in carrying fish from the beach to the processing kitchen. I asked Saa why women were not involved in the carrying of fish from the landed canoe and she says, "Our dress would get wet... I need to go to the market and you know, I cannot go in my wet clothes...and the pans are heavy to carry from the water...let them [the men] do it". While men were observed moving in and out of the water,*

*women's movement were limited to the beach. The coastline served as a barrier beyond which no woman crossed. However, men could move to every location along the beach. Once the fish had been landed at the beach, the male crew members agreed on the price of the entire catch with Saa, the fish was then handed to Saa to trade with the other women as the men only observed. I asked Saa why men were not involved in the trading of fish to the other women, she indicated that men lacked the knowledge and skill to negotiate for a higher price...that is also the reason why they don't go to the market. They will come home with huge debts and collapse the business. She also indicated that some 'feminine-looking' men may engage in fish sale with other women and often results in name calling such as Kojo Besia [a man who looks or behaves like a woman].*

From the excerpts above, although there was no strict enforcement of gender roles at the beach, the material-discursive entanglements across different spaces at the landing beach co-created the gendering of different fishery activities at different times. For instance, the coastline played an active role in the gendering of movement along the coast. Following Deleuze, we can ask - what can the sea water do? Or what can the sandy coast do? From the excerpts above, the sea water can wet Saa's clothes or body, and potentially prevent her from going to the market, a capacity that sandy beach may not have. Hence, the two spaces would have different context specific capacities when in contact with Saa's body. While male fishery workers could easily move across the two spaces (water and sandy beach), women's movement was restricted to only the sandy beach – here the affective role of the coastline serving as a barrier was apparent. However, the gendering role of the two spaces gained their potency as they entangled with other material forces such as different clothing styles of the male and female fish workers. Most of the men wore short pants and, in some cases, were bare-chested which made it easier to navigate through the two spaces compared to the dominant long dresses worn by female fish traders. We also need to pay

attention to the socio-cultural norms which ban women from entering the canoe or sea water at certain periods (e.g., menstruation) as earlier indicated, the cultural expectation of women to wear long ‘proper’ dresses as well as the name calling (e.g., *Kojo Besia*) associated with men’s involvement in fish trade may have influenced their differential levels of participation in fishery activities across the different spaces.

I argue that the gendered practices at the fish landing beach emerge from the combination of the materialities such as the male/female human material bodies involved, the different clothing worn by these bodies (shorts versus long gowns/skirts), the sea water with the capacity to wet clothes, the discourses femininity and masculinity (norms on menstruation) coupled with the different locations within which various fishery activities are carried out at the beach (i.e. the sanding coast and sea space). For instance, an assemblage of female body (human material) – long skirts–the marine/water space (material/spatial force) co-create an event of women’s limited participation in fishery activity such as carrying fish from the landed canoe to the shore as the excerpts above indicates. In the absence of any of these forces in the assemblage, say, the marine/water body or the long skirt or women’s weak bodies, the event of women’s limited participation may not emerge. A woman in short dress may be able to easily move in and out of the water, but that may be highly unlikely to occur as a subversion of culturally accepted way of dressing may be equally costly. It may also depend on whether women are ready to wear short dresses or go bare-chested as the men to avoid being wet by the sea water. The outcomes of such entanglements are difficult to predetermine and may only need to be explored to see what would emerge as the material-discursive-spatial forces intra-act (Ringrose and Rawlings, 2015; Barad, 2007).

#### **6.3.1.4 Processing kitchen space, and material-discursive entangled practices**

In the next excerpts, I show how the fish processing kitchen, its physical features and the other non-human materials and human bodies found within intra-actively co-create

opportunities for and obstacles to women's participation in different practices that occur within and outside it. The extract below was taken from field notes taken during my participant observation at Saa's fish processing kitchen.

August 16, 2019

*Saa had two other sisters and a daughter supporting her fish processing in the kitchen, which was found within their fenced home. The kitchen had five different ovens and about twenty pieces of the fish processing metal net and other cooking utensils as the place also served as the kitchen of the home. Saa was in charge of the kitchen, directing what ought to be done, even in the presence of her husband. I offered to help in the washing of the fresh fish for smoking but Saa prevented my participation with a smile –no, wait, I will call you when I need you, she said. However, when it was time to lift the metal nets, Saa called for my help. After about an hour, Kweku enters the kitchen to help in packaging the smoked fish for storage and I joined him. Saa inspected all the fish we packaged to ensure they were of the right size and quality while those of her sisters were not inspected. Saa insisted that the packaged fish I did with Kweku was too tall and could fall. Kweku thought otherwise, but we reduced it anyway. It was time to store the packaged fish and Kweku suddenly took charge of how the arrangement should be done. He requested that we push the old packages in front and keep the newly packaged at the back to ensure the old is sent to the market first – Saa agrees. After packing the processed fish, I requested from the couple to take a picture as they worked in the kitchen. Saa agreed but Kweku declined and asked that he takes the picture of the wife and myself if I wanted it that way.*

From the ethnographic account above, the fish processing kitchen, and the activities and decisions which took place within it mirrored that of a typical kitchen, which most studies

find women to dominate (Bartley et al., 2005; Orgad, 2019). Although Saa took most of the decisions relating to fish processing, there were instances where Kweku, the husband also took charge in decisions regarding some activities such as how the packaged fish should be stored. Similarly, while Saa prevented my participation in activities such as washing and smoking the fish, when it got to the lifting of the heavy metal nets from the oven, she called for my help. Her prevention of my participation stemmed from gender discourses which regards fish smoking as a feminine act and the fact that smoking required special skills which I did not have, coupled with the fact that washing and smoking fish did not require much brawn. Although Kweku fully participated in the packaging of the processed fish, he declined to being photographed when I requested. Kweku's participation in the fish packaging could equally mean a subversion of his masculine status. Apart from the processing kitchen being situated within the home, the fencing of the home further hindered visibility from the public. As indicated in Chapter 3, perhaps Kweku was aware of what a photograph could do. The photograph could nullify the protective role of the fenced home and potentially result in public display of his role in what could be termed feminine and subsequent ridicule or name calling for his involvement. To avoid this possible outcome, he refused to be photographed. From the ethnographic account, we see Saa's domination and Kweku's limited participation in fish processing and its related decisions. One may argue that such division of fish processing labour and decisions emerged through gender norms of femininity and masculinity where women are expected to take charge of household related activities such as fish processing in the kitchen (Bartley et al., 2005).

However, the gendering of fish processing and storage decisions within the kitchen as shown from the above emerged from more than human intentionality or norms. The analysis reveals that despite Saa's dominance, some fish processing activities and decisions such as storage of packaged fish were undertaken by Kweku, the husband. It can be

discerned from the above account that Kweku's dominance in decisions relating to the storage of processed fish in the kitchen emerged through the co-implication of his ability to lift the heavy packs of fish (human bodily capacity), the fence (material object) around the home (spatial force) serving as a barrier for public scrutiny on gender appropriate roles (discursive force) and heavy packs of fish which required storage (non-human material objects). It is when these forces simultaneously combined that Kweku's participation in fish processing and storage emerged. In the absence of say, Kweku's strength or the fence around the home serving as a barrier from public view, perhaps the event of his dominance in fish storage decisions may not emerge. It is therefore not surprising that Kweku objected to being photographed, as that could nullify the capacity of the fence around the home to serve as a barrier and unsettle the human body–fence–heavy fish package assemblage, if I, the researcher (photographer) exposed such photos to the public.

The above excerpts on the two spaces (that is, fish landing beach and processing kitchen) show that gendered fishery activities were experienced differently across the two spaces by both male and female fisherfolk. Focusing on purely discursive analysis could reveal how both Saa and her husband, Kweku respectively drew on their feminine and masculine statuses to exert different levels of control and participation in fishery decisions and practices. A biological essentialist would also focus on biological factors such as differential strength between them determined the gendered division of fishery decisions and labour across the different spaces.

However, a Deleuzian approach which considers spatiality along with the discursive and material forces adds more to the above approaches. It moves from what determines a phenomenon, to a focus on what is made possible or produced through the intra-activity of different forces – a move from biological or social causality to a material-discursive-spatial entanglement (Barad, 2007; Lyttleton-Smith, 2017). In short, it can be argued that the differential gendered experiences between Saa and Kweku were manifested through the

intra-activity of the spatial forces (the landing beach, the fish market and fish processing kitchen) and other material forces such as the canoes, the sandy beach, the sea, the metal nets, the heavy packaged fish as well as the human (male and female) bodies involved in these activities with different (in)capacities, and the discursive forces such as social norms of appropriate gender roles for both men and women.

Excerpts from interviews provided further evidence on how the different forces co-constitutively enhance or limit women's participation in fishery decisions and practices in different contexts. Focusing on how space comes to matter in the gendering of fishery practices, I also show how other factors become relevant to reveal that the spatial force makes meaning only in relation to other forces, as the interview with Agya-Kojo reveals:

**Interviewer:** Is it possible that women can go fishing, for men to also process and sell?

**Agya-Kojo:** *Ah my brother! Women cannot go to the sea. Fishing is not for women. The task on the sea is not easy...the pulling of those heavy nets over there [he pointed at one] ...Sometimes we sleep on the sea all night, that's where we bath, we go to toilet, we change our clothes, and we do everything on that open canoe. How do you expect a woman to bath or take off her clothes? Besides, the sea is dangerous, the waves can be very violent. Sometimes the kind of dangerous things we see... [Paused].*

**Interviewer:** Okay.

**Agya-Kojo:** *The conditions at sea would not be good for women. Even not every man can go fishing, how much more women. I have heard that in some parts of Nigeria women go to the sea [to fish] ... I am sure it is not deep sea. You know Nigeria has a lot of lagoons which is very calm, just like a river or lake. With that they might be able to get crabs and some fish but with proper deep-sea fishing like ours, women cannot.*

According to Agya-Kojo, ‘women cannot go to the sea [and that] fishing is not for women’. He argued that in addition to the strength required to work on the sea which has been discussed in the previous sections, the ‘open canoe’ (non-human material object) makes it uncondusive and inappropriate for women to work on the sea. Again ‘the sea is dangerous’ because its waves can be ‘very violent’. He then compares the deep-sea fishing in Ghana to the many lagoon fishing in Nigeria, where women may be able to undertake some fishing because it is ‘very calm’. Here we see the differential capacities of two spatial forces; ocean space and lagoon space, all serving as locations for fishing but the ocean’s capacity to produce violent waves could limit the capacity of women to engage in fishing as indicated by Agya- Kojo. It also reveals that the capacity to fish does not only reside with men but also women as found in Nigeria where a calm lagoon space enhances the capacity for women to equally fish. A number of studies equally reveal that in situations where women engage in fishing, they mostly undertake gleaning, riverine and nearshore fishing (Frangoudes, Gerrard and Kleiber, 2019; Zhao et al., 2013).

The above implies that strict division of fishery labour based on essentialist assumptions of differential strength as brute truth is questionable. The differential strength becomes relevant in the context of certain part of Ghana where violent ocean wave (spatial force) and deep-sea fishing would require strength (human bodily capacity) to pull or swim when a boat/canoe (non-human object) capsizes. This may limit women’s participation in fishing. However, with the calmer lagoon water bodies (spatial force) such as the case of Nigeria as described above, women may not necessarily require such strength to be involved in fishing as they are undertaken nearshore with little or no waves. As such, the intermingling of spatial/material force (deep sea and its waves/lagoon) with human material bodies (male/female bodies with different capacities in strength) and non-human objects such as the canoe work together to create different subjective positions for women. Whilst an assemblage of female body–ocean space–canoe may limit women’s participation in the



context of Ghana's fishery, the assemblage of female body–lagoon space– canoe may work to create opportunities for women's participation of fishing in Nigeria. The intervention of a calm lagoon in the fishing assemblage suspends the effects of the violent sea waves to permit women's participation – a largely unnoticed factor in the gender inequality in fishery debate (see Kleiber et al., 2015; Zhao et al. 2013; Harper et al., 2013). Asking the question 'what does the lagoon do?' or 'what does a body do?' prompts us that space (e.g., lagoons, sea, etc.) and human bodies (male and female) with different capacities (e.g., strength) matter in the larger mangle of forces that work to co-create opportunities for and obstacles to women's participation in fishery tasks (Taylor, 2013).

It will be equally contestable to assume that fish trading and processing is a sole responsibility of women without examining the context within which such gendered practices occurred. Excerpts from the interview with Adjoa further explained that while she was in charge of fish processing, there were instances where her husband 'help[ed]' in processing and trading of the fish but under specific spatio-temporal conditions. In instances where such conditions are not met, Adjoa would play a gatekeeping role by preventing the husband from engaging in such activities, as she indicated below:

**Interviewer:** Is your husband involved in the fish processing or trading as well?

**Adjoa:** *Any good man who wants the best for his wife helps in the fish processing...but for the trading at the market, they will not. That is for me...in fact even if he decides to sell at the market, I will not allow...I will not allow my husband to be called Kojo Besia [a man who looks or behaves like a woman](....) Of course, there are some men who engage in fish sales. Our national fish trader's association president is male...They [men] buy in bulk quantities and send to their wives or customers in different towns. Others buy in bulk and distribute to hotels and restaurants. The sale of fish at the market is where I also get my Ntodo [profit from the sale of fish] ...it is none of his*

*business.*

Again, in terms of decision-making, similar forces could be discerned. For instance, in an interview with a fisherman who doubled as a co-canoe owner with his wife on whether they have had disagreement on fishery decisions before, and what happens when it occurs, he indicated:

*Oh yes, there are many but when it happened, we discussed in our bedroom and she accepted her fault when I discussed with her. She has also disagreed with me before and I accepted my fault and apologized. So, we resolve it ourselves (Efo, 44 years, Axim).*

The two interview excerpts above illustrate the affective roles of different spaces entangling with other material and discursive forces to co-constitute the gendering of fish processing and trading decisions. For instance, the *bedroom* plays an important role in the events around fishery decisions by serving as a place where certain decisions and disagreements are resolved. As Efo indicated, there were times that he had to apologize to the wife, but this was done in the bedroom (spatial force). Efo may not necessarily apologize to the wife in a different location outside the bedroom (e.g., the beach) as it may intra-act with discourses of appropriate male position in society to result in public ridicule.

In the earlier interview with Adjoa above, the market space combined with other factors (such as norms of appropriate gender roles) to limit men's participation in fish sales whilst the spatial-material-discursive entanglement of the hotels and restaurants co-created enabling conditions to enhance men's participation in fish sales within these spaces. In terms of fish retail at the market, Adjoa would 'not allow' the husband to engage at all for two reasons: First, to avoid name calling on her husband – discursively, a man's participation in this space (fish market) would constitute a subversion of his masculine status – an 'improper' male behavior that could result in name calling such as '*Kojo Besia*'.

The second reason is to ensure that she gets her profit from sales as she indicated, ‘the sale of fish at the market is where I also get my *Ntodo*...it is none of his business’, which provides evidence for the benefit discourse (Bolzendahl and Myers, 2004; Barnett and Rivers, 2004). This suggest that the economic benefits derived from gendered arrangement could also play a constitutive role in some women protecting such gendered practices to persist.

There were instances where women indicated that such division of labour was ideal, as their role in fish processing and trading allowed them to be home just like normal mothers and wives would do, to cater for their children. Such perceptions coupled with Adjoa’s use of words such as ‘*help*’ in the interview above shows how ingrained is the division of labour in fishery such that undertaking the other’s role may only be considered as ‘help’ or support. It also shows how gender norms and values play a crucial role in the gendering of fishery decisions and practices as discussed in detail in the next section.

#### **6.4 Gender discourses, historical accounts, marital expectations and material entanglements**

In most feminist studies, hegemonic discourses of femininity and masculinity such as a woman’s place is the home, the man’s is the public sphere and wife is subordinate to the husband, are considered as ideological structures which in most cases negatively affect women (Chan, 2008; Risman, 2017). Biological essentialists on the other hand counter such feminist’s arguments and often consider women’s role in pregnancy, childbirth and the consequent childcare and domestic duties as natural and somewhat immutable (Murdock, 1949 in Holborn et al., 2004). In Ghana’s small-scale fishery, activities such as fishing are largely considered as physically demanding and dangerous, terms mostly associated with traditional forms of masculinity. Based on Butlerian philosophy of sex-gender complementarity, it is argued that such biologically defined male and female bodies naturally undertake culturally defined masculine and feminine roles respectively leading

to more men in fishing and more women in fish processing and trading (Overå, 1998, 2003; Britwum, 2009; Kraan, 2009).

Away from these polarized biological determinists and social causality debates, this section shows how such social forces combine with material (both human and non-human) and spatio-temporal forces in co-creating gendered conditions without essentializing or dwelling solely on the social causality arguments. Since the role of the human, non-human and spatial forces have been discussed in the previous sections, I seek to emphasize how dominant gendered structures and discourses play co-constitutive role in the gendering of fishery decisions and practices in Ghana's small-scale fishery. For instance, Adjoa, a canoe co-owner tells how historical account of women greediness produced social expectations with connotations for the division of fishery labour between women and men.

**Adjoa:** *I heard that in the past, women used to go to the sea [engage in fishing], but due to their greediness they were banned from fishing... some women went fishing but due to their greediness, when they saw a lot of fish, they wanted to fill the full canoe so the canoe capsized, and they died. It is believed that those women turned into Ntuii [local name for dolphins].*

**Interviewer:** Really?

**Adjoa:** *Yes, because when those women died, they [respondent's forefathers] saw earrings on Ntuii...and you know they [dolphins] have soft, smooth bodies that really look like a woman. So, it became a taboo for women to go fishing.*

In almost every interview encounter, this story was told as the main reason why women were not engaged in fishing. Although the story was described as a myth, such dominant discourse was largely unquestioned and was believed by most men and women old and young. In informal discussions, some participants indicated that there were instances where metal objects which looked like earrings were found on some of their catch, which they

associated with the said women as captured in Adjoa's interview. However, other participants were skeptical about the veracity of such claims and whether the metal objects were earrings at all. Such participants doubted that a fish like dolphin could be a woman and argued that the metal objects could have been picked by the fish from the polluted ocean, as one participant asked whether all the dolphins outside Ghana's waters could also be the same women.

What I wish to highlight is that, in examining gender inequality in the fishery, dominant discourses within the fishing community as narrated by Adjoa, may have influenced the gendered division of fishery labour. The repeated acts of banning women (even those with the required strength) from fishing for centuries clearly played a role in normalizing gender division of fishery tasks and decisions, which some considered natural (Butler, 1990, 1993). Although highlighting the role of gender discourse and structures is relevant, there is the need to pay attention to the affective charges of the materialities (human and non-human) such as the sea, the earring, the canoe, women's soft bodies and dolphins that makes Adjoa's story appear as true. For instance, the earring performed an agentic work by foregrounding the material agency of a dolphin's body to produce a particular feminine incarnation which entangles Adjoa's narration and our understanding of such gendered practices. This means that the earring was no mere dormant piece of metal, but a vibrant matter, 'an object with thing power', which is saturated with gendered meanings (Taylor, 2013, p. 693; Bennett, 2010). We also see how the affective charges of the past, places Adjoa's experience of gendered division of labour in the context of history.

As argued by Latour (2005, p. 7) structural or systemic explanations such as gender norms or patriarchy which are usually used to portray perceived social patterns or replications themselves require explanation – how do such patterns of life emerge? Answering this question rules out any recourse to an 'underlying mechanism (such as gender structures) as explanations for continuity or change' (Fox and Alldred, 2021, p. 6). For instance, the

affective roles of gender structures and historical accounts in Adjoa's story in the gendering of fishery practices and decisions are incomplete as singular distinctive forces but *becomes* through their relations with other forces (Barad, 2007; Ringrose and Rawlings, 2015). For instance, the perception of women greediness and the subsequent banning of their participation in fishing emerge through the assemblage of non-human material forces such as the earring, the dolphin, the female soft body (human material force) and the spatial force of the ocean space with capacity to drown, coupled with the dominant historical account (discursive force). Without a material object such as the earring or women's soft skin (human body) likened to the smooth skinned dolphin (non-human body), such social perception of women's greediness may not materialize for the banning of women from fishing to occur. It is when these factors assemble or combine simultaneously that such social outcomes (conventionally considered structural) may occur.

Another important arena where such discursive forces played an important role was marital expectations. Although women work alongside their men in the small-scale fishery, they are often expected to take subordinating positions in decision-making in relation to their husbands when it comes to marriage (Overå, 1998). The marital arrangement where husbands pay bride price and are expected to take wives to their homes coupled with religious beliefs which place wives second to husbands, were considered key factors which put men in positions of power in the home and in terms of fishery decisions. In an interview with Sarah, a 61-year-old fish trader and canoe owner, she indicated:

**Sarah:** *I don't think women can be at equal footing with their husbands. The Bible*

*says we are their helpers. The man is the head of the house. He married you [the woman], paid your bride price and took you to his house. As a wife, I need to be under my husband and respect him. There is a saying that, "Bayin na ose nye Besia" [it's a man who decides not a woman]. When it comes to major decisions in this business, it is the man who decides not the woman.*

**Interviewer:** Oh okay.

**Sarah:** *He is the one who can stand when there is a problem. So, ahah! Our elders have some adage that, “se Besia to etuu a, odzisi Banyin nedan mu” [when a woman buys a gun she keeps in the man’s room]. So even if you [the woman] are the one who provides the money, you don’t have to say that because you provide, you have to lead...it does not show respect, ...put the money in his pocket and let him speak for you.*

From the above interview excerpt, Sarah stressed on the religious and social norms which positioned women as subordinate to men and hence, wives ought to respect their husbands in marriage. The use of popular adages such as ‘*Se Besia to etuu a, odzisi Banyin nedan mu* [when a woman buys a gun, she keeps in the man’s room]’, which implies that a woman would not be able to control her own resources in the husband’s house, were important ideologies which controlled women’s behaviors when married. The ‘gun’ used in the above excerpt is not only a resource but a weapon which can kill, connotes power and might – enacting masculine power and authority (Taylor, 2013).

The payment of bride price coupled with the living arrangement where wives moved and usually lived in the husband’s home was considered an important social control arrangement which negatively affected women’s decision-making power. This was also apparent in the quantitative findings where a couple’s marital arrangement such as women’s living with husbands had negative and significant effects on women’s decision-making power (see Table 11 in Chapter 6). In several instances, participants were uncritical about the gendered nature of fishery decisions and practices, and generally unquestioned such dominant discourses as they have become ingrained and considered natural for men to control decisions. On the question of why men seem to dominate household fishery decision-making, Ekua, a 54-year-old canoe owner argued:

**Ekua:** *No matter what, he is the man. Places where women cannot go, men can go. Should something serious happen like fire or robbery, the man would be the first point of contact. Just recently when the [power] transformer caught fire, you heard everyone shouting, mbanyin mbra oo [men should come]. Even as we sit here, I may be older than you, but there are places that if we should go right now, you would have power over me. You would be the one required to talk or act not me, a woman.*

**Interview:** Really, but why?

**Ekua:** *Because you are a man [smiles]. I tell my husband everything because he's the man that I live and work with, so I need to tell him everything.*

**Interviewer:** So, does he also tell you everything?

**Ekua:** *Yes, he does. It is our business...even if he doesn't, he is the man... But he tells me everything.*

From the linear regression model of household fishery decision-making as shown in Chapter 6, women's age was positively and significantly associated with their decision-making power. As such, one would have expected that the high ages of Sarah (61 years) and Ekua (54 years) would equally mean high decision-making power. However, the interview excerpts above seem to suggest the opposite, as both Sarah and Ekua indicated having limited decision-making power especially when compared to their husbands. Some studies suggest that women in older age cohort tend to have traditional gender role attitudes stemming from their gender role socialization (Ciabattari, 2001). Observations from fieldwork also revealed some inconsistencies between women's narration of their household decision-making power (indicating limited power) and what they actually practiced in their homes as discussed in Chapter 4. Such inconsistencies may have been triggered by women's performance of socially desirable behavior during the interviews (highlighting the limitation of interviews), which created the impression of their low



household decision-making power when compared with their husbands (Tichenor, 2005). Several historical and Biblical accounts were stressed by both male and female informants and often explained to combine with other material (human and non-human) forces in gendering fishery decisions and practices:

*God created us different, we [men] have strength...what did the bible say? God said let's create man in our own image...he created man not woman. He only used our ribs to create the women. That's why we call them women. I have watched a video about that. Just listen to the voice differences between men and women that should tell you something* (Nda, 54 years, Crew leader, Axim).

A female fish trader as indicated:

*The Bible states that a man will leave his house and marry a woman so that they live together in the man's house. God realized that man would need a helper, a woman to ensure that the family progresses. That is why God gave the woman as a helper for the man* (Esi, 44 years, Axim).

In the excerpts above, we see the effects of the historical Biblical accounts (discursive force) as it dwells on issues of a God who created man and used part of the man to create woman, making the woman not only secondary to man, but also her roles and decisions as secondary - a 'helper' to her master, the man. We also see how this strong religious account combines with human bodies (male and female) with different capacities in terms of 'strength' and 'tone of voice' as indicated by Nda above to justify the man's dominance. We can also talk about the effects of the video (technological force) that Nda watched to influence his religious believe on the gendered roles and how the image on the video screen affected Nda's understanding of the issue of female participation in fishery decisions and practices as above. In the earlier interview with Sarah, we also saw the important role of social norms and values promoted by popular adages such as '*Bayin na ose nye Besia* [it's

a man who decides not a woman]’ are used in the Ghanaian context to control women’s behavior in fishery decision-making.

As earlier indicated, some women even believed such arrangements were to their advantage and were to ensure the sustainability of the fishery business, hence remained unquestioned. There were few instances where some informants believed there was the need for women to equally take part in decision-making but even with that, they mostly supported women playing a supportive role to men:

*The Bible says that the man is the head. However, Dea otwa sa no onnyim se nakyi akyea [The one who creates the path would not know that he has bent the way unless he’s told]. So, we sometimes advise them. We can even call them on phone whilst they are offshore fishing to move to other fishing locations when we hear of good catches (...). It is all meant to support them [the men] and to sustain the business and not to control them (Attaa, 39 years, Axim).*

‘Control[ling]’ a husband was considered inappropriate and used in a negative sense which could mean that the wife disrespected the husband, or the husband had lost his place in the home as the head or the one to decide. Such informants preferred women’s participation in fishery decision-making, but in a way not to disregard the decisions of the ultimate ruler – the husband.

In the above interviews, I do not seek to focus on the reactions of women as above to make judgement about women’s role in fishery decisions and practices. My aim is to show the important role of discourses as a constitutive force in the gendering of fishery decisions and practices as it combines with human and non-human forces in co-creating different events for women. From the interview with Attaa above, the use of popular Akan (Ghanaian ethnic group) adages was an important discursive tool, which combined with material/technological forces such as the uses of ‘mobile phones’ to rather enhance

women's decision-making power. We become aware of the force held by mobile phones (technological force) as they shifted how women could participate in decisions relating to the male dominated offshore fishing and shifted subjectivities beyond gender norms. The above interviews also show that although some women may engage in somewhat subversive behaviours or resist some gender norms, they may not necessarily aim at changing the existing order or dominant norm. Informants highlighted instances where purely subversive behaviours resulted in name calling as discussed below.

#### ***6.4.1 Name calling in subversive fishery decisions and practices***

Name calling is considered as one of the powerful discursive tools for controlling subversion of dominant gender discourses and values (Ringrose and Rawlings, 2015; Overå, 2007) and this was apparent in the current study as shown in previous sections, and emphasized in my interview with Adjoa (42years) here as a case example:

**Interviewer:** Should this taboo on fishing be removed; do you think women would go fishing?

**Adjoa:** *Yes! [Smiles] we will fish if that taboo is eliminated. In fact, there was a lady in this community who used to fish with other men, but for her school, she had to quit fishing. If she had continued, the story would have been different...You know, people will call you all sort of names, but I wouldn't mind. Just last week when our canoe landed, I realized that the boys carrying the fish from the canoe to the shore started stealing it...I quickly went close to the canoe to warn them, then people started shouting... 'Adjoa tiger', 'Adjoa tiger' [a woman who behaves or looks like a man – a tiger], but I don't care, sika nnyi dzin [money has no name or gender]. Any woman who goes to the sea may develop macho [muscles] [smiles] and would be given all sort of names...Banyin Besia [a woman who looks like a man], you know right? [She quizzed]. But I believe women can go fishing.*

Name calling is often examined through discourse as a form of gender policing around proper womanhood and manhood (Overå, 2007; Huuki and Renold, 2016). Interviews showed that men also suffered such name callings such as '*Kojo Besia*' (a man who behaves or looks like a woman) for engaging in fish trading in the market or other activities considered feminine as the previous sections illustrate. Women however seemed to face more restrictions or impacted more by these name callings. Being concerned mainly with linguistic and discursive terms, previous research has highlighted how terms such as '*Adjoa Tiger*' and '*Banyin Besia*' used in the Ghanaian Akan language as above carries a particular mixture of connotations including 'a woman who looks or behaves like a man or tiger' – an 'improper female', could limit the extent of women's decision-making and practices (e.g., Overå, 2007).

While addressing such problems is relevant, I argue that we need to recognize that such social outcomes result from the relations of different material-discursive and spatial forces (Barad, 2007; Ringrose and Rawlings, 2015). For instance, the above interview excerpts illustrate that the production of gendered subjectivities and practices in the fishery emerge through the intermingling of the discursive forces with human, non-human material and spatial forces such as the female body, the canoe and the sea space. From Adjoa's narration, we find that a woman's inability to engage in fishing may result from powerful discursive tools for controlling women's participation (such as name calling) coupled with the capacity of the heavy fishing net or canoe (non-human objects) when pulled to result in development of female 'macho' body—an inappropriate female body (Coffey, 2013), which could result in public ridiculing. Thus, focusing on the entanglements of such discursive (name calling)-nonhuman (canoe/fishing net)-human (female 'macho' body) forces is crucial for understanding how such gendered practices in fishing could emerge.

As shown from above, the relevance name-calling in the gendering of fishery decisions and practices only emerge when the assortment of other human and non-human material forces are at play. Neither can we assume that the potentiality of the human and non-human forces can be isolated (Barad, 2003, 2007; Fox and Alldred, 2018a). Similarly, what is conventionally considered as women's negotiations, agency or resistance against gender ideologies and structures actually emerge from the intermingling of different material, economic and spatio-temporal factors (Fox and Alldred, 2018b, 2021). There were instances of women's resistance to gender structures in the fisheries. In the case of Adjoa above, she disregarded the norm that prevents women from entering the sea or going close to the canoe, to ensure that her fish is protected from being stolen. However, such resistance materialized through the intra-activity of the discursive force (adages such as 'money has no name') with her conscious desire to ensure that her fish is protected, coupled with the economic benefits (force) of such protection. Without the co-implication of say, the economic force with the other material-discursive forces as above, perhaps the somewhat subversive behavior or resistance of Adjoa may not have materialized. Thus, women's agency or resistance to gender structures is equally transient (like the gender structures themselves) rather than an outcome of a self-determining human overcoming a certain underlying structure – a decentering of human agency towards distributed agencies within material-discursive-economic assemblage (Fox and Alldred, 2018b; Feely, 2020).

### **6.5 Embodied affects, emotionality and the gendering of fishery decisions and practices**

Findings from the study also show that emotions play a crucial role in the gendering of household fishery decisions and practices. As discussed in chapter two, in sociological research, emotion has been analyzed from two opposing perspectives: a cognitivist perspective where emotion is considered as an individual's judgment, self-expression or a specific way by which an individual understands the world (Sartre 1962 in Ahmed, 2004).

On the other hand, the sociality of emotion views emotions as bodily sensations or reactions to social cues independent of our thought or cognition (Ahmed, 2004). Some scholars have argued that in many instances where emotion is thought to include both cognitive and bodily sensations, it mostly tends to elevate the former over the latter (Jaggar, 1996 in Ahmed, 2004). Conventional sociological accounts identify emotion as embodied response to social signals mediated by cognitive processes that provide meaning to these signals (Hochschild, 1983 in Fox, 2015; Barbalet, 2002). Such understandings of emotion tend to equally elevate the socially constructed aspect of emotions over the biological or cognitive force.

Away from these anthropocentric ontologies and dualistic frameworks of emotions, I focus on an approach which dwells on the co-constitution of the social and the biological in understanding emotions following scholars within the popular school of thought known as the 'affective turn' (Boler, 2015, p. 1490; Ahmed, 2004; Tamboukou, 2003; Fox, 2015; Boler and Davies, 2018), using the DeleuzoGuattarian assemblage analysis. According to Youdell and Armstrong (2011, p. 145), thinking about affectivity invites us to think beyond the subject's rational (or irrational) ideas, actions and feelings. Instead, it is the affective flow of the events that is foregrounded. Thus, affect is different from emotions. Affect is a body's capacity to affect and/or be affected (Ringrose and Coleman, 2013; Fox, 2015). Distinguishing between affect and emotions, Hickey-Moody and Malins (2007, p. 9) posit that affect is a 'pre-personal intensity which is felt before it is thought: it has visceral impact on the body before it gives emotive meaning'.

Hence, in assemblage analysis, emotional response such as love, fear, courage, frustration and respect (which would be discussed later in this section) are considered constitutive part of the generalized affective assemblage of the material (both human and non-human) and other social forces that co-produce gendered fishery decisions and practices (Fox, 2015; Ahmed, 2004; Youdell and Armstrong, 2011). This provides an expanded sociological

understanding of emotions by shifting the attention from what emotions are (whether cognitive or socially determined) to what emotions can do within collectivities (Ahmed, 2004; Boler and Davies, 2018). In the following excerpts, I show the affective role of these collectivities with emphasis on the role of emotionality in fishery practices and decisions.

I begin by giving a brief account of a video shared with me by Agya-Kojo which captured an encounter he had with three women (1 journalist and 2 community-based NGO officials) during their short expedition on the sea as the women were interested in knowing how the entire fishery value-chain operates. As he recounted:

*So, after a community engagement, they [the women] asked that we take them on the sea to give them a ride to that island [he pointed – was few metres away]. So, we took a big canoe and just some few miles off the shore, just before the island, come and see the women! They started shaking. They wished they could fly back. So, we told them when we say they [women] cannot do it [fish], they don't need to challenge us. I guess they realized that our work was difficult. However, if it was a boat, I am sure they would be able to go without fear. It is much safer; they may be able to work on it. Yet, I have not seen any woman fishing on a boat before because the only thing we have here are our small, small canoes (Agya-Kojo, Chief fisherman, Axim).*

From the video it is observed that while the three women wore life jackets, Agya-Kojo and his crew members who went with the women were without life jackets, yet two of the women were afraid. Below is an excerpt from what transpired during their expedition.

#### **6.5.1 The sea expedition**

**Woman 1:** *Why is the canoe swinging and tossing like that?*

**Agya-Kojo:** *That is why we are here. There is no cause for alarm*

**Woman 1:** *There is no cause for alarm?*

**Agya-Kojo:** *Yes. Where we have gotten, we are now entering the waters [now getting deeper] so by all means there will be some little, little waves. So, there is no cause for alarm.*

**Woman 2:** *Yoo [okay!] we have heard you. So, ouch! So even if it [the canoe] goes up and down like that we should not be afraid?*

**Agya-Kojo:** *Yes. That is how the sea is. This differentiates the marine waters from the riverine system.*

**Woman 1:** *Yoo yaatse [okay we've heard you – in a wobbling tone]. So, we are safe right?*

**Agya-Kojo:** *You are hundred percent safe.*

**Woman 2:** *Okay we have heard you.*

**Woman 1:** *Hmm. It is not easy o. We are, we are, we are safe, we have been assured, we have been assured that we are safe, but we are sitting at the edges of our seats. We are, we are just praying.*

**Crew member:** *There is no need to fear.*

**Woman 2:** *There is no need to fear, there is no need to fear*

**Woman 3:** *You look scared [said to the other two women, as she looked calmer]*

**Woman 2:** *There is no need to fear, there is no need to fear, but it looks like the waves are too high today, right?*

**Agya-Kojo:** *But you have not gone fishing before so how did you know that? [they all laughed].*

From the above excerpt, 'fear' seems to be an important emotional term. It appears in almost every aspect of the encounter that the women had as they explored the sea. Conventionally, one may argue that the sea and its waves made the women afraid and that the bodily symptoms of fear (the wobbling tone, sitting at the edge of the canoe, perhaps sweating and so on) were automatic (Massumi 1995 in Boler and Davies, 2018). Cognitivists on the other hand may view fear as an instinctual or a personal feeling from the women that enhanced their successful adaptation to the events on the sea. One could also ask why the women were afraid even though they wore life jackets. Although the



expedition may be the women's first-time encounter, they were still afraid. Perhaps, they already knew or had an image that the waves may cause the canoe to capsize, which may lead to death stemming from their inability to perhaps swim like the regular fishermen, hence need to be feared. As such, the image of the sea and its waves as synonymous to fear may be shaped by cultural histories and memories (Ahmed, 2004). The women may have already had an impression of the risks associated with an encounter with the sea waves, an impression which was felt in their voice and perhaps skin. My decision not to join a similar expedition when I was offered the chance (as described earlier) could have also been shaped by similar historical images and memories.

Hence, it could be argued that it is not the sea and its waves that was fearsome on its own. It is fearsome to some people (in this case the two women). However, to describe fear as solely 'personal' fails to consider its relational uptake (Boler and Davies, 2018). Fear was neither in the women nor even the sea and its waves, but a matter of women and sea waves coming into contact, shaped by past histories and memories which allowed the sea and its waves to be apprehended as fearsome. Hence, it is not just that we may have an impression of sea and waves, but the waves also make an impression and leaves an impression (Ahmed, 2004).

From the above, the affective role of '*fear*' within the sea expedition assemblage may readily be discerned. The women's visceral reactions (the wobbling tone), its location 'in cells and in the gut' (MacLure et al., 2011, p. 999), among others gives an indication that particular sorts of bodies, locations and objects are constitutive force of normative gendered subjectivity (Ringrose and Rawlings, 2015). We see the affective role of the different bodies (women and men) as well as the canoe (non-human) encounter with the sea and its waves (non-human and spatial force) which co-constitutively altered the different behaviours of the crew members and the women aboard and the resultant series

of questions from the two women for assurance of their safety. As argued by Fox (2015, p. 310), ‘the significance of an emotion is not as a bodily response to an event, but as a capacity to affect’. Thus, affect is neither fully realized in the social form or language (emotion) nor human consciousness or judgement (feeling), but emerge through the relations of objects, bodies and spaces of which emotions such as fear is crucial, but only a part of the affective plane in the sea expedition assemblage (Massumi, 1995 in Boler, 2015, p. 1493; Taylor and Iverson, 2013). My fear and resultant decision not to undertake such similar expedition coupled with the courage expressed by the third woman indicate that fear does not emerge only from women but also men (like myself) through the material-discursive co-implications as earlier discussed. This is interesting, as in most societies, emotions such as fear is often related to women whilst courage is associated with men (Fox, 2015; Ahmed, 2004). We see that equating fear to women and courage to men as may be argued by some essentialists is limiting. Rather, the workings of the sea and its waves are capable of causing bodies to drown or even death if in contact with an inexperienced fisher body which has emotions and consciousness. This could prevent such bodies as mine from undertaking a sea expedition and be conceived as fearful. It is possible that with constant practice and change in some of the constituting forces (e.g. from violent sea waves to calmer waters such as a lagoon or river), the women as well as men like me may undertake such expeditions, and conception of fear may not exist.

Besides, interviews with fisherfolk (both men and women) also disclosed such affective economy where emotions such as love, courage and respect played a constitutive part in different events in the fishery practices and decision-making assemblage. For instance, on the reasons why women do not engage in fishing, Agya-Kojo disclosed.

*The sea is dangerous, the waves can be very violent (...). Sometimes the kinds of dangerous things we see... [Paused]. The conditions at sea would not be good for women.*

Another male participant who co-owns two canoes with the wife indicated:

*Man! The sea...the sea...for men we are more courageous than women. There are times that we meet a lot of dangerous things on the sea. Some of the fish are very scary and dangerous [Talks about how they can bump into stock of sharks and how scary it can be and shared some fishing techniques]. The women can go but women are not as courageous as men. Women are not courageous. Because in situations where men would keep their cool, when women see, they, they would be shouting...women are not bold for fishing. In Ghana even if we agree that women should go fishing, only a few would do that...only a few. My wife for instance, she can go, but most women cannot. Just look at how they shout in cars when something small happens...they would start shouting and can even confuse the driver...women are not bold. That is why we don't normally allow women to sit at the front seat of cars or behind the driver (Issah, 41 years, Axim).*

In an interview with Yaa, she also shared similar account on the same question as Earlier quoted and summarized here:

*Some women have courage and may be able to fish. For me I cannot... even if they ask me to do that I won't. I don't have the courage to be on that vast sea. Even at the beach how do you see it [the sea]? Let alone stay on the deep sea, I cannot (...).*

A common explanation for the division of fishery labour as given by Agya-Kojo assumes that women cannot go to the sea because the sea waves can be 'violent' and makes the sea 'dangerous', as such it requires *courage or boldness* (a feature that women do not have according to him – as if it is a property) to be able to undertake fishing on the sea, as indicated by Issah and Yaa in the second and third interview excerpts. Thus, both *fear* and *courage* can be experienced as internal states, but they can also be made apparent through actions such as the wobbling tone, praying, sitting on the edges of the seats in the canoe,

or shouting, as indicated in the above examples. Conventionally, sociologists may also consider emotions such as courage or fear as the outcome of the ‘confluence of biology (internal states) and culture (external forces)’ (Fox, 2015, p. 301). For instance, fear may be thought to emerge from a coward (internal state/characteristics) woman’s involvement in fishing on the sea, which results in her wobbling tone (external indicator of fear). However, I consider these as too anthropocentric, which sees such feelings/emotions (such as courage, fear, etc.) as mainly personal, based on an individual’s judgement or as something socially produced, without examining explicitly the part that emotions and other non-human objects plays in such social outcomes.

In the ‘affect economy’ (Clough, 2004, p. 15), I examine the affective capacities of the forces at work including emotions of courage and fear and how it combines with material forces such as the male and female bodies (human bodies) as well as the non-human material forces such as the canoe, the boat, the deep and vast sea, and the waves to co-determine the gendering of fishery decisions and practices (Fox, 2015; Boler and Davies, 2018). From the interview with Issah above, it can be discerned that different component of forces combined to create the gendered of fishery practices. First, focusing on the non-human material and spatial force of the deep sea and its waves, Issah indicates that the sea was dangerous because it had the capacity to drown or cause death, which links with cultural discourses of masculinity and femininity where women are considered coward and weak compared to men hence women are not suitable for fishing. We also see the part that emotions such as courage and fear (both visceral and physical experiences) play in the in the account of Issah, as women may exhibit fear by shouting to confuse the driver in a car. The assemblage would thus include past experiences regarding women shouting in a car to exhibit fear (external force), which are plugged into the fishery practices assemblage as described by Issah (Jackson and Mazzei, 2013).

How these material (human and non-human), discursive and emotional forces combine and affect each other determines whether the gendering of fishery practices and decisions is territorialized or deterritorialized. In the above context, the gendered fishery practices assemblages are held together or territorialized by the relations of affects or component forces involving the ocean space and its waves (material/spatial force), the female body (human material body), discourses of women's cowardice (discursive force) as well as women's actual feelings of fear or courage for engaging in fishing and its related activities which played an important role in sustaining the flow of events. In such instance, fear or courage would not be considered as a mere characteristic for women or men, but as emerging and constitutive part in the material-discursive assemblages of fishing events as illustrated above.

In terms of fishery decision-making, similar accounts of affective relations of material-discursive-spatio-temporal forces were invoked in the accounts of both men and women participants in the different decision-making events. In the interview excerpts that follow, I pay attention to the affective capacities of the embodied sensations and emotions in the events of household fishery decision-making.

*For us, when it is about time for my husband to go fishing, he seeks my views on how to get the canoe on the sea. But the moment they start fishing, he ignores me on fishing matters. (...). The moment the man's fishing equipment is destroyed, and he needs your [respondent's] help, he would do everything with you, but the moment it is resolved, and the fish comes, he forgets about you...but he is my husband, I love him and need to support him... besides, we have children to cater for (Ekua 54 years, Axim).*

The above interview excerpts from Ekua indicates that emotions such as 'love' played a key role in the events of couple's fishery decision-making. There were several instances in

the interviews where participants (both men and women) indicated husbands ought to lead in key household decision-making as it was a sign of ‘respect’ to the husband. Instead of considering love or respect as exclusively individual characteristic or as a social and cultural practice, I focus on the part that such emotions (love and respect) play as a constitutive of the assemblage of human bodies (male, female, children), the non-human objects (the fish, the sea, the canoe) and the economic and the temporal forces that co-create the different outcomes of events around household fishery decision-making and practices. From the interview above, Ekua highlights the important effect of the temporal force - a time when husband needs her financial support to fix the faulty fishing equipment, where her participation is enhanced and a time when her financial contribution may not be needed where her decision-making power is limited. This temporal force rhizomatically links with Ekua’s income contribution to the fishery business, which mirrors findings in the quantitative analysis where women’s income and household financial contribution had significant effects on their decision-making power (see table 7 in chapter 6). The effect of discourses of gender appropriate roles where women are expected to ‘support their husbands and cater for the children’ were also apparent in Ekua’s account, which served to limit her decision-making power. Within this affect economy were not only the above temporal, economic, discursive and material forces but also the effects of emotions such as ‘love’, which served as a key motivation factor for Ekua to keep supporting her husband despite being sidelined sometimes. Emotions such as love are considered as powerful motivators for action as they may ‘coerce, discipline, habituate, subjectify or territorialize bodies and the social world’ (Deleuze and Guattari, 1988 in Fox, 2015, p. 310).

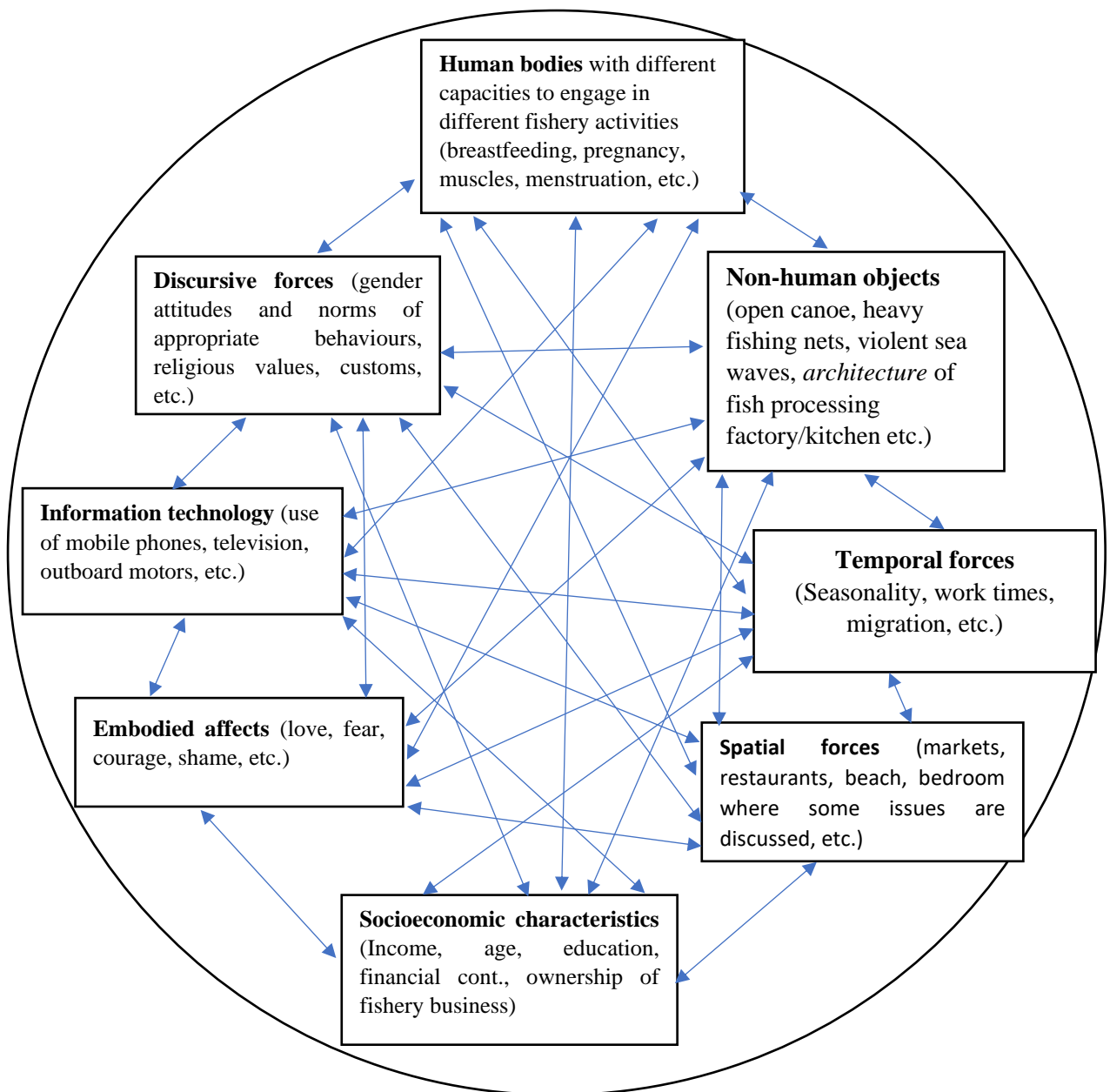
However, the concept of assemblage examines the affective relations between such emotions and the material forces, the temporal contexts and discursive forces and how these relations together create the event around which women’s household fishery decision-making may be enhanced or foreclosed as shown above. It is clear from the above

analysis that any altering or the absence of any one of these entangled forces, such as an increase in Ekua's financial contribution or change in emotions from love to hatred, the events of Ekua's limited participation may not materialize. This implies that emotions such as love cannot be a sole determinant of Ekua's behavior with regards to her household decision-making power despite its crucial role in the gendering of fishery decisions.

We may also look at a love-assemblage where a wife's feelings or emotions may be important but constitute only a part of the love affective economy. This may comprise the human bodies (wife and husband) and non-human forces (the ring, the bride price and other relationship memorabilia) as well as discursive forces such as social expectations or norms of appropriate behavior (e.g., showing respect to your husband) and other cultural models of masculinity and femininity (Fox, 2015). The affective flows between these forces (including emotions) co-determine whether love-assemblage emerges or is deterritorialized into a hate assemblage (Fox, 2015; Youdell and Armstrong, 2011; Ahmed, 2004).

These multiple entangled factors simultaneously and as a unit, work to territorialize (create obstacles for women's participation) and/or deterritorialize (create opportunities for) women's participation around different events and contexts of household fishery decision-making and practices. The inter-implication of the material (both human and non-human), discursive, spatial and temporal forces can be illustrated as complexly intra-connected as shown in Figure 25 below. In the next section, I show how the material (human and non-human), discursive, spatio-temporal as well as socioeconomic forces that assemble as a result of their affective flows intra-actively work to territorialize and deterritorialize different outcomes in the events of fishery decisions and practices.

**Figure 25:** Household fishery practices and decision-making assemblage of rhizomatically interconnected material, discursive, spatial, temporal and economic forces, all mutually affecting.



## 6.6 Forces of territorialization and deterritorialization in fishery practices and decisions

According to Feely (2020, p. 12) forces of territorialization refers to forces that serve to stabilize and maintain order within the assemblage. Mapping forces of territorialization aims at illustrating how the complex interaction of all the above forces produce the problem of a woman who cannot participate or has low level of participation in household fishery



decision-making and practices emerge. Whereas deterritorialization forces examines the assemblage of forces which come to disrupt the existing order to create opportunities for women's participation in fishery decisions and practices (ibid.). From the earlier sections, the forces of territorialization and deterritorialization can readily be discerned. However, I wish to highlight from interview narratives and field note extracts in the previous sections to demonstrate how the gendering of fishery decisions and practices are territorialized and/or deterritorialized for purposes of emphasis and clarity.

Within the events of household fishery decisions and practices analyzed, we found that the combination of certain forces at certain locations, within certain given times worked to limit or constrain the extent of women's participation in fishery decisions and practices. However, there were also instances in the material-discursive-spatio-temporal assemblage which co-produced moments or events of deterritorialization where strict division of roles and decisions was destabilized, creating a resistance to existing orders. The use of the term 'event' indicates that these outcomes are temporary rather than fixed. I begin with stories that elucidate the assemblage of forces around which the gender division of fishery labour emerge or territorialize.

There were several examples in the findings which suggest that mutually affecting assemblage of forces come together to create the temporary outcome of division of labour and decisions for different fisherfolk which particularly limits the participation of women in certain fishery decisions and practices. For instance, in the interview with Ekua; on the question of why the division of fishery labour where men fish and women process and sell fish, she indicated: *'The kind of work done on the sea is too hard that I cannot do. I do not have that strength to pull the heavy nets so when he brings the fish, I also sell'*. Thus, the brawn or strength required to pull the heavy nets (an intra-action of the human and non-human) on the sea (spatial) combine with other forces such as discourses of women's

weakness in Ekua's context to constrain her participation in fishing. In the context of fish processing and sale, such combination of forces may be present to enhance her participation in fish processing and sale. Thus, it can be argued that the inability of Ekua to engage in fishing at the time of the interview only manifested through the rhizomatic link of material-discursive-spatial-temporal forces above coming together to temporarily subjectify Ekua as a weak woman who cannot engage in fishing. The signaling of Ekua as a weak woman also simultaneously framed selling and processing of fish as secondary or 'weaker' task compared to fishing. This further consolidates the lesser importance assigned to selling and processing of fish as it does not require 'strength'.

On the same question, Yaa equally believed that fishing was not for women because it required '*courage*' to be on the '*vast, deep sea*' (material/spatial object). She furthered her discussion by indicating how difficult and incompatible it would be to combine '*care[ing]*' for her '*children*' with the working times – '*2AM*' and days – '*3 to 5 days on the sea*' required to participate in fishing. She further indicates that her capacity to '*breastfeed*' and '*get pregnant*' – capacities which men may not have at the moment in Ghana, but women in Ghana's fisheries may have at the time of interview, combined with the required working time and days to make it incompatible for her to undertake deep sea fishing. Hence, analysis of division of fishery labour without taking into account the capacity of the vast sea (material object) to cause '*fear*' or to require '*courage*' (embodied affects) coupled with the time and days (temporal forces) required for a pregnant and breastfeeding (human (woman) bodily capacity) to fish, according to Yaa, makes it impossible for herself and other women to undertake fishing. Based on the Deleuzian approach, it is the assemblage of these material-discursive-spatial-temporal forces that intra-actively constrain or create obstacles for a woman (in this case Yaa) not to engage in fishing – that is, they combine to territorialize an existing order where women process and sell fish for men to engage in fishing.

Given the above territorializations, the implication is that addressing gender inequality in fishery activities as indicated above would require more than discourses of masculinity and femininity (Jha, 2004; Overå, 2003; Kraan, 2011) or mere biological differences between men and women. The assemblage approach opens up the possibility to address the effects of human and non-human forces such as differential strength, in co-creating such gendered outcomes, which are important but missing elements in existing discussions on occupational sex segregation (Tomaskovic-Devey et al. 2006; Charles, 2011; Jayachandran, 2015). It also implies that for gender equality to be addressed, the assemblage of forces at work in different contexts ought to be mapped and altered or unsettled by intervening the material (human and non-human) requirements, the temporal or economic factors. Such processes of deterritorialization are analysed in the later part of this section.

In another interview, Adjoa, a 42-year-old co-canoe owner indicated at multiple points during the interview the possibility for women to participate in fishing with the story of a lady who fished but for her education she had to quit. However, she also shared stories about times when it would be impossible for women to engage in certain fishery activities. Adjoa does not only stress on the strength required to undertake such activities such as pulling the fishing net as a potential impediment to her participation, but also the capacity of female body to get pregnant, the capacity of the sea to cause a boat to capsize and the resultant swimming which may be required. She also stressed on the role of the historically grounded social norms and values or taboos locally instituted to police normative gender behaviors and the resultant name calling for subversion. Here, we see a rhizomatic link from the discursive to the human bodies (male and female) with different brawn, birth and pregnancy (in)capacities which act simultaneously to constrain or territorialize women and specifically Adjoa's participation in fishing.

The above context implies that fishing cannot be solely a masculine role as some women could actually participate. However, we find that only a few women may actually be able to participate due to the persistent assemblage of forces such as the heavy fishing net which requires strength to pull, coupled with a woman's biological capacity to give birth and the social expectation as carers and homemakers. These combinations of forces work to make women unsuitable candidates to engage in some fishery activities such as fishing as the quantitative analysis indicated. This means that to enhance women's participation would require interventions on discursive forces of gender norms and social values (Jha, 2004; Overå, 2003; Zhao et al., 2013) together with the material, spatial and temporal forces co-creating such gendered subjectivities as analysed above. These processes of altering or deterritorialization are discussed in detail in later parts of this section. The interview with the fisherman (Agya Kojo) equally brings to bear such material-discursive combinations. It would be inadequate to talk about the division of labour in fishery based on gender and discourses (e.g. superstitious beliefs and norms of appropriate behaviour) without looking at the liveliness of the 'deep sea waves' (which may limit women participation in fishing) as he compared the scary wavy deep sea in Ghana with the 'gentle lagoons' which may permit women to engage in fishing in different locations, Ghana and Nigeria respectively as indicated by Agya-Kojo. We could also look at the uncondusive '*open canoe*', (non-human objects) coupled with the harsh conditions at sea (spatial force), the violent waves, which co-constitutively limit women participation in fishing.

As shown from the above the events of gender division of labour in should be understood as emergent and temporal from the intra-implication of all the forces coalescing in often unpredictable manner to create the various outcomes for women. Existing studies missed the role of the material agents (*female body*) at work, in the context of fishing which requires the capacity to pull a heavy '*fishing net*' (material force). It should be noted however that biological differences are important but only part of the assemblage, hence

ought not to be essentialised. There were instances in the interview with Adjoa where a woman engaged in fishing. We also see the territorialization role of education in preventing a lady who used to engage in fishing to quit fishing as narrated by Adjoa. This is contrary to what is often thought about education as a key factor to ensuring gender equality (FAO, 2016). In the context of fishing, education may rather be a constitutive force in preventing a woman from engaging in fishing to ensure equality of roles<sup>11</sup>. Indeed, the quantitative analysis as shown from Table 11 in chapter 5 revealed that women's level of education had insignificant effects on their decision-making power. This gives an indication that perhaps in terms of couple's fishery decisions and practices, education may not be an important factor but only in rare situations as narrated by Adjoa.

On the other hand, the use of mobile phones by some women could play a constitutive role in deterritorialising gendered fishery practices and decisions where men tend to dominate. As Araba, a 38-year-old fish trader indicated that with the help of mobile phones she could call to direct their husbands and the crew members while offshore to move to other fishing locations. While in various aspects of the interviews we find male dominance in decisions relating to fishing, in Araba's context, the material-discursive-technological-spatial assemblage co-created a resistance to male dominance by enhancing her participation in fishing decisions relating to where to fish offshore. Even though the women may not be physically part of the crew offshore, the mobile phone plays a deterritorialising role where a woman's input is realized in the fishing decision-making assemblage. This highlights the entangled and multiple subjectivities of Araba as a traditionally non-fisher and a fish trader who takes fishing decisions. The above also mirrors the findings from the quantitative

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<sup>11</sup> Small-scale fisherfolk generally have low levels of education and classified among the 'poorest of the poor' especially in developing countries (Béné 2003, p. 951). As such, the women who left fishing for education may eventually attain greater status and power than if they stayed in fishing.

analysis where women participated less in fishing activities but had comparatively higher decision-making power in the same activities (see chapter 4).

Again, while fishing in the deep sea coupled with its dangerous waves (capable of causing objects such as canoes to capsize) was found to play a limiting role in women's participation in offshore fishing, we find from the interview with Agya-Kojo that women fish in areas such as Nigeria, but only in lagoons or nearshore where the capacity of the sea waves to cause sinking is perhaps minimized. In fact, several studies have shown that even in cases where women are found to be engaged in active fishing, they are mainly found in nearshore, lagoons and rivers, undertaking activities such as gleaning (FAO, 2016; Zhao et al., 2013; Harper et al., 2020; Frangoudes et al., 2019; Britwum, 2009; Kraan, 2009). Here, the differential affective capacities of the ocean and the lagoon combine differently with the male/female human bodies with their different bodily capacities, coupled with social norms of appropriate gender roles, to territorialize women's participation in fishing offshore, but deterritorialize their participation in the nearshore fishing. As such, these forces rhizomatically connect to create different outcomes for women in different spatial contexts.

Similar examples of material-discursive entanglements emerge in terms of male participation in fishery activities in certain fishery activities. More importantly, in the interview with Adjoa on fisher folk's roles in sale of fish shows how the location or space within which fish is sold could also matter in what women and men do. As she stated:

*Any man who wants the best for his wife helps in the fish processing...but for the trading at the market, they will not. That is for me...in fact even if he decides to sell at the market, I will not allow...I will not allow my husband to be called Kojo Besia [feminine male].*

A social constructionist may focus on how men negotiate the discourse of being called '*Kojo Besia*'. So that the orientation would be towards the deconstruction of how discourses about appropriate gender roles and appropriate conducts for men operate to position a man as 'incomplete' or being called *Kojo Besia* (a man who behaves or looks like a woman), for selling fish at the market because it considered culturally inappropriate for a man to sell fish at the market. Allowing the man to engage in the sale of fish may also reflect poorly on the woman, so it is in her interest to ensure that such arrangement does not occur (Bolzendahl and Myers, 2004; Butler, 1990). While paying attention to such discursive forces in constraining women's participation is crucial, it is equally important to pay attention to how the affective roles of the '*fish*' (non-human object), the '*market*' (spatial force), and the '*man*' (human object), combine with the discursive force in co-creating the social problem where certain fishery activities are considered to be manly and others womanly.

However, the above does not consider men not selling fish as a brute truth but rather a possibility in a specific social context. While selling of fish at the market may result in name calling, selling fish at the beach or restaurant and hotels in bulk quantities may not attract such negative connotations but may be given other names such as '*distribution*', an activity which both men and women can do, instead of '*selling fish*' which based on its material-spatial-discursive context may be considered feminine. As Adjoa further indicated: '(...) of course, there are some men who engage in fish sales...they buy in bulk and distribute to hotels and restaurants. Others buy in bulk quantities and send to their wives or customers in different towns'. As such, while an assemblage of male-fish-fish market- name calling, that is, human-non-human-spatial-discursive forces may territorialize men's participation in fish trade, an assemblage of male-fish-restaurant/hotel-discourses (human-non-human-spatial-discursive) may be

detritorialising as they may be considered appropriate and favourable for men to engage in fish trade.

In another example, from the interview excerpts on Kweku's participation in fish processing in his wife's kitchen, we saw the affective role of the *fenced* homes (material and spatial force) which served as a protective covering for Kweku to engage in fish processing which is often considered feminine – a deterritorialization effect. As such, it will be too oversimplified to indicate that fish processing is solely a woman's activity stemming from discourses. From a social constructionist and poststructuralist perspective, Kweku's participation in what may be considered feminine work may have resulted from a change in his gender ideology (Butler, 1993; Deutsch, 2007). While the role of discourses of femininity and masculinity were apparent, the affectivity of the fence which served as a covering to dispel public scrutiny and enable Kweku to engage in fish processing with his wife is equally important. A Deleuzian and Baradian approach brings to bear how space or locations within which the activities of fish trading (market versus hotels and restaurants) matter in the discussion of what men and women do in Ghana's small fisheries sector. Such an analysis opens up a more nuanced and complex understanding.

In terms of fishery-based household decision-making, similar trends of rhizomatically connected material-discursive-spatio-temporal forces work to territorialize the gendering decisions. For instance, the story by Ekuia on the patterns of her household fishery decision-making shows that although her financial contribution and co-ownership of the fishery business enhances her decision-making power, such decision-making roles also depended on whether the activity upon which the decision is to be taken required the use of strength/muscles or not:

*When it comes to decisions on fish processing, repair of inputs such as the metal nets and the oven, it is the woman's role. For the metal nets, it's our men who fix it for us (...) if my son is at home, he also helps.*



Other interviews indicated that in the absence of male repairers, women may contact other men or carpenters to get such tasks performed. As earlier indicated, fixing the metal net involved decisions on the materials to be purchased, how they should be laid on the oven, among others, which ultimately rest in the purview of the repairer - the man. The above interview buttresses the findings from the quantitative analysis where strenuous activities dampened the positive impact of factors such as household financial contribution on women's decision-making power. We also see the affective role discourses of biblical accounts and social norms which tended to place women as subordinate to men as well as seasonality and technology (image on television) as shown in previous interviews in constraining women's decision-making power in different contexts.

Similarly, the 'bedroom' plays an affective role in the deterritorialization of fishery decision-making assemblage where interview with Efo, a fisherman in Axim indicated that there were times he had to apologize to his wife in the bedroom when he faltered. One may ask, why the bedroom? Discourses of femininity and masculinity would indicate that in a patriarchal society such as Ghana, it is socially inappropriate for a man to apologize to a woman in public. Hence, perhaps the bedroom plays a protecting role for Efo to apologize to his wife (and probably kneel), which would be shielded from public scrutiny. Thus, the architecture of the bedroom (spatial force) plays a co-constitutive role in the deterritorialization of gendered fishery decision-making, serving as a place where certain fishery decisions can be taken to enhance women's decision-making power.

The quantitative analysis on household fishery decision-making again shows the affective roles of other socio-demographic factors such as age of the women, income and intra-familial arrangements such as living with spouse and length of marriage as important factors. In the quantitative analysis, age and income of women enhanced women's decision-making power while living with spouse and length of marriage reduced their

decision-making power as earlier discussed. However, in assemblage analysis we consider these forces as constitutive of the entire material-discursive-spatial-economic-temporal affective plane without granting final causality to any particular force which may have different and complex outcomes. This is why the qualitative data is relevant as it better presents the fluid, contingent processes and events around which these forces combine to create different outcomes compared to the quantitative analysis. As such, we could argue that the research assemblage equally resists a strict division between qualitative and quantitative data and focus on how both sources of data co-create the events of fishery decisions and outcomes under study as discussed in detail in the methodology section in Chapter 3 (Fox and Alldred, 2015; Mazzei and Jackson, 2012).

The main argument from the above discussions is that the new feminist materialist theoretical perspective broadens our scope of analysis and can lead to new and more complex understandings of the division of fishery labour and gendered fishery decisions. I consider the assemblage of forces which work to territorialize (constrain) or deterritorialize (enhance) women's participation in fishery decisions and practices as ephemeral as their affective capacities are only realized in their temporary relations (Fox, 2015; Barad, 2003). Since the preceding sections provide various contexts within which gendered fishery decision-making and practices manifest, the next step is to discuss possible ways by which altering the assemblages would create 'lines of flight' or change the existing orders to enhance women's participation in household fishery decision-making and practices analyzed above (Deleuze and Guattari, 1988, p. 205; Feely, 2020; Buchanan, 2007). These are discussed in the next section, which is also the concluding section of this chapter.

### **6.7 Altering or Unsettling the fishery practices and decision-making Assemblage**

The main argument in the previous sections was the call to embrace more materially engaged research which recognizes the role of the signifier (discursive) as well as the

material (human and non-human) and spatio-temporal forces as an assemblage and how these forces intra-actively create different outcomes in the events of fishery decisions and practices. According to De Lander in Tamboukou (2009, p.10), ‘assemblages are characterized by relations of exteriority’, which means that the component parts of the assemblage can be detached and plugged into another assemblage. As such, mapping the complex intra-action of these forces at work in each context of fishery practices and decisions as done in the previous sections makes it possible to consider some interventions that might unsettle the assemblage to produce different outcomes. More specifically, in this concluding section, I examine how intervening in forces that make up gender division of labour in fishing, fish processing and trading as well as decisions within these realms of fishery work might challenge biological determinists and social causality arguments of gender inequality in household fishery decision-making and practices.

For biological determinists, gender division of labour and the allocation of different social roles results from the male/female genetic and physical differences (Parsons, 1995 in Holborn et al., 2004). For instance, George Peter Murdock suggests that biological differences between males and females are the basis of the sexual division of labour, where men fish, hunt and farm at farther locations and women undertake near home activities such as fetching water, as the ‘most efficient way to organize society’ (Murdock, 1949 in Holborn et al., 2004, p. 98). Based on the findings in the earlier sections of this study, biological determinists would argue that the gender division of labour in fishery where men dominate activities such as fishing, repairs of fishing equipment, carrying heavy pans to the shore and women dominance in fish processing (mostly undertaken in their homes) and trading activities result from their biological differences. That is, men’s muscular physique makes them more capable and suitable for strenuous and more dangerous fishery activities while women’s general daintiness and childbearing capacities makes them suitable for relatively less strenuous home related fishery activities such as processing, which translates

into male dominance in fishery decision-making. This may also explain the findings in the quantitative analysis where strenuous fishery activities damping the positive relationship between key variables such as women's household financial contribution and gender role attitudes, and their fishery decision-making power.

However, as argued by critics, the biological essentialist's explanation of 'universal human behavior is not universal at all' (Holborn et al., 2004, p. 97). While some men may dominate in strenuous fishery activities such as fishing and repairs, the historical, economic, socio-cultural and material contexts within which such divisions occur must be foregrounded. Besides, findings from earlier sections show that there were instances where women participated in fishing and repair activities and men also participated in fish processing and trading activities. As such, strict gender division of labour based on essentialized and immutable biological characteristics is difficult to sustain (Holborn et al., 2004). It is for this reason that Nicholson (1993 in Holborn et al., 2004, p. 97) argued that biological determinist's argument of gender division of labour is based on 'naturalistic fallacy' where difference is based on immutable biological makeup. The enemy here, is the essence (Feely, 2015).

Alternatively, the social causality epistemologies which are favoured by many sociologists and feminist scholars consider such division of labour to be socially constructed (Overå, 1998, 2003; Jha, 2004; Britwum, 2009; Zhao et al., 2013; FAO, 2020). In addition to rejecting the gender division of labour as biologically determined and universal, they consider biological determinism as an attempt to provide justification for male dominance (Oakley, 1974 in Holborn et al., 2004). As such, the division of labour in fishery where men fish and women engage in processing and trading comes from the cultural norms of masculinity and femininity and patriarchal structures which tends to position women as subordinate to men in fishery decision-making. Findings from earlier sections provides evidence of the social constructionist's arguments, where it was considered a taboo for

women to engage in fishing or to go close to certain fishery equipment such as the canoes. There were instances where women were considered unclean for menstruating, hence prevented from entering the water or canoe to prevent pollution or offend the gods, but men could go fishing despite the fact that they equally dispose toilets and urinate in the sea while offshore. Such cultural taboos and norms of appropriate behaviours can be considered discriminatory and may negatively affect women and gender equality efforts. I found that such social norms were policed such that subversion of roles and expectations by women and even men resulted in name callings such as *Adjoa Tiger* [a woman who behaves like a man, by showing strength or aggression], *Banyin-Besia* [a woman who looks like a man] or *Kojo-Besia* [a man who looks or behaves like a woman]. We could argue that such dominant discourses and social prescriptions are crucial in the gendering of fishery decisions and practices.

However, the social causality argument is equally essentializing and universalizing, as it portrays culture as the dominant determinant of social behaviours and outcomes. One could also ask, ‘what it is in the nature of bodies [women bodies], that opens them up to cultural transcription, social immersion, and production’ (Grosz, 2004, p. 2) or why is it that men but not women in most societies are socialized into dominant positions as social constructionist argue? (Charles and Bradley, 2002). In previous sections, we found the affective roles of material forces including human bodies, non-human objects, spaces, time and other socio-demographics as crucial constitutive forces in the extent of women’s participation in fishery decisions and practices. We cannot ignore the roles of these material (human and non-human) bodies. However, these are not captured in the social causality arguments in explaining the gendering of fishery decisions and practices. This has been so, partly as a result of social constructionists and poststructuralist’s favour of the social over the biological, which makes it difficult to engage with an ontological theory of

life, with the fear of going back to what they have been fighting for decades – biological determinism (Fox and Alldred, 2018a; Van der Tuin, 2011).

The DeleuzoGuattarian assemblage analysis provides a flat ontology which disrupts the nature/culture, biological/social divide and considers both forces as mutually affecting without essentializing (Feely, 2020; Ringrose and Rawlings, 2015; Barad, 2007). From this analytical framework, social outcomes such as gender inequality in household fishery decision-making and practices are understood as co-produced by the intra-activity of range of material forces that extends from physical to biological, psychological, social and cultural factors (Braidotti, 2013a; Barad, 2003, 2007; Coole and Frost, 2010; Lykke, 2010; Haraway and Teubner, 1991; Deleuze and Guattari, 1988). The previous sections provided details of how these forces work to territorialize (limit) and deterritorialize (enhance) women's participation in fishery decisions and practices in different contexts. Since the thrust of the study hinges on gender inequality, I focus on how the identified forces of territorialisation could be unsettled to potentially enhance women's participation in household fishery decisions and practices.

Key findings from this chapter indicate that women participated less in more strenuous fishery activities and decisions such as fishing, repair of fishery equipment and other fishery activities considered dangerous. It is clear that biological forces such as different capacities between men and women stemming from their differential body size and strength and women's capacity to bear, breastfeed and nurse children plays a constitutive role in the gendering of fishery practices such as fishing. However, the capacity of the strength becomes relevant only in relation to non-human material forces such as the fishing equipment used – heavy fishing net which required pulling offshore and the canoe, which was considered uncondusive and unsafe, making it dangerous for women to fish on the sea and its waves, which has capacity to cause people to drown. Danger in this sense emerged from the sea, the canoe and human bodies coming together. A key question to ask is, could

the assemblage of forces working to limit women's participation be unsettled by the introduction of a fishing boat (material object) and by attaching a reel (material object) to the fishing boat which can pull the heavy fishing net (material object) with the press of a button (material object)? With the role of discourses in mind, issues of social norms, historical accounts and taboos could simultaneously be tackled through education and sensitization to address the issues of name calling and contribute to deterritorialising the fishery division of labour assemblage. While childbearing and nursing roles of may be difficult to alter owing to the level of technology, the use of house helps to cater for the young children could free women to engage in certain fishery activities limited by these roles.

Also, in terms of fishery decision-making, the introduction of technologies such as the use of mobile phones could enhance women's participation in certain fishery related decisions such as offshore fishing locations where women may not be present (Overå, 2006). With these devices, women may be able to call their spouses to direct them to good fishing locations after finding out from other landed canoes. Again, sensitization programmes for both men and women to deal the issues of femininity and masculinity and biblical arrangements of what constitutes appropriate roles of a wife, and a husband could play an important role. Besides, enhanced economic status of women in terms of income and ownership of key fishery equipment such as canoes, outboard motors and fishing nets could play a deterritorialising role in the gendering of fishery decisions. However, it would be naïve to assume that intervening in each of the assemblages with these forces would automatically enhance women's decision-making power or participation in fishing. These interventions are equally ephemeral and may lead to unexpected and complex results as the forces rhizomatically connect and intra-act and affect each other (Feely, 2020; Barad, 2003, 2007). As such, the assemblage should be constantly monitored and altered to fit the contextual need of the people, place and time (Feely, 2015; Ringrose and Rawlings, 2015).

Household fishery decision-making and practices is not the only realm within which such assemblage of material, discursive, spatial, temporal and socio-demographic forces may occur. The material-discursive co-implications can be found in different aspects of social life and outcomes. It is only a matter of paying attention to them. In the next chapter, I show this in the context of community-based fishery decision-making in Ghana where such forces were equally apparent in co-determining the extent of women's participation in community-based fishery decision-making/practices.



## CHAPTER 7

### COMMUNITY-BASED FISHERY DECISION-MAKING AND PRACTICES

#### ASSEMBLAGE

#### 7.1 Introduction

Women's participation in community-based decision-making in managing natural resources such as the fishery is considered crucial to the sustainability of the industry (Resurrección, 2013). One key assumption for this call is that women are naturally connected with nature (the ocean, the fish, etc.) due to their reproductive and caring roles, hence would better protect such resources in a more sustainable manner than men (Agarwal, 2001; Cleaver, 2002). Whilst scholars have criticised such assumptions as overly simplistic, gender inequality in fishery decision-making and practices especially at the community level is common knowledge. However, it is unclear how the labyrinth of factors creates opportunities for and obstacles to women's participation in community-based fishery decision-making and practices. The current chapter sought to address these questions by examining the extent of, and the factors influencing women's participation in community-based fishery decision-making and practices in Ghana.

Using the new materialist's approach, I show how multiple material-discursive-spatio-temporal factors work together to co-create gendered outcomes in community-based fishery decision-making in different social contexts. To be able to do this, I draw on data generated using quantitative and qualitative methods. As described in detail in chapter 3, the quantitative models provide supplementary accounts and help to show what the core forces affecting women's community participation are, their direction and extent of effect in the different outcome variables of women's community-participation. Thus, the quantitative data mattered not as simply objective information but as a 'lively entity' that shaped our understanding and thinking processes – a part of the research apparatus (Clark and Thorpe, 2020, p. 9; Barad, 2007). Qualitative methods such as informal discussions, participant observations and in-depth interviews were used to capture the fluid, contingent

events, and processes around women's community-based fishery decision-making. The next section provides an account of the variables used in (quantitatively) measuring women's community participation, after which the various factors influencing women's participation and the events around which they occur in the context of Ghana's small-scale fishery are analysed.

## **7.2 Measuring women's community participation (Quantitative)**

As described in Chapter 3, women's community participation was assessed by their frequency of meeting attendance and position in fishery association following Agarwal (2001). The main predictor variables of women's community participation were measured based on the civic voluntarism model by Verba et al. (1995) and Burns et al. (2001) to explain why some people (women) may engage in political activities and others may not. It is a comprehensive model with a blend of resource model, rational choice, social network and psychological theory (see Chapter 2). The International Social Survey Programme (ISSP) gender role attitudes scale (2012) was used to assess women's gender role attitudes on five-point Likert scale of five statements relating to women's participation in community-based decision-making. The ISSP scale showed a good internal consistency with Cronbach's alpha of 0.83. Using Varimax rotation, the principal component extraction method produced only one component with eigenvalues  $\geq 1$  and accounted for 59.5% of the variance. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.83, which is above the acceptable limit of 0.50 (Field, 2013), and Bartlett's Test of Sphericity ( $p < 0.001$ ), which shows good model fit. Interpersonal and network variables such as membership in other associations, decision-making position in other associations as well as institutional factors (formal and informal rules) governing the selection of community leaders and meeting participants were also measured by asking the question: 'To what extent does system of recruitment limit your participation?'. Socio-demographic factors including income, social class, and intra-household dynamics (living with spouse), the age

and number of children, respondent's level of education and spouse's educational level were included as controls. Details of these measurements have been provided in Chapter 3 of this thesis.

The same respondents (female fishery workers) surveyed in the household decision-making participated in the community level study, hence their sociodemographic variables as well as economic and material factors including ownership of fishery equipment statuses as indicated in Chapter 4 remain the same. These variables may be referred as at when they are needed in this chapter. A descriptive analysis of the main outcome and predictor variables used are shown in Table 13.

**Table 11:** Descriptive statistics of the outcome and predictor variables

<b>Codes/Values</b>	<b>Variables</b>	<b>N (%)</b>	<b>Mean</b>	<b>SD</b>	<b>Min-Max</b>
	<b>Freq. of meeting attendance</b>		1.9	0.8	1-5
1	<i>Never</i>	103 (25.8)			
2	<i>1-3 times</i>	259 (64.8)			
3	<i>4-6 times</i>	22 (5.5)			
4	<i>7-9 times</i>	6 (1.5)			
5	<i>10 times +</i>	10 (2.5)			
	<b>Position in Fishery Assoc.</b>		0.1	0.2	0-1
0	<i>No</i>	376 (94.0)			
1	<i>Yes</i>	24 (6.0)			
	<b>Member in Other Association</b>		0.8	0.4	0-1
0	<i>No</i>	100 (25.0)			
1	<i>Yes</i>	300 (75.0)			
	<b>Forms of Association</b>		1.2	1.1	1-5
1	<i>None</i>	100 (25.0)			
2	<i>Religious</i>	216 (54.0)			
3	<i>Political Party</i>	66 (16.5)			
3	<i>Self-help group</i>	17 (4.3)			
4	<i>Traditional</i>	1 (0.3)			
	<b>Position in other Association</b>		0.1	0.3	0-1
0	<i>No</i>	350 (87.5)			
1	<i>Yes</i>	50 (12.5)			
	<b>Qualification</b>		2.7	0.9	1-4
1	<i>Not at all</i>	52 (13.0)			
2	<i>Small Extent</i>	108 (27.0)			
3	<i>Moderate</i>	155 (38.8)			
4	<i>Large extent</i>	85 (21.3)			
	<b>Trust</b>		3.1	1.0	1-4
1	<i>Not at all</i>	41 (10.3)			
2	<i>Small Extent</i>	75 (18.8)			
3	<i>Moderate</i>	93 (23.3)			
4	<i>Large extent</i>	191 (47.8)			
	<b>Interest</b>		0.4	0.5	0-1
0	<i>No</i>	238 (59.5)			
1	<i>Yes</i>	162 (40.5)			
	<b>Recruitment limiting</b>		2.5	1.0	1-4
1	<i>Not at all</i>	69 (17.3)			
2	<i>Small Extent</i>	133 (33.3)			
3	<i>Moderate</i>	115 (28.7)			
4	<i>Large extent</i>	83 (20.8)			
Number of participants (N) = 400					

### 7.3 Extent of women's participation in community-based fishery decision-making

Results from the Table 13 show that majority of the respondents (64.8%) have attended community-based fishery meetings between 1-3 times over the last 12months, with only about 25% who had never participated. On average, participants attended community meetings almost twice (1.9 times) within a year. The situation was quite different in terms

position in community-based fishery association as majority (94%) of respondents do not hold or have not held any position in community-based fishery committee. Only few respondents (6%) held positions in the community-based association. Such positions included secretary, women's organizer and fisher trader's leader (*Konkohemaa*) who may not be very influential in taking key community-based fishery decisions. These suggest that although women may be actively involved in meeting attendance, their community participation may be perfunctory and tokenistic with little or no real impact in terms of influencing how community-based fishery decisions are made as they occupy the fringes and less influential positions of fishery decision-making. The extent of women's participation could be considered as what Charles refers to as 'procedural equality' attempts, where the inclusion of women becomes a mere cliché to fulfil formal institutional and donor provisions and requirements of women's participation in community-based fishery management resolutions (Charles, 2011, p. 365).

### ***7.3.1 Women's 'self-limiting' behaviours in community-based fishery positions***

The qualitative evidence showed that some women preferred to be more active in terms of meeting attendance than holding key positions in community-based fishery decision-making. This was mainly due to the perceived difficulty in balancing demands of the position with work and family responsibilities as indicated by Lizy:

*I attend meetings most of the time, but I cannot be a leader (...) that would be a problem. I would not have time. Sometimes they schedule meetings to last for 2 hours, but by the time you come back [home], you would have spent the whole day. A leader may be required to stay over till they close, which I cannot. Sometimes they [leaders] travel to different towns, sleep over...not every woman can go or would be allowed by her husband (Lizy; 48yrs, Axim).*

From the above interview excerpts, Lizy preferred attending meetings to holding decision-making positions. Being a mere member without position gives her more time and

combines better with her role as a wife, a mother and fish trader. As a mere member, she could easily sneak out of meetings to perform domestic and fishery roles. As she indicated, being a leader comes at a cost. It required travelling and commitment to long meeting hours which were not suitable for her and may result in triple time burden; time for fishery work, housework/childcare and as a leader, hence would not be favourable for her to take such positions.

### ***7.3.2 Gendered division of labour, flexitime and women's meeting attendance***

In line with the preceding section, there were instances where participants (both men and women) indicated that the meeting days (usually Tuesdays – a no fishing day) coupled with the gender division of fishery labour where men are mainly responsible for fishing and women in charge of fish processing and sale, create a leverage for men to participate in community meetings while women may still be at work:

*They [women] go to the market every day. For men there are days that we do not go fishing but women are always working. If they become leaders, it will affect their work. So, most of the time men are more than women (Kweku, 54 years, Axim).*

Another participant indicated:

*They [women] attend but it is not like that of men. They do the fishing so in most cases when meetings are about fishing and how to regulate our activities, it is the men who are mostly called to attend. Even in meetings with government officials the men are the main partakers, we [men] are invited more (Ameyaw, 44 years, Axim).*

The above interview excerpts imply that in examining gender inequality in community-based fishery meeting attendance and leadership positions, inflexible meeting times, women's housework and childcare roles, stemming from existing masculine and feminine ideals as proposed by the neo-institutionalist could be crucial. In contrast to modernization theorist's argument that women's labour force participation would enhance their decision-

making power, this was not the case as the above findings indicate. In the context of the above interview, Lizy's work as a fish trader for example, played a limiting role in her taking up of leadership positions since she would be overburdened. As indicated by Coffe and Bozendahl (2010, p. 321) being employed may negatively affect women's community participation due to the 'accumulated indirect disadvantages and a direct lack of time'. Women's community participation comes at a cost, where they would usually have to choose between their work and the position in community-based fishery associations, which they mostly chose the former over the later. Using the new feminist materialist framework, I would show how women's biological capacities such as childbirth and breastfeeding put them in a better position as nurturers at certain points in time of their children. Such physical bodily capacities combine with other spatio-temporal forces such as meeting locations, times of meetings, among others to limit the extent of women's community participation as would be discussed later.

### ***7.3.3 Rules of community participation, interests and the gendering of community-based decision-making***

We also see how recruitment and participation rules may affect the extent of women's community participation where some participants (men) would be invited for meetings and others may not as indicated by Ameyaw above. There were instances in the interviews where participants indicated that women's lack of participation in community-based fishery decision-making results from the fact that they 'don't have time'. However, not having time as they described could also mean lack of interest in the community-based association because they did not benefit from such meetings, or their opinions did not make the expected impacts on decisions taken:

*Brother, I don't have time. If after expressing my views, they are not respected and taken then when I'm called again, do you think I would go? If after wasting my time, I realize that my view doesn't count, then if I'm called the next day, if you were in my shoes would you go? (Akosua, 57 years, Axim).*

Hence, attending such meetings could mean a ‘waste of time’ for the women who do not benefit from it. In fact, some male informants confirmed the women’s assertion by indicating that, even men face such similar challenges, but their main motivation for attending such meetings stems from the expected benefits such as government subsidies especially on fishing equipment (e.g., outboard motors, fishing nets) of which being an active member of the association is mostly a key requirement and an added advantage:

*I think they [women] are right. In fact, that is a problem for all of us [both men and women], but for us [men], sometimes we go [attend meetings] because there may be some government subsidies on equipment such as nets, petrol [premix fuel] and outboard motors. If you don’t attend, you would not get. For women, it is not like that. It is only when Daasgift [local NGO] support them with loans that they benefit (Kojo, 51 years, Axim).*

Since ownership of fishery equipment is often ascribed to the men, they are mostly the recipients of such government subsidized items (Sumaila et al., 2016). Such gender biased distribution of benefits by government could stem from the taken-for-granted view about gender division of labour where fishing is considered a male activity, making the men the ideal candidates to receive such important fishing equipment. However, the current study reveals that ownership of fishery equipment is not solely by men, as there are female owners as well, but such important position of women is mostly ignored by the institutional arrangements. As argued by Charles (2011, p. 363, 367), the most resilient gender inequalities are those that are not explicitly status graded but ‘appear to reflect naturally distinct preferences of autonomous men and women’ – resulting from different cultural legitimacy accorded to different types of gender inequality. Such forms of less hierarchical gender inequality such as division on labour retain broad legitimacy as found above to influence not only individual actions but institutional arrangements such as government’s distribution of fishery equipment subsidies to mainly men. These findings show how



individual, household level fishery practices such as the division of labour could influence the gendering of community-based fishery decisions and practices.

The above findings indicate that holding leadership positions and attending community-based fishery meetings are influenced by factors beyond modernization and neo-institutionalist's debates of gender and women's socio-economic status as the above examples illustrate. In the sections that follow, I would show in a more nuanced fashion that the extent of women's community participation (measured by their frequency of meeting attendance and position in fishery association) are influenced by a plethora of forces working together in different social contexts. First, I would examine (quantitatively) the extent to which the different component factors affect women's community participation. Next, I would show how more fluid, contingent forces combined (including those identified quantitatively) intra-actively co-create opportunities for and obstacles to women's participation in community-based fishery decision-making.

#### **7.4 Forces affecting women's participation in community-based fishery decision-making**

In this section, I outline the components of forces in the community-based decision-making assemblage along a material-discursive-spatio-temporal-economic-institutional plane. This involved analysis of quantitative models and reading stories relating to women's participation in community-based fishery decision-making and practices from participant observations and interviews, and by examining how the material, discursive, spatio-temporal and institutional forces affect these stories and observations. I also present excerpts from field observations and in-depth interviews to show how different material-discursive components produced different outcomes through their entanglements by focusing on materialities (human bodies and non-human objects), discursive forces, spatio-temporal forces, socio-demographic forces as well as institutional forces (formal and informal rules) that govern local (and particularly women's) participation in community-based fishery decision-making. As earlier indicated, women community participation was

analysed within two contexts: Frequency of meeting attendance and position in fishery association. I first present findings from quantitative analysis of the former followed by the later using hierarchical multiple regression and multiple logistic regression models respectively to examine the extent to which these factors affect women's community participation. I provide ethnographic accounts and interviews to buttress or highlight points of convergence and divergence, or contradictions.

#### ***7.4.1 Forces affecting women's frequency of meeting attendance***

In Table 14 below, sociodemographic factors (age, education, income, etc.) are entered in model 1. In model 2, psychological factors (trust, interest, etc.), including gender role attitudes are added, whilst in model 3, interpersonal/network factors (membership in other association, position in other association), institutional factors (perceptions about method of recruiting participants, external interference) and socio-material factors (ownership of fishery equipment) are added.

##### ***7.4.1.1 Socio-demographic factors and women's meeting attendance***

Model 1 showed that age had positive and significant effects on women's meeting attendance ( $\beta = 0.105$ ,  $p < 0.05$ ). Migrants were less likely to attend community meetings compared to indigenes ( $\beta = -0.166$ ,  $p < 0.05$ ). Religiosity had positive and significant effects on women's meeting attendance ( $\beta = 0.348$ ,  $p < 0.05$ ). Moreover, ages of children positively and significantly affected women's meeting attendance ( $\beta = 0.098$ ,  $p < 0.05$ ). Having older children meant that these women would be relieved from the caring roles of their younger children, making it possible for them to attend such meetings (interview with Ekua, Axim). Women with other sources of regular income were more likely to attend meetings ( $\beta = 0.177$ ,  $p < 0.10$ ), whilst women's social class positively and significantly affected their meeting attendance ( $\beta = 0.198$ ,  $p < 0.01$ ). Though education was positively related to women's meeting attendance, it was an insignificant predictor ( $\beta = 0.033$ ,  $p > 0.10$ ). Meanwhile, women who lived with their spouses were more likely to attend

meetings, but an insignificant predictor ( $\beta = 0.122$ ,  $p > 0.10$ ). Spouse's education had negative but insignificant effects on women's meeting attendance ( $\beta = 0.001$ ,  $p > 0.10$ ). Although the effects of spouse education were insignificant, interviews revealed that women with educated spouses tended to depend on their partners for community information relating to their business, especially in situations where the spouse is actively involved in community activities. Such women mostly indicated their husbands would 'inform them of everything' when they returned from the meetings and would only attend when there has been a specific call for women to attend such meetings (Interview with Araba, 38 years, Axim).

**Table 12:** Hierarchical regression showing factors influencing women's Community-based fishery meeting attendance

**7.4.1.2 Gender role attitudes, psychological and institutional factors**

Variable	Frequency of Meetings Attendance		
	Model 1	Model 2	Model 3
Age	0.105 (0.046)*	0.075 (0.043)+	0.075 (0.041)+
Residential status (ref: Indigene)			
<i>Migrant</i>	-0.166 (0.083)*	-0.141 (0.076)+	-0.098 (0.072)
Religiosity (ref: Non-religious)			
<i>Religious</i>	0.348 (0.148)*	0.188 (0.136)	0.162 (0.128)
Number of Children	-0.039 (0.070)	-0.025 (0.064)	-0.020 (0.060)
Ages of children	0.098 (0.049)*	0.055 (0.045)	0.003 (0.043)
Living with spouse	0.122 (0.092)	0.073 (0.085)	0.095 (0.082)
Education	0.033 (0.047)	-0.020 (0.043)	-0.037 (0.040)
Spouse Education	-0.001 (0.045)	0.019 (0.041)	0.023 (0.039)
Years of Work	-0.045 (0.039)	-0.071 (0.036)*	-0.078 (0.034)*
Income	0.004 (0.034)	0.006 (0.031)	0.008 (0.029)
Other source of income	0.177 (0.105)+	0.209 (0.096)*	0.173 (0.091)+
Social class	0.198 (0.061)**	0.233 (0.056)***	0.179 (0.054)**
Gender Role Attitude (GRA)		0.034 (0.008)***	0.025 (0.008)**
Trust		0.084 (0.038)*	0.071 (0.036)+
Qualification (efficacy)		0.116 (0.038)**	0.107 (0.036)**
Interest		0.173 (0.042)***	0.150 (0.040)***
System of recruitment			-0.102 (0.034)**
Member in other Association			0.087 (0.078)
Position in other Association			0.616 (0.102)***
Ownership of fishery Equipment (ref: No)			
<i>Co-Owned</i>			0.085 (0.082)
<i>Single Owned</i>			0.195 (0.097)*
<b>R<sup>2</sup></b>	0.114	0.276	0.368
<b>Adj. R<sup>2</sup></b>	0.087	0.245	0.333

N=400; +P < 0.10 \*P < 0.05 \*\*p < 0.01 \*\*\*p < 0.001

Unstandardized regression coefficients are reported, with standard errors in parentheses

In model 2, women's gender role attitudes had positive and significant effect on their meeting attendance ( $\beta = 0.034$ ,  $p < 0.001$ ). This indicate that women with egalitarian gender role attitudes were more likely to attend community meetings compared to those with traditional attitudes. Similarly, trust and women's self-rated qualification (efficacy) and interest had positive and significant effects on their meeting attendance with coefficients ( $\beta = 0.084$ ,  $p < 0.05$ ), ( $\beta = 0.116$ ,  $p < 0.01$ ) and ( $\beta = 0.173$ ,  $p < 0.001$ ) respectively. This implies that respondent's psychological characteristics, including gender role attitudes have crucial effects on their community meeting attendance. In model 2, the predictive strength of all the sociodemographic variables of respondents (age, residential status, religiosity, ages of children), except social class reduced. In fact, social class had positive and significant effect on women's meeting attendance throughout the models. Evidence from interviews revealed that women who portrayed themselves as having high level personal/psychological characteristics such as high-level self-esteem, tended to attend meetings more or show the desire to attend such meetings. As the interview with an officer of a local non-governmental organization pointed out:

*I think women themselves have low self-esteem. They find it difficult to speak in public. No one prevents them but I think the crowd scares them. Because they talk a lot when they are together selling fish or discussing other issues even with men at the beach (...). Some [women] will not even come [attend meetings] just because they would be asked to talk (Local NGO official, Axim).*

My observations from the community meetings showed that there were instances where the male counterparts would actually call on the women to also share their thoughts on issues under discussion, but only few women (usually their leaders) would speak. In model 3, institutional factors - system of recruitment had negative and significant effect on women's meeting attendance ( $\beta = -0.102$ ,  $p < 0.01$ ). This implies that women who

perceived the system of recruiting participants as unfair were less likely to attend community meetings.

*The system of recruiting participants also hinders women participation. Sometimes only a small percentage of us are included. Just the recent fishery conference that was organized at the University of Cape Coast, only a small percentage of women were included compared to the men who had more than 70 members. Women had only 16 reps. These kind of biasness limits women participation in meetings at the community and even national or regional levels (Eno, 51 years, Konkohemaa, Axim).*

Such conferences are mostly organized by state institutions together with non-governmental organizations who may have the power to decide who attends or not depending on the issues to be discussed. The taken-for-granted view that fishing is for men and fish processing and trading is women's domain, as earlier discussed, coupled with the fact that the main goal of fishery institutions is to ensure sustainable use of the fishery resource, such meetings tend to focus on men who are considered the main exploiters of the fishery resource (Resurrección, 2013; Zhao et al., 2013). This was also evident in Ghana's fishery co-management plan which gives opportunity for 'women groups' to be represented only to help address 'post-harvest' issues in the community-based fishery co-management committees (Mutimukuru-Maravanyika et al., 2017). Such access and treatment discrimination<sup>12</sup> mean that even in situations where women may decide to take up higher decision-making positions, the farthest they would go is to serve as women representatives to deal with post-harvest issues whilst in other critical areas such as fishing and its related activities, their views may be absent. Even though Ghana's fishery co-management plan has gender equality at its core, its own arrangements seem to contribute

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<sup>12</sup> Organisational access discrimination occurs when specific groups of people are excluded from entering or being part of an organization, whereas treatment discrimination occurs when individuals or groups in an organisation receive resources below what they deserve (see Greenhaus, Parasuraman and Wormley, 1990; Burton, 2019).

to gender inequality. The above discussion shows how institutional arrangements (formal and informal) in community-based fishery decision-making can negatively affect the extent of women's community participation. This finding buttresses the argument by Charles that the structural forces that aims at facilitating women's equal participation could also contribute to sex segregation, consequently resulting in gender inequality as the above contexts illustrate (Charles, 2011).

#### ***7.4.1.3 Networks and socio-material forces, and women's meeting attendance***

Network factors such as women's membership in other social associations had positive but an insignificant effect on women's meeting attendance ( $\beta=0.087$ ,  $p > 0.10$ ). However, holding a position in other associations had positive and significant effects on women's meeting attendance ( $\beta=0.616$ ,  $p < 0.001$ ). Evidence from interviews showed that although only a few women actually held positions in other associations (such as religious, political parties or self-help groups) (see table 5 above), women with positions in such associations tended to be the most active participants in the community-based fishery meetings. As indicated by Ekua: *'You will normally see a few women and same faces coming for meetings all the time'* (Ekua, 44 years, Bosun Besia, Axim).

Besides, women who owned fishery equipment were more likely to attend community-based fishery meetings. However, the effects of ownership of fishery equipment depended on whether the woman was a single owner or co-owner of the fishery equipment. While single ownership had positive and significant effects on their meeting attendance ( $\beta = 0.195$ ,  $p < 0.05$ ), co-ownership of fishery equipment had positive but insignificant effect on women's meeting attendance ( $\beta = 0.085$ ,  $p > 0.10$ ). This implies that it may not be enough for a woman to be a co-owner to spur her meeting attendance. Being a single owner is rather crucial. As indicated in chapter 5, in cases where women co-own fishery equipment such as canoe with especially their husbands, they tend to downplay their ownership status and granted ownership to their male partners. The cultural expectations where men are

expected to head their homes could also mean that the man would have to pose as the owner in the case of co-ownership in order to meet such social expectations (Overå, 1993; 1998; Odotei, 1991). Although couple's co-ownership of fishery equipment is not a secret in the fishing communities, for a woman to attend meetings to represent the couple may be demeaning on the husband and may signal a loss of his control in the home. Women may therefore downplay their ownership status in such cases as a sign of respect to the husband and a form of public display to show that they are not trying to dominate their husbands (Tichenor, 2005). These also suggest that when meetings are sanctioned for canoe owners to attend, the women co-owners may not, but their husbands may attend. In addition to the economic force associated with sole ownership of fishery equipment, women single owners are likely to be more motivated to attend community-based fishery meetings because they would have more at stake and they would need to show more commitment compared to when the equipment are co-owned, where the other co-owner (e.g. husband) would be equally qualified and perhaps most suitable to attend such meetings. The next section would examine the extent to which the socio-demographic, psychological, networks, institutional and socio-material factors affect women's position in the community-based fishery association.

#### ***7.4.2 Women's position in community-based fishery associations***

Table 15 shows the different factors influencing women's position in community-based fishery association. Model 1 includes sociodemographic factors (age, education, income, social class, etc.). In model 2, gender role attitudes and other psychological characteristics (trust, interest, and efficacy) are added. In model 3, network/interpersonal factors (membership in other association, position in other associations, etc.), institutional factors (method of recruiting participants) and socio-material factors (ownership of fishery equipment) were added.

#### ***7.4.2.1 Socio-demographic factors***

From Table 15, Model 1 shows that older women were more than four times more likely to hold position in the community-based fishery association but failed to reach levels of significance (OR = 4.24; 95% CI = 0.49-36.66,  $p > 0.10$ ). Women with high education were almost twice more likely to hold positions compared to those with no formal education. However, education was an insignificant predictor of women's position in association (OR = 1.88; 95% CI = 0.34 - 10.43,  $p > 0.10$ ). In addition to the generally low level of education among workers within the small-scale fishery sector (Adjei and Overå, 2019), education may not be a key requirement for holding community-based fishery positions (Overå, 1998, 2003). However, interviews with both fishermen and fish traders indicated that having higher education was increasingly becoming an important factor, due to the increasing interactions with external NGO's and governmental bodies that comes with such positions in recent decades.

Besides, women with older children were four times more likely to hold position in associations than those with younger children and the relationship was significant (OR = 4.03; 95% CI = 1.42 -11.45,  $p < 0.01$ ). Women with other source of regular income were more than twice more likely to hold position than those without any other regular income source and was slightly significant (OR = 2.69; 95% CI = 0.98–7.38,  $p < 0.1$ ). More importantly, women with higher self-rated social class were more than five times more likely to hold positions compared to those with low self-rated social class (OR = 5.29; 95% CI = 1.79 – 15.67,  $p < 0.01$ ). Among the sociodemographic variables, age of children and women's self-rated social class, were the most significant predictors of women's position in fishery association as they were significant throughout the models, holding other factors constant.



**Table 15:** Multiple logistic regression showing factors influence women's positions in community-based fishery association

Variables	Decision-making position in fishery association					
	Model 1	Model 2	Model 3			
Socio-demographics	OR	95% CI	OR	95% CI	OR	95% CI
Age(log)	4.238	(0.490-36.656)	1.406	(0.124-15.903)	0.577	(0.025-13.225)
Residential Status (ref: Indigene)						
Migrants	0.594	(0.231-1.526)	0.680	(0.241-1.920)	0.977	(0.281-3.391)
Religiosity (ref: None religious)						
Religious	1.938	(0.226-16.632)	1.188	(0.113-12.537)	0.854	(0.069-10.588)
Level of Education (ref: Low)						
Medium	0.973	(0.351-2.702)	0.759	(0.249-2.317)	0.789	(0.212-2.931)
High	1.884	(0.340-10.429)	1.508	(0.235-9.679)	0.860	(0.070-10.622)
Children's Age (ref: Young)						
Older	4.026	(1.416-11.453)***	4.234	(1.390-12.892)**	7.996	(1.725-37.053)***
Years of Work (ref: Low)						
High	1.517	(0.383-6.014)	1.644	(0.367-7.369)	1.106	(0.184-6.633)
Income (ref: Low)						
Medium	0.580	(0.185-1.814)	0.577	(0.174-1.913)	0.423	(0.086-2.084)
High	2.363	(0.500-11.160)	2.296	(0.386-13.672)	4.523	(0.352-58.155)
Other source of income (ref: No)						
Yes	2.685	(0.976-7.383)*	3.236	(1.023-10.236)**	3.335	(0.739-15.044)
Social Class (ref: Low)						
High	5.289	(1.785-15.669)***	7.467	(2.356-23.663)***	5.142	(1.187-22.282)**
<b>Independent Variables</b>						
Gender Attitudes (ref: Traditional)						
Egalitarian			1.137	(0.343-3.777)	0.590	(0.146-2.384)
Trust in CBFMC's (ref: Low trust)						
High trust			2.054	(0.479-8.813)	3.952	(0.699-22.282)
Qualification/efficacy (ref: high)						
Low			0.062	(0.007-0.511)**	0.010	(0.000-0.258)***
Interest (ref: Low Interest)						
High interest			1.514	(0.256-8.958)	0.708	(0.102-4.914)
Memb. of other assoc. (ref: No)						
Yes					1.016	(0.186-5.556)
Position in other Assoc (ref: No)						
Yes					11.807	(2.796-49.853)***
Less Political Interference (ref: No)						
Yes					5.005	(1.425-17.584)**
Own fishery Equipment (OFE) (ref: No)						
Yes - Co-owned					2.172	(0.158-29.848)
Yes Single owner					17.066	(1.213-240.171)**
2log-likelihood		-143.612		-124.954		-91.833
Nagelkerke Pseudo-R <sup>2</sup>		0.248		0.362		0.551
Cox and Snell R <sup>2</sup>		0.091		0.132		0.201

\*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.1$  N = 400

Model 1 included socio-demographic factors; Model 2 included Model 1, gender attitudes and psychological factors; Model 3 included Model 1, 2 and structural and other socio-material factors. N = Number of cases.

#### ***7.4.2.2 Gender, Psychological characteristics, interpersonal/network factors***

Unlike the frequency of meeting attendance where gender role attitude, trust and interest were significant predictors, in terms of position in fishery association, these factors had positive but insignificant effects on women's position in fishery association with (OR = 2.05; 95% CI = 0.48 – 8.81,  $p > 0.10$ ) and (OR = 1.51; 95% CI = 0.26 – 8.96,  $p > 0.10$ ) respectively. Women's decision-making efficacy (qualification) had positive and significant effects on their position in the fishery association. Women with low self-rated qualification (efficacy) were less likely to hold position compared to those with high self-rated qualification and significant in both models 2 and 3 with (OR = 0.06; 95% CI = 0.01 - 0.51,  $p < 0.01$ ) and (OR = 0.01; 95% CI = 0.00 - 0.26,  $p < 0.01$ ) respectively.

Interpersonal network factors such as women with membership in other associations were more likely (though insignificant) to hold position in the community-based fishery association (OR = 1.02; 95% CI = 0.19-5.56). However, women who held positions in other associations were almost twelve times more likely to hold positions in community-based fishery association than those without any position in other associations (OR = 11.81; 95% CI = 2.80 – 49.85,  $p < 0.01$ ). This finding coincides with other studies which find positive effects of networks or social capital on women's community participation (Stockemer and Byrne, 2012; Kirbis et al., 2017; Putnam, 2000). The current study reveals that mere membership in other associations (networks) may not be enough but rather holding position in such associations is crucial for women to hold position in a community-based fishery association. In the fishing communities, it was observed that the few women who held positions in other associations (e.g. church, self-help groups, etc.) were mostly the same people who held positions in the community-based fishery association. One such woman even indicated that there were times that she had to reject some positions offered her because they were too many for her:

*I do [hold position in the] national fish processors association, and in the regional Konkohemaa [fish trader's leaders] association and the Axim Area Women's leader of my church. Some people tried to convince me to take up an Assembly woman position, but I declined because of my numerous roles (Eno, 51 years, Axim).*

Holding such positions could be an indication to others that such women could equally perform such tasks or boost the woman's self-rated efficacy (qualification) and self-esteem for such positions. As proposed by the neo-institutionalist and modernization thoughts of demand side and supply side arguments respectively, holding positions in other associations could result in change in public attitudes towards women's leadership roles and could provide women with necessary civic skills to propel their participation in community-based fishery decision-making (Chafetz, 1990; Schlozman et al., 1999; Rosenbluth et al., 2006; Burns et al., 2001).

#### **7.4.2.3 Institutional, socio-material factors and women's position in fishery association**

In terms of institutional factors, women were five times more likely to participate in community-based fishery association when they perceived less interference from external (especially political) influences than when they perceived external interference (OR = 5.01; 95% CI = 1.43 – 17.58,  $p < 0.05$ ). Besides, ownership of fishery equipment was an important predictor of women's position in community-based fishery association. Although women who co-owned fishery equipment (e.g., with spouse) were twice more likely to hold position in community association than those who did not own, co-ownership was an insignificant predictor of women's position in association (OR = 2.17; 95% CI = 0.16-29.85,  $p > 0.10$ ). However, women single owners were seventeen times more and significantly more likely to hold position in community-based fishery association than those who did not own (OR = 17.07; 95% CI = 1.23 -240.17,  $p < 0.05$ ). Again, women sole owners of fishery equipment were almost eight times more likely to hold position in fishery association than women fishery equipment co-owners (that is,  $17.07 / 2.17 = 7.87$ ),

holding other factors constant. Apart from the economic importance associated with ownership of fishery equipment, holding positions in the fishery association is usually tied to ownership of equipment such as canoe and outboard motors. Owning such equipment is an indication that she would be interested in the fishery business issues and its development since they equally stand to benefit. It also commands social respect and prestige. An interview with Ewura, A fish trader whose husband is the sole owner of fishery equipment provided a detailed account:

*For one to be selected as Konkohemaa [fish trader's leader] the person should at least own a canoe or co-own with the husband so that she would know the cost involved in fishing to be able to negotiate reasonable price for the landed fish. If they should select someone like me who does not have a canoe, I would be biased and ensure that the price of fish at the shore would reduce drastically to favour me. So, someone like me would not be considered as a leader (Ewura, 43 years, Axim).*

Similar requirements are considered in selecting leaders in the community-based committees, as single owners of such equipment may be seen to have a lot at stake and would be committed to the course of the fishery business. Women attempt to assign ownership to their husbands as a form of performance of socially desirable behavior (Tichenor, 2005), as earlier indicated could also play a crucial role in making women's co-ownership an insignificant predictor of their position in fishery. While co-ownership may matter for male fishers, it may not be too relevant for women when it comes to predicting their position in the community-based fishery committees. It is therefore not surprising that even though majority of women participants co-owned fishery equipment with their spouses (see Chapter 5), co-ownership effects on women's decision-making position was insignificant.

The above analyses show how women's socio-economic status, psychological/attitudinal characteristics, institutional, and other socio-cultural and material factors affect their

participation in community-based fishery decision-making. While the above statistical models provide a preliminary understanding of the social world with regards to the factors affecting women's community participation, it imposes analyst-defined account of different data. That is, the statistical analysis filters and extract certain quantifiable data and categorizations according to a predetermined instrument rather than a detailed account of the contingent processes through which the events around which community decision-making occur (Fox and Alldred, 2015).

In the next section, I examine in a more nuanced fashion how the different factors affecting women's community participation combine to co-create different outcomes for women based on in-depth interviews and other ethnographic accounts. Using the new feminist materialist's approach inspired by DeleuzoGuattarian assemblage analysis, I focus on the intra-activity of the above forces (those identified from the quantitative analysis) by examining how they rhizomatically combine with other less quantifiable human, non-human, spatio-temporal and discursive forces in creating opportunities for and obstacles to women's community participation. This approach does not grant final causality to any particular factor but rather the effects of their co-implications in co-determining women's community participation (Barad, 2007; 2014; Fox and Alldred, 2017). Such indeterminate approach de-privileges human intentionality and focuses on the network of assemblages and their territorializing and deterritorialising capacities (Youdell and Armstrong, 2011).

Based on the above assumptions, I show how the different components of forces identified, rhizomatically combine to create opportunities for (deterritorialize) and/or obstacles to (territorialize) women's participation in community-based fishery decision-making in the next sections. Specifically, I emphasize on the processes by which the material (human and non-human), discursive, spatio-temporal and the institutional forces matter and play constitutive roles in affecting women's participation in community-based fishery decision-making and practices.

## **7.5 Mapping component forces in the events of women's community participation.**

In the previous sections, I examined the extent to which the different socio-demographic, economic, psychological, institutional, networks and other socio-material factors affect women's participation in community-based fishery decision-making in terms of their frequency of meeting attendance and position in community-based fishery associations. In this section, I show that these forces are overlapping, interlaced and occur in a more fluid fashion to create opportunities for and/or obstacles to women's community participation in different social contexts (Ringrose and Rawlings, 2015). To show how these flows occur, I use Deleuzian assemblage and Baradian diffractive analysis to map how these forces connect with each other in unpredictable manner to create different outcomes. This would be done through analysis of qualitative data generated through interviews and participant observations together with the quantitative outcomes generated in the preceding sections. In the section which follows, I focus on the role of materialities (human and non-human) forces at work and their relations with other forces in the gendering of community-based fishery decision-making and practices.

### ***7.5.1 Mapping material forces affecting women's community participation***

The material forces include the human and non-human material factors that affect the extent of women's participation in community-based fishery decision-making and practices. The human factors include the male and female bodies with different (in)capacities (e.g., birthing, breastfeeding, etc.) which affect their extent of community participation. On the other hand, the non-human forces include the material objects such as '*T-shirts*', microphones used at meetings and '*take away*' (food given after meetings), which play constitutive role in affecting the extent of women's participation in community-based fishery decision-making and practices. I begin by paying attention to the role of the

human factors that work to create different outcomes for fisher folk's (with focus on women's) community participation in the context of Ghana's small-scale fishery sector.

#### ***7.5.1.1 Birthing and breastfeeding bodies, and gendered community participation***

The interview extracts below show in elaborate fashion how the differential bodily capacities such as women's ability to give birth and breastfeed puts them in a suitable position to nurture children than men, which combine with other forces to create different outcomes in their extent of participation in community-based decision-making. For instance, in the interview excerpt below, Ekua, a 44-year-old fish trader shares how her role as a nurturer limits her participation in meetings and her decision not to contest for position within the community association:

**Interviewer:** Do you hold any position in the fisher's association?

**Ekua:** *I don't hold any position in the fishery committee, but I really want to have a say in whatever decision is taken and be aware of such decisions. I do not want to be a leader though.*

**Interviewer:** Why?

**Ekua:** *I do not have time for myself. If I am made a leader, I would not be able to travel for meetings and leave my young children. My husband is also almost always not at home to take care of them. That is why I do not want to be disturbed with leadership roles. I cannot travel to far distances, but if it is near me, I can quickly rush and attend.*

From the interview excerpts above, Ekua indicates her negative intentions towards leadership position as a result of the nurturing of her young children coupled with the fact that her husband is 'almost always not at home' to cater for the kids. This buttresses findings in the quantitative analysis where age of children had positive and significant effects on women's meeting attendance and position in community-based decisions. In fact,

age of children was consistently cited as an important factor which obstructs women from participating effectively as their male counterparts. Particularly, the biological role of pregnancy and the breastfeeding of children, a capacity which only women have at the current level of technology, tend to confine them to the home and negatively affect their participation in community-based fishery activities. This was made more explicit in an interview with Akosua, a *Bosun Besia*:

*Another factor could be the housework and childcare duties. However, it also depends on the ages of the children. When my kids were young, that was one of my reasons for not participating. But now that they are grown-ups, it is not really a problem. That is why some women may not necessarily participate. They can't leave the little children for meetings (Akosua 57 years, Axim).*

Akosua further the argument by indicating that the extent to which breastfeeding and nurturing roles impede women's community participation matters only in relation to the children's age – women will not breastfeed forever. As the children grow, women may be freed from the burden of nurturing and breastfeeding. Such female bodily capacities may therefore not be relevant in impeding women's community participation. The foregoing excerpts thus provide evidence of biological determinist's arguments that women's bodily capacity to give birth and breastfeed may place them in a more suitable position to focus on childcare roles which may in turn limit their participation in community-based fishery decision-making. However, as we see from the preceding discussions, breastfeeding and child nurturing are ephemeral and only relevant at certain point in time (younger age) of the child and not when they are grown. Hence, biological determinist's argument of essentialized female pregnant and breastfeeding body serving as a hindrance without the context (such as age of the child) would be difficult to sustain. The biological limitation of birthing and breastfeeding only exist in a context and thus cannot be generalized.



Furthermore, as indicated by Ekua in the extract above, the role of female pregnancy and breastfeeding body becomes an impediment to her community participation only in relation to the locations (spatial force) where meetings are held especially when one becomes a leader which requires ‘travelling long distances’. Hence, it would be difficult to assume that women’s breastfeeding or childcare roles impede their community participation without looking at the context within which it occurs, which in this case has to do with the spatial force. As Ekua indicates, in a context where such meetings are organized near her, she ‘*can quickly rush and attend*’ (perhaps, even on condition that she is breastfeeding). The biological limitation on women would therefore not exist in every situation, but in this context, when the woman must travel to long distances (spatial) for meetings, which may take longer hours (temporal).

The above buttresses the argument that we cannot universalize women’s birthing and breastfeeding roles in determining their community participation as proposed by the essentialist. Such bodily capacity becomes relevant in the above context only in relation to the distance or locations where meetings are organized – far distance. We could even extend the argument further to look at how policies of exclusive breastfeeding which enjoins mothers to breastfeed their newborn babies exclusively for at least six months from birth could also play an affective role in the extent of women’s community participation (Aidam et al., 2005; WHO, 2002). Such policies may have influenced Ekua’s decision to breastfeed the child instead of say using other food supplements by which Ekua’s body’s capacity to produce milk for the baby could have been replaced. This also means that perhaps the use of food supplement may break the breastfeeding – long distance to meetings – time – childcare plane, which may have limited Ekua’s participation, into say food supplement – distance to meeting – time – children plane which may enhance her community participation. Such assemblages need to be monitored and altered as may be required (Feely, 2020).

Again, we could also look at the age difference between Ekua (44 years) and Akosua (57 years) which may positively and significantly correlate with the ages of their respective children (as correlation table in the appendix suggest). Comparatively, older women such as Akosua were more likely to have older children compared to Ekua, which also buttresses the quantitative findings where women's age had positive and significant effect on their meeting attendance. The above also shows how aspects of household arrangements extend beyond the home to the community level to create different outcomes for women. Ekua's indication that her husband is '*almost always not at home to take care of them [her children]*', suggest that in the presence of the husband, certain childcare roles may be undertaken by the husband to free Ekua to attend such meetings. This provides evidence for the quantitative findings where living with husband had positive (though insignificant) effects on women's community participation. It also provides evidence of extant research which suggest an increasing participation of men in what was traditionally referred to as female roles such as childcare duties (Coltrane, 1996, 2000; Gamburd, 2010; Bulanda, 2004).

What I wish to emphasize from the above analyses is that we need to unpack the active roles of all the forces at work in understanding the gendering of community-based fishery decision-making and recognize these forces as relational in affecting women's (in above cases, Ekua and Akosua's) participation in community-based fishery decision-making beyond the propositions by social constructionists and biological determinists. In the above interview excerpts, we find that the extent of women's participation in community-based fishery decision-making emerge through the intra-activity of material forces such as women's breastfeeding and pregnancy status, spatio-temporal forces such as location of meetings, times of meetings, sociodemographic force such as age of children and women's age. These different components of relational forces have the same ontological status such

that in the absence of one factor, the observed outcome may not manifest – perhaps a different outcome may emerge. For instance, the absence of locations/distance to meetings, the biological force of breastfeeding serving as an obstacle may not materialize as earlier discussed. Existing studies have paid little attention to the agency of such biological factors and the outcomes their entanglements. For instance, Sartore and Cunningham (2007, p. 259) suggest that ‘self-limiting behaviours of women in terms of leadership positions result from ideological gender beliefs’. While such gender beliefs may be relevant, the scholars miss the important effect of the biological factors such as those discussed above as they entangle with gender ideologies and other spatio-temporal forces as discussed above in co-creating such limiting outcomes for women.

Besides, the complex combination of these forces co-creates different outcomes where women’s community participation may be territorialized or deterritorialized as have been shown above and would be discussed further in later sections (Barad, 2007; Feely, 2020). In the section that follows, I provide further examples of how the assemblage of these complex forces intra-actively creates different outcomes for women’s community participation by highlighting the active role of non-human material objects.

#### ***7.5.1.2 Non-human material objects: t-shirts, take-away, microphone and gendering of community-based fishery decision-making.***

In the preceding section, we found that the gendering of community-based fishery decision-making emerge through the relations of multiple material-discursive-spatial-institutional forces simultaneously working together to create an outcome, with a focus on human material bodies. In this section, I focus on how non-human material objects such as T-shirts, take-away (food served after meetings), microphone and the ownership of equipment (e.g., canoe) affect the extent of women’s community participation in Ghana’s small-scale fishery sector as they combine with other spatio-temporal-discursive forces. I conclude that these non-human material forces together with discursive and spatio-

temporal forces are of equal relevance and intra-actively create different outcomes for women in terms of their extent of community participation (Braidotti, 2013a; De Lander, 2006). For instance, in an interview with Ekua on the reasons for women's limited participation in community-based fishery decision-making she indicated:

*Some women need sensitization. Some think that the only reason why we attend meetings is because of take-away [food given after meetings] or because of T-shirts...they will not attend but when we do, they would start calling us names and insulting us as greedy and selfish. It is our own women who ridicule us. This tends to discourage most women (Ekua, 44 years, Axim).*

An analysis of Ekua's response from a social constructionist's perspective may focus on how women negotiate the discourse of being called 'greedy' and 'selfish'. So that the orientation is towards the poststructuralist's deconstruction of how discourses about appropriate gender roles and appropriate conducts for women operate to position or read women as greedy and selfish. However, we need to pay attention to the 'take-away' [food given after meetings] and the 't-shirts' and how they combine with discourses of appropriate women's role which could result in the ridiculing of women by their peers and name calling as greedy and selfish.

Informal discussions with fisherfolk indicated that such community meetings are regarded irrelevant because fisherfolk (both men and women) participation do not come with any significant results on their livelihoods. As such, take-away and t-shirts considered as ways that some people are lured to attend meetings. Hence, being given food or t-shirts after meetings have negative connotations among the people. One may be regarded as selfish or greedy for attending meetings to be given such foods or shirts. Thus, the relevance of name calling emerge only in relation to the material objects such as t-shirts and take-away. In other words, the capacity of such discourses to impede women's participation in the above

context materializes only through their relations with objects such as t-shirts and take-away. This means that we cannot ignore the role of the take-away and t-shirts without which discourses of name calling as in the above context, may not manifest to hinder women's participation. The issue of name calling coupled with women's limited community participation in the above context cannot therefore be universalized as done by social constructionists and poststructuralists. Neither can we solely dwell on the material objects such as take-away nor t-shirts as the sole determinants of women's limited community participation as done by the essentialist, but as constitutive part of the community participation assemblage. Such materialities gain their capacity and relevance as in the above outcome only through their relations and co-implication with the discursive forces.

Again, as earlier indicated, Informal discussions showed that the unequal distribution of such material items (that is take-away, t-shirts, etc.) have negative effect on people's (both men and women) interests to participate in community decision-making. Equal access to such benefits may deal with the negative impacts of name calling to spur women's interests. This supports findings from the quantitative analysis which found that women's high interest had positive and significant effect on their participation in community-based fishery decision-making (see tables 6 and 7). It also shows that feelings of interest which is often associated with human intentionality and subjective experience are produced by more-than-human assemblages. Interest in this context is not fixed but eventual from the material (take-away, t-shirts)-discursive (name calling) co-implications and part of the affective plane which may limit or enhance women's community participation in different contexts (Fox, 2015).

The above imply that policies to enhance women's participation that seek to change human actors without looking at (or even recognizing) the presence and affective roles of non-human agents, would not fully address the problem of women's limited participation. Non-

human objects such as ‘take away’ and ‘t-shirts’ and their relations with discourses of gender appropriate roles co-create different outcomes for women and such scholars may miss these crucial points. Similar material affectivity was highlighted in an interview with Abena on the extent of women’s community participation and whether women were equal to men when it comes to leadership as she indicated:

*There is a woman in this town who is well educated and vocal. She has the courage to speak on our behalf during meetings. When she takes the mic [microphone] and starts speaking...she is even better than some men. Others [other women] are not bold, they would shiver just by holding a mic...they can’t even hold the mic in public, but when you get closer to them, you would realize that they have many good points. So, women can be leaders, but usually few (Abena, 39 years, fish trader, Axim).*

From the interview excerpts above, we find that personal endowments and attributes such as education may give women some civic skills to propel their community participation as found in other studies (Agarwal, 2001; Burns et al., 2001). Most participants indicated that although education was not a key requirement for one to be selected as leader, it is gradually becoming a basic requirement as these local associations increasingly connect with officials outside the communities. This was also confirmed in the quantitative analysis where women’s education had positive but insignificant effect on their community participation. Education may play a deterritorialising role as it may bolster women’s courage internally and apparent in their speaking as they entangle with non-human factors such as microphones, and the public space with which community meetings are held.

#### ***7.5.1.3 Material-emotionality entanglements and gendered community participation***

Emotionality also played a co-constitutive role in the events of women’s community-based fishery decision-making. From the interview excerpts with Abena above, two concepts of emotions related to women are used – women who are able to hold the microphone to speak in public and therefore considered courageous on one hand, and others who are

emotionally limited or inferior, and exhibit timidity and would shiver by holding the mic to speak in public. Social constructionists may focus on how patriarchal structures and social expectations that women would act soberly may limit their ability to speak boldly in public with the mic (Agarwal, 2001; Jha, 2004; Wrigley-Asante, 2011, 2012). Such scholars may also focus on how discourses of courage are used to describe women who confront such dominant discourses and are able to speak in public using the microphone as described by Abena (Ahmed, 2004).

However, such anthropocentric conceptions are limiting as they focus on human intentionality and discourses whilst the active materialities such as the ‘microphone’ and the spatial forces such as the ‘public space’ where meetings are held are rather considered as passive or not even recognized at all. Paying attention to these material and spatial forces as active agents as they intermingle with the discursive, embodied affects and emotions such as courage and shivering provide a novel and expanded understanding of the forces influencing women’s community participation.

Using the Deleuzian assemblage lens, we see that discourses of courage and timidity manifest in relation to the material force of the ‘microphone’ and the ‘public space’ within which community decision-making is undertaken. It would therefore be difficult to assume that certain categories of women have properties of courage while others do not, without examining the context – the public space and when given a microphone to speak within which they emerge. Such outcomes are therefore considered as events which only emerge in the material-spatial-discursive assemblage as above. Courage or timidity cannot therefore be universalized as a characteristic of some people as done by the essentialists or as mainly socially given as done by the social constructionist and poststructuralists. They are only eventual and can occur to anyone irrespective of the gender and it forms part of the affective assemblage in the community-based fishery decision-making (Braidotti, 2013b, 1996).

The events of women's limited community participation may not exist when the microphone–public space–fear assemblage is unsettled or deterritorialized. As Abena indicated above, '*when you get closer to them [those women considered timid], you would realize that they have many good points*'. This implies that in the absence of the microphone-public-discourse assemblage, discourses of timidity/fear and courage may be irrelevant, and the resultant limited community participation of women may not manifest – something else may emerge, perhaps, the so-called timid women may eventually become courageous. As such, discourses of courage or timidity are not fixed identities of women or men, but are malleable and mutable (Butler, 1990). As indicated by Abena, such women may be able to share their 'good points'. However, it is only when all the material-spatial-discursive forces assemble simultaneously that we determine whether what emerges is courage or timidity, or women would participate in community-based fishery decisions or not. The above analysis also shows that discourses of gender appropriate roles as highlighted above are equally important as they intra-act with other forces to co-create different subjective positions for women. In the next section, I highlight the affective role that such discourses play as they assemble with other forces in the context of women's community participation.

#### ***7.5.2 Discursive forces and entanglements in women's community participation***

Feminist scholars interested in examining the extent of women's community participation in the management of natural resource such as fishery have mostly been based on social constructionists and poststructuralist's perspectives, which often cite factors such as socio-cultural norms and values, time constraints, and other personal endowment and attributes such as women's high illiteracy, low economic status and age as the most common constraining forces (Jha, 2004; Sarker and Das, 2002; Agarwal, 2001, 2009). These factors are often linked to hegemonic discourses of femininity and masculinity, and patriarchal



structures as working to categorize women as subordinate to men (Jha, 2004; Risman, 2004, 2017; Butler, 1993).

In this section, I argue that while such anthropocentric and discursive forces are crucial, focusing on discourses without examining the context within which they occur as they combine with other material, spatial and temporal forces grant limited understanding of the problem at hand. I examine how the assemblage and complex intra-activity of these forces co-create different outcomes for women in terms of their participation in community-based fishery decisions with emphasis on the effects of discourses. Discursive forces such as perceptions of women and men's differential (in)abilities and attitudes, gendered behavioural norms, gendered division of labour and participation rules were important factors which impacted the extent of women's community participation.

#### ***7.5.2.1 Social perceptions about women's (in)abilities, hierarchies of emotions and gendered community participation***

Findings from in-depth interviews indicated that specific views and perceptions about women's (in)abilities and attitudes had crucial effects on the extent of their community participation. Social perceptions such as women as fundamentally inferior to men in terms of leadership, women as highly emotional, slow and light-minded were among the most cited views by both male and female participants. For instance, in an interview with Kojo, a 51-year-old canoe owner and fisherman, when asked about his views on the extent of women's community participation, indicated:

**Kojo:** *Any association that does not have men included doesn't last. Even women-only groups need men so that they would give them knowledge.*

**Interviewer:** Knowledge, why?

**Kojo:** *Because women would always be women. For us men, our thinking is not like women. Even the thinking of a young male is far better than a matured woman. Because women have a way of thinking.*

**Interviewer:** Really, how do they think?

**Kojo:** *As you see women, they are not patient. They are too emotional. They do not easily forgive, they never forget...how can they form an association with such attitudes...every woman has low thinking ability.*

**Interviewer:** Really? But what is the cause of the ‘low thinking’ as you say?

**Kojo:** *Let’s look into the Bible. When the snake went to deceive Eve, she quickly agreed.... the man only ate the fruit because he loved the wife [Eve]. If the serpent had gone to Adam first, they would not have eaten the fruit. So, no matter what, men are better than women. No matter what, the man is a better thinker.*

**Interviewer:** Is that the reason for the dominance of men in decision-making position?

**Kojo:** *Ahaa! [exactly!] ...that’s why I earlier said that even women only groups do not thrive. No matter what, men would be needed to ensure the sustainability of the group. For men-only groups to stand would also require women...women would come in numbers...the numbers would show that the group is vibrant. Women are needed for their numbers but when it comes to leading men should take charge.*

From the above interview excerpt, negative perceptions such as ‘women would always be women’, ‘young male is better than matured woman’ ‘women (are) too emotional’ were among the socially ingrained constructs which could impinge upon women’s capacity to participate in community-based fishery decision-making. It should be noted that such negative perceptions about women were not only expressed by male participants but even some female participants. Such negative descriptions of women were strongest in community activities where men’s domination was already entrenched. As indicated by Kojo above, while women may be needed for their numbers (meeting attendance) to make the association stand, they may not be needed when it comes to leadership positions - men are needed to take charge. This may also help explain why women tended to have high

meeting attendance, but limited decision-making positions as found in the quantitative analysis.

From the interview excerpts, we see how historical accounts from Biblical texts and books (material objects) also influence such descriptive assumptions about the characteristics and capacity of a typical male and female, for Kojo to argue that women are light-minded. It was very common for participants to dwell on the Bible to consider women as inferior. This was not surprising as majority of participants considered themselves as religious (see Chapter 4). In several instances, both male and female participants quoted biblical verses to indicate that it was not right for women to stand and preach (or lead) in the church. Such negative perceptions and prescriptions of how man and women ought to behave were extended to women's community participation especially in terms of leadership positions. From the above we see how such discourses also depend on long histories of articulation which secures the male subject as superior over the female (Ahmed, 2004; Ridgeway, 2014).

The above excerpts also show how emotionality (whether timid or courageous) is considered to be beneath the faculties of thought and reason. Feminist scholars have also argued that a subordination of emotions also works to categorize women as inferior to men. As Sara Ahmed posit: *'To be emotional is to have one's judgement affected: it is to be reactive rather than active, dependent rather than autonomous'* (Ahmed, 2004, p. 3). Such negative conceptions of emotions views being emotional as feminine and beneath thought or reason which is viewed as masculine (Jaggar, 1996 in Ahmed, 2004). Even in situations where both men and women are viewed as emotional, there exist 'hierarchy of emotions', where some emotions are elevated as sign of superiority and others as sign of weakness (Ahmed, 2004, p. 3). For instance, while Kojo viewed women as 'impatient' leading to their unsuitability for leadership positions, emotions such as 'love' and 'patience' were elevated as signs of superiority and good judgement which he linked to men – 'Adam ate

the fruit because he *loved* his wife, Eve'. Such categorization of emotions shows how discourses could play an important role in creating different subjective positions for women and men (Butler, 1990). The above examples highlight the crucial role of discourses about women inferiority, combined with Biblical texts from which histories of women weakness and perceptions of their light-mindedness and emotionality emerge which work to position women as inferior to men and the gendering of community-based fishery decision-making.

Another related negative social perception about women found was the perception of women's promiscuity when they travel for meetings as indicated by Adjoa:

*Not every woman can go or would be allowed [to travel for meetings] by her husband. There are allegations that when some women travel for meetings, they do their own things... you know what I mean? So as a wife you would need to inform your husband and make him believe that you wouldn't do that.*

Such behavioural characteristics were found to be undertaken by both men and women. However, it was often believed that women were more gullible and could be easily lured by men as they travelled with them for meetings, sleep in hotels, among others, which made it difficult for women to take up such positions without prior approval from the husband who is also considered head of the family. This was made more explicit during a couple interview with Esi and her husband, Sam, as below:

**Sam:** *Women are light-minded [Esi nods] ...As they attend the meetings, interact with the men, by the time you realise they would be having fiancé among themselves in the group. They would start receiving weird calls.*

**Esi:** *Yes, by the time you [the man] realises, the woman would have married within the group. A lot has happened in this town.*

**Sam:** *So, if me, the man, if I also attend, I will need to be careful.*

**Interviewer:** So why don't we allow the women to also attend with the expectation that they would also be careful?

**Esi:** *For women, it happens so fast. We can easily do that. It can easily break the marriage.*

**Sam:** *Hmm. For women they can easily give in. And they would marry the same man you have been seeing around.*

**Interviewer:** So, would you allow your wife to take up any position in the association?

**Sam:** *Oh no, I won't. Even though I trust my wife, I won't, to avoid any suspicion [smiles].*

**Interviewer:** Madam, would you also allow him to contest for any position?

**Esi:** *Hmm. For him. Though I have a say, it is not everything that I can control. So, I would ask him if he is interested. If he is interested, I would agree. If I say that because you [he] disagreed mine, I will also not allow you [him]. It would be as if I am challenging him. I should not challenge him. Always I need to ensure that I am under him.*

**Interviewer:** Why should you be under him?

**Esi:** *Because I am a woman [wife smiles, husband nods]*

The above interview excerpts show how unequal power among couples in the home could translate into women's community participation (Jha, 2004). The excerpts show how negative perceptions are entrenched to the extent that they are even unquestioned and are accepted by women (as in this case Esi) who are accused of being promiscuous and gullible. Again, Esi indicated that a lot of such incidents had happened in the community. This shows how past experiences and happenings in other homes (exterior forces) could be plugged into Esi and Sam's community participation assemblage or be taken-up and used to create different subjective positions (Ringrose 2011; DeLander, 2006). We see the role of discursive forces of women's promiscuity and gullibility as they combine with other forces such as locations of meetings, sleeping locations (spatial force) coupled with weird phone calls (technology) and the cultural positioning of men as heads of the family to result in male's prior approval before a woman could travel for such meetings, consequently

limiting her community participation. As such, negative discourses about women promiscuity and gullibility is made apparent only in situations where women would need to travel to another location, sleep over as we find from the above discussions. Hence, such discourses cannot be generalized as the determinant of women's community participation as done by the social constructionists and poststructuralists without examining the contexts within which they occur such as when it comes to travelling to different locations or sleeping in hotels.

Notwithstanding, social perceptions about women were not always negative as some participants indicated women participation as equally important in community-based fishery decision-making. In an interview with Egya on whether men and women should be given equal opportunity to participate in decision-making he indicated:

**Egya:** *Yes! Because, because what men can do, women can do better.*

**Interviewer:** Why do you say so?

**Egya:** *That is what we have been told [smiles]*

**Interviewer:** By who and do you believe it?

**Egya:** *Don't you hear that on TV and radio? That is what the educated keep telling us. As to whether I believe or not, I can't say but it all depends on them [the women]. It depends on what they can do.*

A critical analysis of the above interview excerpts may indicate that Egya may not necessarily believe in the assertion that 'what men can do women can do better'. However, what I wish to point out here is that the above perceptions of Egya materializes through the co-implications of such discourses with material and technological forces such as the 'television' and 'radio' where such gender equality information is shared. We may also extend the argument to look at how government and perhaps donor policies of gender equality may have affected the relay of such information through these media platforms to

the public. Hence, the material and technological forces play an active role in the extent to which Egya would view women as equal to men or not.

From the preceding sections, I have discussed how different material (human and non-human), spatial, temporal, institutional and other socio-demographic factors play important but constitutive roles in the gendering of community-based fishery decision-making in Ghana's small-scale fishery. As can be discerned from the above, these forces combine in complex and usually unpredictable manner to create different outcomes for women with regards to their community participation. There were instances where these forces combined to limit (territorialize) women's community participation, whilst in other instances, women's community participation was enhanced (deterritorialized). The various forces of territorialisation and deterritorialization are discussed in the next section.

## **7.6 Delimiting forces of territorialization and deterritorialization**

Within the events of community-based fishery decision-making analyzed in the earlier sections, I found that the rhizomatic connections of certain material-discursive-spatial-temporal and institutional forces worked to limit or constrain the extent of women's community participation. However, there were also instances in the material-discursive-spatio-temporal assemblage where strict gendering of community fishery decision-making was deterritorialized or destabilized. These moments of territorialization and deterritorialization should not be understood as produced solely from human intentionality or agency but rather as emerging from the material-discursive-spatio-temporal co-implications (Feely, 2020; Fox and Alldred, 2019; Braidotti, 1994, 2013a).

In this section, I show how these territorialized and deterritorialized outcomes emerged and argue that such outcomes are only temporary becomings rather than fixed (Ringrose, 2011). They only emerge when the different forces combine simultaneously. As such, the idea of a universalized, fixed female and male identities as argued by the social

constructionists/postructuralists and biological determinists is difficult to sustain (Braidotti, 2013b; Deleuze and Guattari, 1988; DeLander, 2006). Different outcomes of women's community participation can emerge through the myriad of forces of relations at work in different social contexts. These forces can also be plugged into other relations to create other ephemeral events or outcomes (Feely, 2015, 2019; Ringrose, 2011; Jackson and Mazzei, 2012), as discussed in later parts of this section.

The previous sections provided several examples of territorialization. In this section I highlight some of these examples for purposes of clarity. For instance, turning to the interview with Ekua in the earlier sections, she indicated instances where women may not want or not be able to participate in community-based fishery decision-making. Beginning with the material force, we found that while the distribution of material benefits such as *'take-away'* and *'t-shirts'* could and did facilitate community participation, interview with Ekua also indicates that such materialities play a constitutive role in territorializing women's community participation. Following the rhizomatic link from the non-human material forces (take-away and t-shirts) to the realm of discourses, it was apparent that discourses of gender appropriate roles and name calling may also affect this instance of territorialization. As Ekua indicated, women tended to be discouraged from attending community meeting due to the name calling such as *'greedy'* and *'selfish'* as they receive these material items. As earlier indicated, informal discussions also indicated that such name callings result due to the unequal distribution of these (material – t-shirts, take-away) benefits.

In the context of the interview with Ekua as summarized above, we see that the limited community participation of these women does not only result from discourses of name calling or human intentionality. Rather, the gendered (women limited) community participation is an emergent product of the complex intra-action of the material (t-shirts, take-away), discursive (name calling – greedy, selfish), institutional forces working



together. It is the intermingling of these forces that work to territorialize (limit) the extent of women's community participation as described by Ekua. As such, I argue that previous studies missed the important role of these human and non-human materialities, despite the crucial effects of these factors in gendering community-based participation as discussed above.

In another example, Ekua indicated that despite the desire to make her view count in community-based fishery decision-making, she would not want to be a leader. Again, in analyzing her narration, the assumption is that the instances of territorialization or her inability to seek or desire leadership position as she narrated are the emergent products of complex array of material-discursive-spatial forces working together. In exploring how these forces worked to territorialize Ekua's participation, we may first consider the location where meetings are organized (spatial force). Ekua indicated that the long distances to meeting locations which would require traveling makes it unfavourable for her to take up such positions. However, her problem with traveling becomes relevant as it combines with the need for her material body capable of producing breastmilk to take care of her baby by breastfeeding (human bodies – woman's capacity to produce milk, baby needs milk), coupled with the fact that the husband was not always at home (familial arrangement). In the earlier discussion, I extended the assemblage beyond the confines of the fishery community to look at how national policy of exclusive breastfeeding may have influenced Ekua's decision to breastfeed her baby. We also saw how discourses about women's promiscuity and gullibility could also play a constitutive role in Ekua not wanting to travel for meetings as the couple interview with Esi and Sam also indicated. We see that it is the complex combination of these forces (spatial-human bodies–discourses of breastfeeding policies, perceptions of women's promiscuity and gullibility) that work to territorialize or limit Ekua's capacity to participate in community leadership positions. In the absence of any of these forces, the problem of women's limited participation may not emerge. For

instance, without the long distance to the meeting, perhaps Ekua may actually take up such positions. It is also possible that she would still not take the position, but we don't know yet what the outcome would be and therefore cannot universalize.

Thus, the territorialization of Ekua's community leadership position emerge through the relations of the meeting locations (spatial force), her breastfeeding capacity (human body), the baby (human body), the husband's recurrent absence from the home (familial arrangement) and the discourse of appropriate gender role and perhaps exclusive breastfeeding policies (discursive force). It is the simultaneous combination of these forces that work to limit Ekua's community participation. This implies that the outcome of Ekua's inability to take up position in the community association can only be resolved when these combinations of forces are altered or unsettled.

While the above discussions described instances of territorialization, at other times, moments of deterritorialization were also apparent. To illustrate this, again we turn our attention to the stories shared by participants in the earlier sections of the chapter with regards to women's community participation. It should be noted again that, in analyzing these stories, the assumption is that the moments of deterritorialisation are the emergent products of multiple material-discursive-spatio-temporal-economic forces working together. For instance, in the interview with Abena as to whether women were equal to men in terms of leadership position, she indicated instances where women with certain personal endowments and attributes such as education and civic skills could equally participate as their male counterparts. From the interview extract, we found that personal endowments and attributes such as education may give women some civic skills to propel their community participation as indicated by other studies (Agarwal, 2001 Burns et al., 2001; Verba et al., 1995). However, differences in speaking ability does not lie only in education, but in context – microphone use - public space – emotionality entanglements. Following the rhizomatic link from the realm of personal endowment and attributes it

quickly becomes apparent that embodied affects and emotions may constitute the forces of deterritorialization. In the interview, Abena indicated that women with courage could easily take the microphone (material) to speak in public (space). Instead of seeing emotions such as courage as a fixed human (woman's) property, examining the capacity of emotions in the community participation assemblage described by Abena shows how the embodied sensation and emotions of courage combine with the personal endowment forces such as education and material forces of microphone within the public space (spatial force) to affect the participation of women (in this case Abena) in community-based fishery decision-making.

To offer another example of deterritorialization, we look at the interview with Egya from the previous section. In discussing whether men and women should have equal opportunity to participate in decision-making he provided instances of discursive-material-technological assemblage through which the deterritorialization gendered community-based fishery decision-making could emerge. In exploring these from the interview, we might start by considering the effect of dominant discourses such 'what men can do women can do better' as indicated by Egya. Although Egya's response creates an impression that he might not necessarily believe in such discourses, his narration shows how the discursive force rhizomatically combine with the images on television and voices on radio (technological and material forces) to relay such information and perception. Hence, the deterritorialization effect as narrated by Egya is made possible by the co-implication of the discourse (what men can do women can do better), the non-human material and technological objects of television and radio as well as institutional forces of gender equality policies.

Examining Egya's account as an incident of deterritorialization through the relations of material-discursive-technological-institutional assemblage opens it up to complexity. Egya's view of women's community participation can no longer be understood reductively

as a product of his sole decision or intentionality or agency to accept a more egalitarian gender role attitude as the social constructionist and poststructuralists may suggest (Agarwal, 2001; Jha, 2004). It cannot also be assumed to be caused by any of the single factors (Egya's discursive position, the technological force, material force or institutional policies). It is rather understood as emergent from the combination of these different component forces of existence working together in an assemblage (DeLander, 2006).

The assemblage analytical approach therefore allows us to remain attentive to the active roles of both material, discursive, temporal and spatial forces. As noted by Feely (2020, p. 17), 'the method can allow us to produce complex... maps of how the social assemblages work'. Again, knowing how the assemblage works in the present can help us to think about ways to unsettle or alter it to make it work differently (Feely, 2020; Nail, 2017). In the case of women's participation in community-based fishery decision-making analyzed above, the assemblage of forces working to territorialize and in other instances deterritorialize women's participation have been analyzed. The next step is to think about how these assemblages of forces could be altered to work differently. Since the study focuses on understanding gender inequality in community-based fishery decision-making, the next section would focus on how the forces that work to territorialize or limit women's community participation can be altered to work differently. That is, to enhance women's participation.

### **7.7 Altering or unsettling the territorialisation assemblages**

In this concluding section, I consider some interventions that might alter or unsettle the assemblage of forces that work to territorialize or limit the extent of women's participation in community-based fishery decision-making. Specifically, I examine how intervening in the material, discursive, spatial, temporal, economic and institutional forces that work to limit women's frequency of meeting attendance and position in fishery associations might help create different outcomes for women in these realms. This would help challenge social

constructionists and biological determinist arguments of a universalized woman with certain characteristics limited by economic and social forces of patriarchy and discourses as earlier studies indicate (Agarwal, 2001, 2009; Jha, 2004, Overå, 2003, 1998; Butler, 1990). This would provide relevant information for fisherfolk (women and men), policy makers, professionals and scholars who might be interested in knowing how the community-based fishery decision-making assemblage works in the present and how it might be made to work differently (Feely, 2020; Nail, 2017).

A key finding from the study was that women tended to participate more in terms of meeting attendance especially those within the local communities compared to leadership positions, where their male counterparts dominated both realms of community participation. In examining the forces that work to limit or territorialize women's community participation within the two arenas, we found that different material-discursive forces intertwine in complex fashion to limit the extent of women's participation. For instance, in the interview with Ekua on the women's meeting attendance, we saw the co-implication of material forces such as t-shirts and take-away with discourses of name calling referring to women as greedy and selfish coupled with institutional rules in the distribution of such benefits. From Ekua's story, these forces combined in a complex manner to territorialize the extent of women's community participation. To alter this assemblage, we could turn to the non-human material forces by asking whether the material objects of '*take-away*' and '*t-shirts*' could be replaced with say 'cash allowance' or be distributed more fairly by ensuring that every fisherfolk gets his/her share, to address the issues of name calling? Again, we may echo the recommendations by social constructionist and poststructuralists to address discursive issues such as name-calling through education and sensitization, which may play a part in enhancing women's interest and participation (Tilley et al., 2020; Agarwal, 1997, 2010; Harper et al. 2020; Kleiber et al. 2015; Zhao et al. 2013).

In another example, we found the co-implication of material-discursive-spatial forces of microphone, public space where meetings are held, embodied affects and emotions such as fear (stage fright) as well as discourses of women's promiscuity which worked to limit the extent of women's meeting attendance. To alter this assemblage, we could consider whether encouraging local meetings instead of travelling to long distances, encouraging small group meetings where a microphone may not be required as well as humanist proposal of education and training to enhance women's public speaking skills and confidence. Altering the assemblage this way may help encourage women's community participation in terms of meeting attendance.

Finally, in an interview with Ekua, she indicated her desire to make her view count, but would not want to take up leadership position. The study revealed that the territorialization of Ekua's community leadership position emerge through the co-implication of the spatial force of meeting locations, her breastfeeding capacity (human body), the baby (human body), the husband's recurrent absence from home (familial arrangement) coupled with the discourse of appropriate gender role and perhaps exclusive breastfeeding policies (discursive force). To unsettle this assemblage, we may ask whether the material human body of Ekua with capacity to produce breastmilk could be replaced by say food supplement for babies. To alter the spatial force of long distance, we could intervene by organizing meetings within localities instead of long distance. Though not explicitly indicated, it could be argued that the persistent absence of Ekua's husband from home may stem from discourses of appropriate gender roles where men are expected to work outside the home, which may also be altered through education and sensitization as the social constructionists and poststructuralists would recommend to ensure that husbands take active role in childcare as aspects of the interviews suggested.

Whilst the above interventions may alter the assemblage of forces working to territorialize women's community participation in the different contexts, they may have complex unintended consequences (Feely, 2020). Such interventions as above are equally ephemeral and tentative, and ought to be continually monitored and altered in different social contexts and times (Youdell and Armstrong, 2011; Feely, 2015). As such, the context within which different outcomes of women's community participation emerge are very critical in the assemblage analysis.

Although the assemblage analytical approach has been criticized for its limited predictive capacity (Lemke, 2017; Fox and Alldred, 2015), Barad (2012, p. 50) emphasizes that diffractive thinking is 'suggestive, creative and visionary'. Rather than conventionally interpreting matter and discourse as something that are already there, diffraction is 'oriented towards eventualities...where privileges of human agency, and the linearity of cause and effect are not in play' (MacLure, 2015, p. 16). Thus, the new materialist framework provides a novel approach to understanding social problems such as women's participation in community-based fishery decision-making and is likely to propose different recommendations for change beyond what the biological determinists, social constructionists and poststructuralists would provide, as done in the preceding sections. It takes on-board both language (discourse) and the liveliness of matter (human and non-human) in explaining gender inequalities in community-based fishery decision-making across different social contexts, without a return to essentialism, as done by the biological determinists, nor social causality as done by the social constructionists (Ringrose, 2011; Ringrose and Rawlings, 2015; DeLander, 2006; Barad, 2003, 2007; Youdell and Armstrong, 2011).

## CHAPTER 8

### SUMMARY OF FINDINGS, IMPLICATIONS AND CONCLUSION

#### 8.1 Introduction

This thesis builds upon existing research dealing with the complexities of gender inequality and provides alternative explanations for such complexities in the context of household and community-based fishery decision-making and practices in Ghana. This chapter concludes the entire study. First, I recapitulate the purpose of the study, theoretical approach and methods used. Second, I reiterate the key findings of the study based on the research questions. From the results, I discuss the contributions and theoretical implications of the study for research on gender inequality in the fishing industry as well as occupational sex segregation in the third section. In the last section of the chapter, I outline limitations of the study and recommendations for future research.

#### 8.2 Purpose of study, theoretical approach and methods

In recent decades the proportion of women in the labour force has increased throughout the world. In spite of this, research consistently shows that women lag behind their male counterparts in decision-making positions at household, community, and national levels (Meisenbach, 2010; Tichenor, 2005; Bartley et al. 2005; Jha, 2004). Several theoretical explanations have been offered to account for this dichotomy but have failed to adequately address the complexities of women's decision-making status. Using the new feminist materialist framework, with Ghana's small-scale fisheries as a case example, the current study sought answers to the question: *How do the combined material, discursive, spatial and temporal factors co-produce opportunities for or obstacles to women's participation in household and community-based fishery decision-making/practices?*

Based on the new feminist materialist approach, the study focused on the neglected, but important role of materialities (human and non-human) and their *intra-action* with discursive and other spatio-temporal factors in shaping women's participation in household and community-based fishery decision-making and practices. To understand such



complexities required a deeper understanding of the different contexts and processes of household and community-based fishery decision-making. An ethnographic approach using methods such as surveys, in-depth interviews and participant observations was deemed to be appropriate for this study. Household decision-making/practices involve family members making decisions about domestic matters and economic production, whereas community-based decisions involve meeting attendance and the positions that women hold in community-based fishery associations. In the next section, I summarize the main findings of this study in relation to each of the research sub-questions. I begin by discussing issues related to women's household fishery decision-making and practices, and thereafter their participation in community-based decision-making.

### **8.3 Summary of findings**

#### ***8.3.1 Extent of women's participation in household fishery decision-making and practices***

In terms of household decision-making/practices (as discussed in Chapter 4), the findings from both quantitative and qualitative analyses primarily revealed that women participated more in fish processing and trading related tasks and decisions than in strenuous tasks and decisions such as fishing and repair of equipment. This is in line with the literature on gendered fishery decisions and practices in both developing and developed countries (Harper et al. 2020; Kleiber et al. 2015; Kraan 2009; Overå 2003; Zhao et al. 2013). The findings also corroborate existing research on occupational sex segregation where women are found to be actively involved in different aspects of such occupations, but have limited bargaining power in strenuous tasks and decisions which are often dominated by men (Anderson et al 2017; Jha, 2004; Tichenor, 2005; Doss, 2013). The current study further revealed that despite the notable division of labour, some women (however few) do participate in the more physically strenuous fishery tasks. Similarly, the interviews and participant observations revealed that some men do also participate in the fish processing

and trading activities but only under specific circumstances such as when their wives are away as discussed in Chapter 4.

The above findings indicate that the division of fishery decision/practices may not always be strictly divided along gender lines as couples' roles usually overlap. In addition, whilst some women exhibited frustration for their lack of decision-making power especially in the male-dominated strenuous activities given their financial commitments, they rarely questioned the dominance of men in these tasks. In the next section, I examine the material, discursive, economic, and spatio-temporal factors, and the outcomes of their co-implications in the events of women's household fishery decision-making and practices.

### ***8.3.2 Materialities, discourses, and entanglements co-creating opportunities for and obstacles to women's decision-making/practices***

The aim of this thesis was to examine the active role of materialities (e.g. physical bodies, objects and spaces) and the outcome of their co-implications with other social and temporal factors in explaining the complexities of gender inequality in fishery decision-making and practices. Specifically, the thesis highlights the importance of engaging with women's embodied experiences in fishery decision-making and practices (Atkinson et al. 2020; Coffey, 2019). In terms of household fishery decision-making, the qualitative findings revealed how materialities (human and non-human) were used to justify women's limited fishery decision-making/practices. Focusing on human bodies, the interviews revealed that the male/female bodies with different capacities in terms of strength, birth and menstruation had a bearing on women's decision-making position at the household level. For instance, the strength required to perform certain fishery tasks (e.g., pull a heavy fishing net) played a constitutive role in limiting women's participation in deep sea fishing. Other interviews revealed that women's child-bearing capacity meant that they would not have the required strength to fish. Likewise, the need to breastfeed their babies, coupled

with their capacity to produce breast milk limited women's participation in fishery tasks which required long stays offshore.

In terms of decision-making, the regression models showed that women's participation in strenuous fishery tasks have positive but insignificant effects on their decision-making power, while participation in procession/trading tasks actually reduced it. This finding highlighted the limitations of Western-based propositions such as Levanon and Grusky (2016), where occupations which require physical strength are considered to be of low status, and disadvantageous to females. On the contrary, in Ghana's small-scale fishery where participating in strenuous fishery tasks commands high status, women's limited participation in such tasks is relatively disadvantageous as it limits their decision-making power. The role of materialities such as human physique with different capacities (strength, menstruation, birth, etc.) in gendering fishery decisions/practices as above showed that biological and physiological differences between men and women play important roles in the gendering of fishery decisions and practices (Murdock, 1949 in Holborn et al. 2004). Similarly, social structures, norms and values (e.g., women's gender role attitudes, taboos, etc.), which categorise men as superior to women are equally important. For instance, while menstruation is used to categorise women as unclean to fish, men who equally pollute water bodies through the disposal of urine or faecal matter may still go fishing (Kleiber et al., 2015; Overå, 1998, 2003).

The new feminist materialist framework provides important insight into the complexities in women's decision-making and practices (Fox and Alldred 2018; Feely 2020). The relational process of intra-action offers a new way to recognize the role of human materialities such as physical bodily capacities without succumbing to biological essentialism (Barad 2003; Feely, 2020). The ethnographic accounts have shown that the relevance of bodily capacities (e.g. differential strength, menstruation) categorizing fishery decisions/tasks for men and women emerge in relation to pulling material objects such as

the '*heavy fishing nets*' or the '*unconducive canoe*' and gender norms of appropriate roles for men and women.

The interaction terms between women's financial contributions, gender role attitudes, ownership of equipment, and the type tasks women perform (strenuous and processing/trading) from the regression analysis revealed that women's participation in strenuous tasks weakened the extent to which their financial contribution and gender role attitudes are commensurate with their decision-making power. The simple slope analysis revealed that women with traditional gender role attitudes who do more strenuous activities have high decision-making power, whilst those with egalitarian gender role attitudes doing more strenuous activities have low decision-making power. Women's participation in strenuous tasks, high financial contribution and egalitarian gender role attitudes were positively associated with their decision-making power. As such, one would have expected that women with high financial contributions and egalitarian gender role attitudes who undertake strenuous fisheries task would have higher decision-making power. However, this was not the case, as the findings reveal. Women's fishery decision-making varies according to the gendered division of labour, and those who violate it are 'punished' as they have to reduce their quest for equality in strenuous activities in order to assume some level of decision-making. These findings suggest that women who do male dominated activities and make their gender equality demands more apparent would rather have less decision-making power. This is true especially when doing such activities pose threats to men's masculine identity (Hiller and Philliber 1986 in Zuo and Tang 2000; Overå 2003). The above findings are of particular importance – being able to do what men do or having egalitarian gender role attitudes or high financial contribution do not automatically give women higher status/power. These findings run counter to the predictions of relative resource and gender theories, which suggest that women's higher household financial contributions (Sullivan 2011; Blood and Wolfe 1960) and egalitarian gender role attitudes

(Agarwal 1997; Tichenor 2005; Kleiber et al. 2015; Finegold et al., 2010) will invariably enhance their decision-making power. They make more sense when combined with the type of fishery activities women do.

In short, when it comes to women's decision-making power, the physicality of activities they do matters, just as how much they contribute or what they believe in. On their own, the type of fishery activities women do (e.g. strenuous/non-strenuous) may not always matter. However, their relevance is brought to bear when interacted with women's gender role attitudes and financial contributions as the regression results indicated. New feminist materialist framing highlights the crucial point that the complexities of women's decision-making and practices are better understood as emerging from the co-implications of the material, discursive, spatio-temporal forces.

Another important finding was that ownership of production assets (e.g., canoes, fishing nets and outboard motors) trumps gendered division of labour. That is, women who owned major equipment had high decision-making power irrespective of the type of activities performed and the physical materiality required. Interviews showed that by their ownership, these women had to ensure that the equipment are in good working condition, which improved their decision-making status. As actants in the fishery tasks, fishing equipment such as canoes can float, break, leak or drown with or without human intervention. Thus, they are active, they have their own agency, which make impressions on humans (the women owners) and the humans (women) also make impressions on these equipment as they entangle with each other (Barad, 2012). For instance, poor maintenance of a canoe may result in its destruction, and the destruction of a canoe could mean no fish/income for the woman or a loss of livelihood. The intra-action of the canoe-human-economic factors co-determine women's fishery decision-making. This also suggests that women's ownership of fishery equipment can be an important path towards gender equality in the fisheries decision-making. Hence, women should be considered in the distribution of such

government subsidized equipment (e.g., fishing nets) as informal discussions and other studies suggest that women are often left out of the distribution of subsidized equipment (Sumaila et al., 2016). The findings also serve as a wakeup call on community-based fishery NGOs and stakeholder groups interested in gender equality to support women with such equipment instead of solely providing finances to run the fishery business or engaging solely in gender equality awareness campaigns.

### ***8.3.3 Extent of women's participation in community-based fishery decision-making***

In terms of women's participation in community-based fishery decision-making (discussed in chapter 7), the findings revealed that while women actively attended community meetings, only a small proportion held decision-making positions in the fishery associations. The few women who held positions occupied the less influential, 'women focused' decision-making positions such as organisers and fish trader leaders (*Konkohemaa*). These results corroborate the findings on gender inequality in natural resource governance literature which contends that women mostly occupy the fringes in decision-making positions (Agarwal, 2015, 2001; Cleaver, 2002; Resurrección, 2013). Moreover, the qualitative findings revealed that some women preferred meeting attendance to holding key decision-making positions in community associations as it combined better with their roles as wives, mothers, and fish traders. Different material-discursive, spatio-temporal factors combined to co-create the different levels of women's community participation as discussed below.

### ***8.3.4 Materialities, discourses, and entanglements co-creating opportunities for and obstacles to women's participation in community-based fishery decision-making***

In carrying out this research, I paid particular attention to the neglected role of materialities and their co-implication with social and spatio-temporal forces in co-creating such gendered outcomes. This theoretical orientation provided a nuanced account of the complexities in women's participation in community-based fishery decisions, such as why

women may hold socially limited positions in community-based associations despite their important contributions to the fisheries. The findings revealed that personal endowments such as women's education and social status enhanced their community participation as suggested in other studies (Burns et al, 2001; Verba et al., 1995). Although education was not a key requirement for a person to be qualified for position in community-based association, interviews revealed that such personal characteristics were becoming important requirement due to the interaction that community-based fishery associations had with external funders, NGOs and governmental bodies.

More importantly, the results showed that different components of forces; material (human and non-human), discursive, spatial, and temporal factors were at work in the gendering of community-based fishery decision-making. In terms of human physiology, the interviews revealed that women's bodily capacities such as the ability to give birth and breastfeed put them in a more suitable position to nurture children than men, but also limited their opportunities to attend meetings and hold positions in the fishery association. These findings highlighted the need to pay attention to the important role of biological and physiological factors in gendered experiences and practices (Allen, 1984; Ortner, 1972; Boserup, 1970).

The study also suggested that essentializing such biological factors without contextualizing them in the gendered outcomes of community-based participation is overly simplistic. For instance, the extent to which breastfeeding, and nurturing impedes women's community participation depended on the age of the child. As the children grow, the limiting role of such female bodily capacities becomes almost irrelevant. This finding was buttressed by the quantitative results where age of children had a positive and significant effect on the regularity of women's meeting attendance and their position in community-based decisions. Interviews further revealed that spatial factors such as the locations where meetings are held could complicate the situation of women's community participation. As indicated by

Ekua in chapter 7, she may not attend meetings if such meetings required ‘long distance travelling’ but when such meetings are organized near her, she ‘can quickly rush and attend’, perhaps, even if she had a child to breastfeed. The new materialist framing exposes the limitations of the biological essentialist by showing that the biological limitation on women will not be relevant in every situation. It depends on context such as the age of the child and the locations of meetings hence cannot be generalized without examining the context within which they occur. Non-human objects such as *T-shirts*, *take-away* (food shared after meetings), microphones used at meetings and women’s ownership of fishery equipment also played important roles in the extent of women’s meeting attendance and positions in fishery associations as they entangled with other objects, discourses and spatio-temporal forces. For instance, coupled with the lack of impact of fisherfolk’s (men and women) opinions and the consequent lack of interest, the distribution of materialities such as T-shirts and take-away were considered as ways to lure fishers (men and women) to participate in community-based fishery activities. Thus, distribution of such items carried negative connotations and name-calling such as ‘greedy’ and ‘selfish’, which discouraged women’s participation in the community-based fishery decision-making.

Whilst discursive forces such as name-calling, played an important role in women’s community participation as may have been argued by feminist scholars, the new materialist framing extends this argument. The new materialist approach shows how influential name-calling be when combined with materialities such as the *food* and *T-shirts*, whose affective capacity equally emerges as they intra-act. It further shows that interest which is often associated with human intentionality and subjective experience (e.g., Stockemer and Byrne, 2012), are produced by more-than-human assemblages (Barad, 2003; Fox and Alldred, 2018a). Women’s interest in community-based decision-making is not fixed but contingent upon the material (take-away, t-shirts)-discursive (name calling) co-implications (Fox, 2015). This contingency implies that by altering the assemblage of material (e.g., food, t-



shirts), discursive (e.g., name-calling), emotional (e.g., interest), the outcomes of women's limited community participation could also be altered.

The interviews further revealed how emotions such as 'courage', 'fear or timid' in community participation go beyond human intentionality or cognition to more-than-human assemblages (Fox, 2015; Boler, 2015), as has been suggested in existing debates (Ahmed, 2004; Tackman et al., 2019). From the interviews, women's fear or courage of participating in community-based fishery decisions emerged as their bodies intra-acted with materialities such as the *microphone* to speak in a *public space* (spatial force). This could explain why in the absence of such materialities and spatial contexts, these same women could speak freely and negotiate fish prices, for instance at the landing beach as the interviews indicated. The study further shows how hegemonic discourses such as 'women would always be women', 'women are too emotional' and 'women as gullible or light-minded' are socially ingrained constructs which impinged upon women's community participation but remained unquestioned by fisherfolk (including women). The findings revealed that such negative perceptions were strongest in areas of community participation where male dominance was strongest such as in leadership positions.

Critical feminists do well to highlight the crucial role of social structural forces including gender norms and values as well as historical and religious legacies in limiting women's leadership roles as above (Jha, 2004; Agarwal, 2001; Kleiber et al., 2015; Wrigley-Asante, 2011). However, the new feminist materialist framing provides a nuanced account of such gendered outcomes. For instance, the interviews showed that perceptions about women's gullibility and promiscuity became a relevant factor in women's community participation as they entangled with spatio-temporal factors such as women *travelling to long distances* for meetings or sleeping in hotels. Examining the contexts within which such inequalities occur shows that discourse matters, just as the location of meetings (spatial factors) does too. This implies that efforts to enhance women's community participation by focusing on

dealing with discourses such as name-calling that portray the position of women as inferior to men without dealing with (or even recognising) the location in which meetings are held may miss the point. This may explain why existing approaches have not sufficiently addressed the inconsistencies in gender gaps in the different socio-political spheres including women's community participation (Charles, 2011; Iversen and Rosenbluth, 2008; Jha, 2004).

The interviews further revealed that discourses about women were not always negative. Popular sayings such as 'what men can do women can do better' as indicated by Egya (a fisherman) in Chapter 7, implied that women were equal to men in community decision-making. Such discursive framings were important in understanding women's community participation but gained relevance when combined with Egya's (human body) entanglement with technological forces such as *television* and *radio* as channels through which such discourses were conveyed to him. This assemblage could be further extended to examine relations of exteriority (DeLander in Tamboukou, 2009), such as how governmental and donor (especially community-based NGOs) programmes on gender equality played important roles in spreading such popular discourses as the interviews indicated. The new materialist framing adds that gender equality sensitization programmes through channels such as radio and television and community-based NGO groups may be effective ways to address gender inequality in community-based decision-making and practices (FAO, 2016). Understanding how the different factors work as they entwine means that it is equally possible to shape these assemblages towards revolutionary goals by intervening or unsettling the assemblages (Nail, 2017; Buchanan, 2007). That is, to explore how the combination of factors can be transformed in order to bring about change. To address the broader aim of gender inequality in decision-making and practices, the next section summarizes how the assemblage of forces which work to limit women's household and community-based fishery decision-making could be unsettled or transformed.

### ***8.3.5 Unsettling the assemblage to address gender inequality in decision-making/practices***

In this section, I discuss how the assemblage of factors that have a negative effect on the participation of women in household and community-based fishery decision-making can be altered or transformed to address the problem of gender inequality in fisheries decision-making and practices. First, how can the assemblage of forces that limit the participation of women in household fishery decision-making and practices be altered? For instance, forces such as the uncondusive canoe, heavy fishing net combined with women's bodily (in)capacities (e.g., strength, birthing) and discourses of women's uncleanness combine to limit women's participation in some fishery activities such as fishing. This assemblage could be altered with the introduction a fishing boat (material object) which may be more conducive, and by attaching a mechanized reel (material object) which can easily pull the heavy fishing net with the press of a button. The introduction of a material object such as fishing boat or mechanized reel to overcome women' physical disadvantage coupled with sensitization to deal with the discourses of name-calling may enhance women's participation in activities such as fishing to change the dynamics of gender inequality in fishery labour.

I also examined how the assemblage of forces that have negative impact on women's participation in community-based fishery decision-making/practices could be altered. First, the analysis showed that the co-implications of material-discursive-spatial forces such as *microphone*, *public space* where meetings are held, embodied affects and emotions such as *fear* (stage fright) as well as discourses of women's *promiscuity* work to limit the extent of women's attendance at meetings. To alter this assemblage, meeting organisers could consider organsing meetings locally instead of elsewhere in order to avoid long distance travel. In addition, small-group meetings which do not require the use of a microphone to reduce embarrassment and encourage participation could replace large public gatherings. In addition, education and training can be introduced to enhance women's public speaking

skills and confidence (Verba et al. 1995; Burns et al., 2001). Altering the assemblage this way may help encourage women's community participation in terms of meeting attendance.

In another example, the research findings showed that the co-implication of material forces such as *T-shirts* and *take-away* combined with *name-calling* discourses coupled with *rules* regarding the distribution of meals and t-shirts impact negatively on the participation of women in community affairs. To alter the assemblage, I turn to the non-human material forces by asking whether the material objects of '*take-away*' and '*t-shirts*' can be replaced with say *cash allowances*. This change would not be perceived by the public to result in ridiculing or name-calling. Furthermore, such an intervention will echo some of the recommendations advocated in feminist literature such education and sensitization to deal with name-calling in combination with change in the rules regarding the distribution of benefits which may play a part in enhancing women's interest and participation in community affairs.

A critical point of reflection is to ask whether the proposed interventions described above that are based on the new feminist materialist framework will make a significant difference to women's participation in household and community-based decision-making. For instance, will the introduction of a new batch of boats really enhance women's decision-making and participation in the fishing industry? Will letting women speak without a microphone or changing the distance or location of meetings make a meaningful difference to women's community participation? A typical response from a pro Deleuzian would be that we do not know yet what objects, places and bodies can do until we scrutinize them as they intra-act with other factors (Deleuze and Guattari, 1988; Feely, 2020; Fox and Alldred, 2018a; Barad, 2003, 2007; Fox and Powell, 2021). In that sense, these interventions are also experiments. It is possible that even with the introduction of such materialities (e.g., fishing boat), women may still not participate for some other material factors. For instance, the boat may not be immune to the heavy sea waves, making it difficult to steer. So, apart

from these proposed interventions and experiments, what other information do we need, to know or show that with these interventions, women's decision-making power will increase sufficiently to be meaningful?

Paying attention to the effects of material-discursive-spatio-temporal relations may allow us to produce complex but never fully complete maps of how these assemblages work (Feely, 2020). I simply cannot tell what the decision-making status of these women would be with the new interventions. The proposed interventions are likely to be fraught with unintended consequences. They are tentative and would require constant monitoring and altering to suit our needs (Feely, 2020). However, the proposed interventions may constitute a welcome development especially for women within the fishing industry. For instance, the introduction of new set of fishing boats may not necessarily result in women's increased participation in fishing as has been found in other fishery sectors of developed economies (e.g., Zhao et al., 2013), but a consideration of women in social benefits such as government's subsidized equipment may enhance their decision-making power (Walker 2001; Overå, 2003). Women's ownership of such equipment would mean that they would have much at stake to maintain such equipment is in good condition, and to ensure their continuous supply of fish (Overå, 2003). In terms of community-based participation, changing meeting locations may not necessarily enhance women's community participation, but shorter distances may intra-act well with women's domestic and childcare roles to ensure that they would at least be able to attend meetings to familiarize themselves with fishery issues. Shorter meeting distances could also mean that women may not have to sleep in hotels where their husbands may suspect them of engaging in extramarital affairs, which could result in marital breakdown. Finally, letting women speak without microphones by encouraging smaller group meetings may enhance their community participation as found in some studies (Torell et al., 2019), but such small

groups may also not have the power to influence decisions at the community and national levels (Kasimba and Lujala, 2019).

In addition, within the DeleuzoGuattarian and Baradian flat ontology, women's decision-making power and resistance are necessarily ephemeral and fluctuating (Fox and Alldred, 2021, 2018b). However, critics may question why some forces making up the fishery decision-making and practices assemblage exhibit apparent regularities and continued replications? That is, why do forces such as gender structures (norms, values and attitudes) or patriarchy continually combine with other forces, to make such enduring assemblages produce a semblance of an overarching system? Indeed, whilst some assemblages are typically fluid (molecular), there are more dense (molar) assemblages that may appear as fixed (De Lander, 2006). Some new feminist materialist scholars have argued that such dense assemblages are equally fleeting, and their persistence result from the replication of the forces making up the assemblage (e.g., Fox and Alldred, 2018b; Feely, 2020; De Lander, 2006). But why do some forces persistently replicate to create seemingly enduring assemblages? The approach fails to adequately explain such enduring assemblages. As Fox and Alldred (2017) rightly argue, understanding such replications would radically require empirical analysis to understand how dense assemblages manifest in different contexts, opening up possibilities in some contexts and closing in other contexts.

Similarly, though the role of materialities (e.g., human physical body) is crucial in understanding the gendering of fishery decisions and practices, the findings reveal that bodily materiality may not always have the triggering effect or the same weight in different assemblages. For instance, whilst bodily physical demands are obvious obstacles that some women may have to deal with to undertake specific fishery tasks, on their own, physicality did not matter much in terms of women's decision-making regarding the same roles. Women seemed to be more concerned about having much larger share of decision-making than seeking equal share of tasks with men. The conception of flat ontology however

indicates that the material-discursive assemblages have equal ontological status or relevance. This suggest that the new materialist framework may have limited applicability and explanatory power in determining the relative weights of the material, discursive, spatial and temporal factors within the assemblages. Whilst such a project may slightly contradict the propositions of the framework, it is important that the relative weights of the different forces making up an assemblage are equally determined to inform policies (Dixon-Roman, 2016). This thesis attempted to show the relative weights of some of the forces making up women's decision-making and practices through the regression analysis but would require further studies that shows how each factor making up an assemblage could be captured or measured.

#### **8.4 Study's contributions, limitations and recommendations for future research**

Theoretically, this thesis departs from the broad, essentialist and human-centric propositions, and draws on the new materialist's framework to highlight the active role of materialities. My argument has been that the outcomes of women's participation in household and community-based fishery decision-making emerge from the co-implication of material-discursive-spatio-temporal relations. This implies that it is difficult to think about women's limited decision-making as resulting from their biological deficiencies, cultural and structural processes or as a product of free choice by self-determining men and women (Charles, 2011), but rather through their co-constitutive enmeshment with other spatio-temporal forces. This understanding has profound ethical and ontological implications as I show how materialities such as heavy fishing nets, canoes, microphones, women's physical bodies and their (in)capacities, and other spatio-temporal factors (e.g. seasonality) played powerful role in co-creating different gendered outcomes.

This understanding implies that addressing gender inequality in fishery decision/practices as indicated above will require more than discourses of masculinity and femininity as has been contended by previous studies (Charles, 2011; Zhao et al., 2013; Kleiber et al., 2015,

2017; Overå, 2003). Whilst social forces may be relevant, this study reveals that ‘bodies and things are not separate, and their inter-relationship is vital to how we come to know ourselves as humans and interact with our environments’ (Hickey-Moody et al., 2016, p. 5). Thus, we cannot ignore the crucial role of the human and non-human materialities and the complexities they bring to bear in understanding gendered outcomes. For instance, if the problem of heavy fishing nets or unconducive canoes persist and we focus on dealing with gender norms and values such as ‘what men can do women can do better’ as ways to encourage/educate women to engage in fishing on an equal basis, some women may be encouraged to fish, but may have limited decision-making power as the findings of this study illustrate. The findings also reveal that while gender norms and values remain important in the gendering of fishery decisions and practices, fishery decision-making and practices is not mere phenomena of women’s oppression (see Choi, 2018). It is a fluid and contingent process marked by significant specificity of material-discursive relations.

The above findings provide important indications for the deficiencies in existing gender antidiscrimination laws and regulations such as gender quotas and family policies aimed at dealing with gender inequalities in decision-making within the fisheries and other socio-political contexts by enhancing women’s status (Charles and Bradley, 2002; Charles, 2011; Zhao et al., 2013). Whilst such policies have had some progress, studies show that even countries reputed to be the most gender-progressive in social policy provisions are some of the most sex-segregated in decision-making and practices (Charles, 2011). In Ghana, gender quotas for women in fishery leadership positions, gender sensitive training and leadership skills for both men and women have yielded limited results (Kleiber et al., 2016; Tsamenyi, 2013; Finegold et al., 2010; Harper et al. 2013). As indicated in Chapter 2, gender equality policies themselves have been largely sex-segregating (Jayachandran, 2015; Charles, 2011). As this thesis reveal and also found in other studies, in terms of community-based fishery leadership positions, such policies make provisions for women



to usually occupy female-oriented and less influential positions such as fish processors and traders' leader and secretary, whilst the men dominated the positions of president, vice president and treasurer (Mutimukuru-Maravanyika et al., 2017; Okyere-Nyako et al., 2016). Findings from this thesis shows that in addition to these structural factors, such gendered decision-making arrangements partly result from 'free choices' of the women. For instance, some women indicated that even if they are given the chance to undertake male dominated fishery activities such as offshore fishing or take up leadership positions, they would not do it. This buttresses findings from extant research that in terms of occupations, when women have the option to choose 'what they love' they are unlikely to consider jobs such as engineering and technical fields which are mostly male dominated (Charles, 2011, p. 366). Following Grosz (2004) and Barad (2003) one could ask, what is it about men that makes them dominate such physically demanding activities, and what is it about women that makes them choose what they choose?

I argue that paying attention to the role of human and non-human materialities and their co-implications with the structural and other social factors in co-creating such gendered outcomes could inform policies on how such assemblages could be intervened to address gender inequality in fisheries and other social contexts. I do not consider the material interventions as permanent solutions to gender inequality in fisheries because several unpredictable consequences may emerge from their co-implications (Feely, 2020; Fox and Alldred, 2018a). Following Lyttleton-Smith (2015, p. 249), I consider the interventions as proposed earlier as 'thinking points' rather than final solutions or outlines to deal with gender inequality in the fishery decisions and practices. Notwithstanding, attention to such material-discursive intra-actions (which has received little empirical research) provide important contexts for understanding the complexities of women's participation in decision-making and practices.

Thus, this thesis calls for the need to embrace more materially engaged research which recognizes the active role of material factors as they intra-act with other factors in co-creating different outcomes for women (and men). Aside from the small-scale fisheries, other occupations such as mining and agriculture, especially in the dominant brawn-based economies of developing countries as well as occupations such as construction that require human physical strength may provide similar accounts of gender inequalities (Chan and Ho, 2013; Bryant and Jaworski, 2011; Reeson et al., 2012). However, the important role of such materialities are often neglected in the mainstream literature. This has partly been due to the fear of going back to what feminists have been fighting for decades – biological determinism/essentialism (Van der Tuin 2011; Lemke, 2017). However, the new feminist materialist approach provides a novel account in the complexities of women's decision-making and practices through the entanglement factors described in this study. This means that in addition to implementing policies such as gender quotas, gender sensitivity training and leadership skills to address the effects of structural and other social factors, the new feminist materialist approach incorporates the effects of materialities such as the effects of human physical body, non-human objects, spatial and temporal factors. This helps not only to broaden our scope of analysis but helps to better understand the inconsistencies between the global increase in women's economic participation, global adoption of gender equality policies and frameworks, and women's limited decision-making power in both developed and developing countries. This calls for further studies in other occupations and domains of work where paying attention to such co-implications may provide better insight into gender inequality in decision-making and practices.

Methodologically, this thesis has drawn primarily on ethnographic methods using surveys, in-depth interviews and participant observations. The findings are useful as they provide empirical accounts of the different factors associated with women's participation in household and community-based fishery decision-making/practices. The ethnographic

accounts and in-depth interviews provide important contexts to capture and understand the processes through which less quantifiable experiences such as name-calling and emotions play important roles in the gendering of fishery decisions and practices. In addition, this thesis provides the empirical contexts through which the material, discursive and other spatio-temporal factors combine to create different outcomes of women's decision-making. The use of an ethnographic approach of mixed methods is a departure from most studies on women's economic participation and decision-making power, which are limited to either qualitative or quantitative methodology (Meisenbach, 2010; Creswell and Creswell, 2017). Besides, analyzing women's participation in decision-making within two different socio-spatial contexts (household and community levels) is useful in understanding the different contexts and the ensuing opportunities and obstacles they bring to women. It also shows how the new materialist framing may be applicable to different scenarios.

In addition, most studies of gender inequality in decision-making/practices focus on single-spouse accounts – either from the husbands (Hoang and Yeoh, 2011; Wilkie, 1993) or the wives' experiences (Meisenbach, 2010). Such studies do not only lack the accounts of the other spouses; their focus on single spouse's account may be affected by the performance of socially desirable behaviour from the respondent during interviews as found in some studies (Tichenor, 2005). For the current study, although the survey was based on accounts of the female fisherfolk (due to the difficulty in accessing the men who usually worked offshore), interviews were also conducted with selected male spouses to limit the problem of social desirability. Notwithstanding, future research should include responses from husbands in the survey for better comparative analysis of such inequalities. Finally, there could have been a more nuanced way to capture bodily capacities in explaining the different types of fishery activities other than strength. Notwithstanding, I found such categorization to be theoretically sound in order to distinguish without difficulty between the different capacities of the human body for the quantitative analysis.

## APPENDICES

### Appendix 1: Pearson's correlation analysis of variables included in the study (household decision-making)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Age of resp.	1																			
2 Length of marriage	.34**	1																		
3 Living with spouse	-.17**	.528**	1																	
4 Children's Age	.556**	.183**	-.156**	1																
5 Education	-.115*	.018	.067	-.073	1															
6 Spouse education	-.074	.324**	.468**	-.044	.369**	1														
7 Years of work	.558**	.205**	-.146**	.392**	-.235**	-.113*	1													
8 Income	.032	-0.037	-.011	.079	.105*	-.026	.100*	1												
9 Growing up	.044	-0.065	-.152**	.060	-0.030	-.083	.087	.061	1											
10 Financial	.213**	-.169**	-.426**	.206**	-.147**	-.353**	.126*	.133**	.080	1										
11 Gender	.026	-.100*	-.039	-.001	.002	-.115*	.033	.063	-.001	.062	1									
12 Ownership	.273**	.169**	-.040	.252**	-.013	-.037	.232**	.111*	.087	.162**	-.059	1								
13 Seasonality	-.107*	.053	.163**	-.052	-.014	.116*	-.012	-.043	-.006	-.242**	-.059	-.131**	1							
14 Financial*Strenuous	.090	-.125*	-.192**	.030	.010	-.023	.020	-.043	.044	.028	-.043	-.063	-.004	1						
15 Financial*processing	.140**	.091	.086	.100*	-.030	.046	.056	-.026	.090	.018	-.055	-.050	-.021	.144**	1					
16 Gender*Strenuous	-.033	.000	.063	-.029	.072	.073	-.045	-.024	-.035	-.039	.066	-.060	.019	.039	.047	1				
17 Gender*processing	-.042	-0.037	-0.036	-.007	.038	.077	-.032	.066	-.015	-.060	.063	.088	.008	.040	-.186**	-.050	1			
18 Ownership*Strenuous	.047	.049	.013	.003	-.019	.048	.014	.027	.048	-.056	-.059	.064	-.008	.163**	-.030	-.104*	.011	1		
19 Ownership*processing	-.017	.029	.169**	-.054	.042	.051	-.115*	.013	-.044	-.052	.084	.067	-.107*	.011	.059	.021	-.028	.013	1	
20 Decision_Power	.282**	-.111*	-.282**	.178**	.036	-.132**	.103*	.102*	.147**	.329**	.094	.220**	-.306**	.050	.054	-.104*	.073	.117*	.109*	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).      \* . Correlation is significant at the 0.05 level (2-tailed).

**Appendix 2:** Descriptive statistics of sociodemographic variables included in the study

<b>Variables</b>	<b>Frequency (N=400)</b>	<b>Percentage</b>
<b>Locations</b>		
Axim	179	44.75
Sekondi	116	29.00
Dixcove	105	26.25
<b>Age (years)</b>		
<i>Mean (SD)</i>	<i>49.08 (10.53)</i>	
<i>Minimum-Maximum</i>	<i>(18-72)</i>	
<b>Length of Marriage</b>		
<i>Mean (SD)</i>	<i>2.17 (1.17)</i>	
<i>Minimum-Maximum</i>	<i>(1-5)</i>	
<b>Living with spouse</b>		
<i>Mean (SD)</i>	<i>0.68 (0.47)</i>	
<i>Minimum-Maximum</i>	<i>(0-1)</i>	
<b>Age of children</b>		
No child	12	3.0
Less than 10years	122	30.5
11 – 20years	150	37.5
21 – 30years	98	24.5
31years +	18	4.5
<b>Level of Education</b>		
No formal Education	163	40.8
Primary	115	28.7
Junior High	105	26.3
Secondary/vocational/Tech.	16	4.0
Tertiary	1	0.3
<b>Spouse' Education</b>		
No formal Education	215	53.8
Primary	78	19.5
Junior High	75	18.8
Secondary/vocational/Tech.	31	7.8
Tertiary	1	0.3
<b>Years of work (years)</b>		
<i>Mean (SD)</i>	<i>26.12 (12.18)</i>	
<i>Minimum-Maximum</i>	<i>(1-54)</i>	
<b>Income (GH¢)</b>		
<i>Mean (SD)</i>	<i>321.63 (394.20)</i>	
<i>Minimum-Maximum</i>	<i>(0-5000)</i>	
<b>Household arrangement growing up</b>		
Father decided	74	18.5
Parent shared	232	58.0
Mother decided	79	19.8
Others decided	15	3.5

### Appendix 3: Principal component analysis of seasonality

Component Matrix <sup>a</sup>	
	Component 1
Lean season and spending of fish sale income	.744
Lean season and decision on fishing	.577
Lean season and fish for household consumption	.703
Lean season and repair of fishing equipment	.669
Lean season and repair of oven	.553
Lean season and purchase of fishing equipment	.773
Lean season and purchase of oven	.667
Lean season and fish processing decisions	.565
Lean season and market locations decisions	.557
Lean season and fish pricing at the beach	.472
Lean season and fish pricing at the market	.571
Lean season and decision on major household purchase	.719
Lean season and decision on minor household purchase	.614
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

### Appendix 4: Principal component analysis categorizing fishery activities into strenuous and processing/trading activities

Rotated Component Matrix <sup>a</sup>		
	Component	
	1	2
Fishing	<b>.672</b>	
Repair equipments (Canoe, nets, etc.)	<b>.725</b>	
Repair of fish smoking oven	<b>.610</b>	
Purchase fishing equipment	<b>.758</b>	
Purchase fish smoking oven	<b>.539</b>	
Processing of fish (smoking, frying, etc.)		<b>.741</b>
Marketing locations to sell fish		<b>.778</b>
Pricing at beach	<b>.614</b>	
Pricing at market		<b>.671</b>
Extraction Method: Principal Component Analysis.		
Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.		

**Appendix 5:** Principal component analysis categorizing fishery decisions into repair and major purchases (1), processing and trading (2), and Spending and consumption (3)

Variable	Component		
	1	2	3
Spend income decisions			<b>.537</b>
Fish to consume			<b>.520</b>
Repair fishing equipment	<b>.691</b>		
Repair fish smoking oven	<b>.697</b>		-.476
Purchase equipment	<b>.745</b>		
Purchase oven	<b>.730</b>		-.438
Processing fish		<b>.526</b>	
Market locations		<b>.729</b>	
Pricing at market		<b>.625</b>	
Extraction Method: Principal Component Analysis.			
a. 3 components extracted.			

**Appendix 6:** Descriptive statistics of gender role attitudes (household)

To what extent do you agree or disagree with the following statements?		Strongly Disagree N (%)	Disagree N (%)	Neither agree nor Disagree N (%)	Agree N (%)	Strongly Agree N (%)	Mean (Min/Max) - 1-5)	SD
i.	Both man and woman should contribute to household income	7 (1.8)	13 (3.3)	63 (15.8)	161 (40.3)	156 (39.0)	4.11	0.91
ii.	A man's job is to earn money; a woman's job is to look after the home and family	33 (8.3)	54 (13.5)	43 (10.8)	154 (38.5)	116 (29.0)	3.67	1.25
iii.	Being a housewife is just as fulfilling as working for pay	22 (5.5)	50 (12.5)	49 (12.3)	153 (38.3)	126(31.5)	3.78	1.18
iv.	A job is alright, but what most women really want is home and children	22 (5.5)	62 (15.5)	110 (27.5)	127 (31.8)	79(19.8)	3.45	1.13

# **Appendix 7: Pearson's correlation analysis of variables included in the study (Community-based fishery decision-making)**

Correlations																									
Variables	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1. Age	3.86	1.09	1																						
2. Residential Status	1.70	0.46	0.03	1																					
3. Length of stay	1.82	1.51	.235**	.751**	1																				
4. Religion	2.01	0.85	-0.08	.120*	0.00	1																			
5. Living with spouse	0.68	0.47	-.174**	0.062	0.08	0.00	1																		
6. Number of children	1.36	0.55	.183**	0.091	.176**	-.101*	0.07	1																	
7. Ages of children	1.97	0.92	.556**	-0.027	.178**	-.105*	-.156**	0.07	1																
8. Education of respo.	1.94	0.92	-.115*	-.207**	-.154**	-.179**	0.07	-.161**	-0.07	1															
9. Social class	1.53	0.63	0.01	-0.086	-0.10	-0.06	0.08	0.00	-0.07	.177**	1														
10. Years of work	3.14	1.19	.558**	0.032	.234**	-0.01	-.146**	.151**	.392**	-.235**	0.08	1													
11. Income	1.98	1.13	0.03	-0.044	0.08	-0.03	-0.01	-0.07	0.08	.105*	.135**	.100*	1												
12. Other income source	0.16	0.36	-0.03	-.129**	-0.06	0.01	-0.07	-0.06	0.00	0.087	.155**	0.013	.120*	1											
13. Own fishing equi (OFE)	0.98	0.70	.273**	0.023	.118*	0.01	-0.04	0.06	.252**	-0.013	0.09	.232**	.111*	0.01	1										
14. Gender Role Att. (GRACOM)	18.44	4.10	0.03	-0.010	0.04	0.02	-0.09	0.01	0.04	0.027	-0.01	0.072	-0.068	0.02	.141**	1									
15. Memb. of other assoc.	0.75	0.43	-.160**	-0.085	-.127*	-0.04	-0.03	-0.02	-.107*	.127*	.146**	-0.072	0.003	.136**	0.002	0.04	1								
16. Posit. in other assoc.	0.13	0.33	0.06	-.134**	-.101*	-.136**	-.109*	0.00	.135**	0.097	.162**	0.050	0.022	.110*	0.020	.109*	.218**	1							
17. Trust	3.09	1.03	.164**	-0.058	0.03	-.129**	0.02	-0.03	.121*	.100*	-0.05	0.047	0.058	-0.07	0.082	.130**	-0.053	0.03	1						
18. Qualification	2.68	0.95	.195**	-0.033	.111*	-.150**	0.08	0.07	.152**	0.082	-0.02	.124*	0.004	-0.02	0.075	.131**	-0.047	0.08	.259**	1					
19. Men/women coop.	3.13	0.78	0.06	-0.071	-0.01	-0.07	-0.08	-0.02	0.03	-0.007	0.00	0.040	0.026	-0.03	0.045	0.04	0.071	.173**	.183**	.125*	1				
20. System of recruit.	2.53	1.01	-.153**	0.028	-0.02	0.08	-0.05	0.06	-.185**	-0.005	.113*	-.109*	-0.008	0.07	-0.094	-.144**	.126*	-0.04	-.272**	-.128*	0.005	1			
21. Political interfer.	0.26	0.44	0.00	-0.033	-0.02	0.01	-0.02	-0.01	0.01	-0.020	0.07	-0.017	-0.068	0.03	-0.068	0.06	.099*	0.09	-.176**	0.075	0.009	.200**	1		
22. Freq. of meeting attend.	1.90	0.77	.154**	-.140**	-0.01	-.164**	0.04	-0.01	.159**	.109*	.184**	0.048	0.064	.109*	.174**	.239**	0.092	.364**	.288**	.273**	.109*	-.241**	0.07	1	
23. Posit. in fishery assoc.	0.06	0.24	.120*	-0.089	-0.02	-0.04	0.04	0.08	.180**	0.061	.255**	.111*	0.052	.124*	.202**	0.06	0.073	.286**	.132**	.251**	0.068	-0.091	.142**	.375**	1
**. Correlation is significant at the 0.01 level (2-tailed).							*. Correlation is significant at the 0.05 level (2-tailed).																		



## Appendix 8: Study country Ethical clearance



KWAME NKURUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
COLLEGE OF HEALTH SCIENCES

SCHOOL OF MEDICAL SCIENCES / KOMFO ANOKYE TEACHING HOSPITAL  
COMMITTEE ON HUMAN RESEARCH, PUBLICATION AND ETHICS



Our Ref: CHRPE/AP/554/19

11<sup>th</sup> September, 2019.

Mr. Moses Adjei  
Department of Sociology  
and Social Policy  
Lingnan University  
HONG KONG.

Dear Sir,

### LETTER OF APPROVAL

**Protocol Title:** *"Female Fishery Entrepreneurs: A Study of Women Participation in Fishery and Household Decision Making in Coastal Ghana."*

**Proposed Site:** *Axim and Secondi-Takoradi.*

**Sponsor:** *Hong Kong Government.*

Your submission to the Committee on Human Research, Publications and Ethics on the above-named protocol refers.

The Committee reviewed the following documents:

- Notification letters of 8<sup>th</sup> July, 2019 from the Lingnan University seeking permission to conduct the study at the Axim and Secondi-Takoradi Communities (study site) and they were approved.
- A Completed CHRPE Application Form.
- Participant Information Leaflet and Consent Form.
- Research Protocol.
- Questionnaire.

The Committee has considered the ethical merit of your submission and approved the protocol. The approval is for a fixed period of one year, beginning 11<sup>th</sup> September, 2019 to 10<sup>th</sup> September, 2020 renewable thereafter. The Committee may however, suspend or withdraw ethical approval at any time if your study is found to contravene the approved protocol.

Data gathered for the study should be used for the approved purposes only. Permission should be sought from the Committee if any amendment to the protocol or use, other than submitted, is made of your research data.

The Committee should be notified of the actual start date of the project and would expect a report on your study, annually or at the close of the project, whichever one comes first. It should also be informed of any publication arising from the study.

Thank you, Sir, for your application.

Yours faithfully,

Osomfo Prof. Sir J. W. Acheampong MD, FWACP  
**Chairman**

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Room 7 Block J, School of Medical Sciences, KNUST, University Post Office, Kumasi, Ghana  
Phone: +233 3220 63248 Mobile: +233 20 5453785 Email: chrpe.knust.kath@gmail.com / chrpe@knust.edu.gh

## Study Information and Participant consent form

**Note:** To be given to all prospective participants to decide on their participation in the study.

### Information Page

**Research Topic:** Women's Participation in Household and Community-based fishery decision-making and Practices in Coastal Ghana: A New Feminist Materialist Approach.

I am Moses Adjei, a PhD student of the Department of Sociology and Social Policy at Lingnan University, Hong Kong. This study is in partial fulfilment of the requirement for the award of Doctor of Philosophy (PhD) Degree in Sociology and Social Policy.

This study aims to provide a better understanding of the factors, which may create opportunities for or obstacles to women's participation in household and community-based fishery decision-making in Ghana's fisheries sector. The study would potentially provide useful information to various stakeholders within the fisheries sector, policy makers and practitioners.

Two main methods are being used to collect the data – questionnaires and in-depth interviews.

Your participation in this study is entirely voluntary. Respondents reserve the right to not to respond to questions they may not be comfortable with or may withdraw from participating in the course of the study without any negative consequences. This is an academic research and not affiliated to any public or commercial institution. Your responses to this questionnaire is strictly anonymous and confidential. No one will know if you participated and how you have answered the questions.

For any further information about this study, please contact researcher at [mosesadjei@LN.edu.hk](mailto:mosesadjei@LN.edu.hk) or telephone (+233556769689 - Ghana) or (+85252614851 – Hong Kong).

In case you have any concern about the conduct of this study or your rights as a research participant, please contact: Department of Sociology and Social Policy, Lingnan University, 8 Castle Peak Road, Tuen Mun, New Territories, Hong Kong SAR.

**Chief Supervisor:** Prof. Annie Hau-Nung Chan  
Email: [annchan@LN.edu.hk](mailto:annchan@LN.edu.hk)

**Co-Supervisor:** Prof. Roman David  
Email: [rdavid@LN.edu.hk](mailto:rdavid@LN.edu.hk)

## Consent form (Questionnaires)

### Statement by interviewer/researcher obtaining informed consent:

I have fully explained the purpose of the study to the prospective participant ..... and have explained in detail the procedures, potential risks and benefits, to enable the potential participant make informed decision on whether to participate or not.

Date: .....

Name: .....

### Consent by participant:

I confirm that I have understood the information provided on this study. I have had the chance to ask questions about the study and satisfied with the answers that I have been given by the researcher.

I understand that the information collected may be used in research reports and articles without using my name or contact address. I also agree that what I say may be quoted in research reports and articles without using my name.

I understand that my participation is voluntary and I have the right to decline any question that I find uncomfortable or decline the entire participation at any point in the course of the interview, without any negative implications on me.

I have received a copy of this information leaflet and consent form to keep for myself.

I agree to take part in the study!

Name: .....

Date: ..... Signature/thumb print: .....

## Survey Questionnaire

### Dear Respondent,

Thank you for accepting to participate in this study. The purpose of the study is to examine the factors relating to women's participation in household and community-based fishery decision-making. This questionnaire takes between 30-45 minutes to complete. Your participation is completely voluntary and you may decide not to respond to any of the questions and may opt out anytime. All information collected is strictly anonymous and confidential.

For any further information or clarification about this study, please contact researcher at [mosesadjei@ln.hk](mailto:mosesadjei@ln.hk) or telephone (+233241019116 - Ghana) or (+85252614851 – Hong Kong).

Thank you,

Moses Adjei  
Lingnan University

### Identification and Quality Control

Questionnaire Number: .....

First name of Respondent: .....

District: .....  
.....

Name of Community/Suburb: .....

Contact Number (if any): .....

Checked by (supervisor/Interviewer): .....

Date: .....

## Part 1a: Demographic information

Select your answer by **circling** the appropriate box as may apply

1. **Year of birth?** .....
2. **Place of birth:** [1] Indigene (*skip to 4*) [2] Migrant
3. **If migrant, how long have you been living in this community?** .....year(s)
4. **Ethnicity:** [1] Nzema [2] Ahanta [3] Fante [4] Ewe [5] Other (specify): .....
5. **What is your religion?** [1] Catholic [2] Protestant [3] Islam [4] Traditional religion [5] Do not belong [6] Other (specify): .....
6. **Marital Status**  
[1] Never married [2] Married [3] Divorced/Separated [4] Cohabiting  
[5] Widowed
7. **If married, how long have you been married?** .....year(s)
8. **If married, are you currently living with your husband?** [1] Yes [0] No
9. **Number of Children, if any?** ..... (*if None skip to 11*)
10. **Age(s) of Children** .....
11. **How many family members, including yourself live in your residence currently (Household size)?** .....
12. **What is the highest level of education you have attained?** [1] No formal education  
[2] Primary [3] O' Level/JSS [4] Secondary/Vocational/Technical  
[5] Tertiary (undergraduate, diploma) [6] Postgraduate (Diploma, Masters, PhD)
13. **If you are currently married, please state the highest level of education of your spouse?**  
[1] No formal education [2] Primary [3] O' Level/JSS  
[4] Secondary/Vocational/Technical [5] Tertiary (undergraduate, diploma)  
[6] Postgraduate (Diploma, Masters, PhD) [99] Not Applicable
14. **Who in your household has the highest level of education? State relationship to you and level attained**.....
15. **In most Ghanaian communities, there are groups which tend to be towards the top and groups which tend to be towards the bottom in terms of position in society. Below is a scale that run from bottom to top. Where would you put yourself in this scale (you can choose from 1 to 10 by circling)**

Top									
Bottom									
1	2	3	4	5	6	7	8	9	10

## 1B. Fishery related experiences and socioeconomic characteristics

16. How long have you worked as a fish trader? .....year(s)
17. In the past 3 months, your estimated monthly income from fish trade would be? GHS.....
18. Do you have any other regular source of income? [1] Yes [0] No (skip to 21)
19. If yes, what other regular economic activity do you engage in? .....
20. In the past 3 months, your estimated monthly income from the other regular source(s) would be? GHS .....
21. In the past 3 months, what is your average percentage contribution to your household income?  
 [1] No contribution [2] Less than 50% [3] Exactly 50% [4] More than 50% [5] 100%  
 [99] Cannot Tell
22. To what extent are you (*as a wife*) free to use the income that you generate?  
 [1] Not at all [2] To some extent [3] To a large extent [99] Not applicable
23. Do you own any fishing equipment?  
 [1] Yes (*Specify equipment owned*).....  
 [0] No

## PART 2A: women perceptions and attitudes towards economic roles and participation in household decision-making (gender role attitudes).

This section aims to assess respondent's perceptions and attitudes towards women economic contribution and decision-making roles.

(For each statement, kindly select the answer as it may be appropriate by circling)

24. To what extent do <u>you</u> agree with the following statements?		Strongly Disagree [1]	Disagree [2]	Neither Agree nor Disagree [3]	Agree [4]	Strongly Agree [5]
i.	Both the man and woman should contribute to household income	1	2	3	4	5
ii.	A man's job is to earn money; a woman's job is to look after the home and family	1	2	3	4	5
iii.	Being a housewife is just as fulfilling as working for pay	1	2	3	4	5
iv.	A job is alright, but what most women really want is a home and children	1	2	3	4	5
v.	A man should have the final word about decisions in the home	1	2	3	4	5

**2B. Influence of social norms and expectations on women economic role and household decision-making.**

25. To what extent do you think <u>members (men and women) in your community</u> agree with the following statements?		Strongly Disagree [1]	Disagree [2]	Neither agree nor Disagree [3]	Agree [4]	Strongly Agree [5]
i.	Both the man and woman should contribute to household income	1	2	3	4	5
ii.	A man's job is to earn money; a woman's job is to look after the home and family	1	2	3	4	5
iii.	Being a housewife is just as fulfilling as working for pay	1	2	3	4	5
iv.	A job is alright, but what most women really want is a home and children	1	2	3	4	5
v.	A man should have the final word about decisions in the home	1	2	3	4	5

**Part 3. Involvement in fishery-based household decision-making**

This indicator seeks to measure the level of women's participation in household decision-making and the various factors which may influence their participation.

(For each statement, kindly select the answer as it may be appropriate by circling).

**26. Which of these can you say are the main reasons for the division on labour in fishery? (Select as many as may apply)**

- [1] The sea god prohibits women from fishing
- [2] Fishing at sea is a dangerous activity for women
- [3] Hauling of fishing net requires male brawn
- [4] The canoe is unsafe for women to fish
- [5] Women pregnancy and nurturing roles would not permit them to fish at sea
- [6] Poor technology (e.g. use of paddles) makes fishing unfavourable for women
- [7] Women nurturing roles make them better fit for fish processing
- [8] Other (specify).....

**27. Overall, which of the following statements best describes the division of fishery-based decision-making arrangement in your household?**

- [1] I am responsible for all important household fishery-based decisions
- [2] I am responsible for more of the household fishery-based decisions than my spouse
- [3] The division of household fishery-based decision-making power is evenly distributed
- [4] My spouse/partner has more decision-making power than I do.
- [5] My spouse is responsible for all important household fishery-based decisions.
- [6] Other (specify).....

**28. In your household, who usually undertakes the following fishery activities/practices?**

No.	Statement	Me	Husband	Me and Husband	Others	Me and others	Husband and others
i.	Fishing	1	2	3	4	5	6
<b>Repair of faulty fishery equipment (iv– v)</b>							
ii.	Canoe, Fishing net, Outboard motor	1	2	3	4	5	6
iii.	Fish smoking oven	1	2	3	4	5	6
<b>Purchase of fishing equipment/materials (vi -vii)</b>							
iv.	Canoe, Fishing net Outboard motor, Fuel	1	2	3	4	5	6
v.	Fish smoking oven	1	2	3	4	5	6
vi.	Processing of fish (smoking, frying etc.)	1	2	3	4	5	6
vii.	Market locations to sell fish	1	2	3	4	5	6
viii.	Pricing of fish (at the beach)	1	2	3	4	5	6
ix.	Pricing of fish at market	1	2	3	4	5	6

**29. In your household, who usually has the final say in the following fishery decisions?**

No.	Statement	Me	Husband	Me and Husband	Others	Me and Others	Husband and others
i.	How to spend money made from the sale of fish	1	2	3	4	5	6
ii.	When to go fishing	1	2	3	4	5	6
iii.	How much of fish caught should be kept for consumption in the home	1	2	3	4	5	6
<b>Repair of faulty fishery equipment (iv– v)</b>							
iv.	Canoe, Fishing net, Outboard motor	1	2	3	4	5	6
v.	Fish smoking oven	1	2	3	4	5	6
<b>Purchase of fishing equipment/materials (vi -vii)</b>							
vi.	Canoe, Fishing net Outboard motor, Fuel	1	2	3	4	5	6
vii.	Fish smoking oven	1	2	3	4	5	6
viii.	Processing of fish (smoking, frying etc.)	1	2	3	4	5	6
ix.	Market locations to sell fish	1	2	3	4	5	6
x.	Pricing of caught fish (at the beach)	1	2	3	4	5	6
xi.	Pricing of caught fish at market	1	2	3	4	5	6
xii.	Major household purchases (cars, lands, etc.)	1	2	3	4	5	6
xiii.	Household purchases for daily needs (e.g. food)	1	2	3	4	5	6



30. If decisions are **NOT** solely made by you, **to what extent** can you influence how the following decisions are made?

No.	Statement	Not at all	To small extent	To moderate extent	To great extent	N/A
i.	How to spend money made from the sale of fish	1	2	3	4	99
ii.	When to go fishing	1	2	3	4	99
iii.	How much of fish caught should be kept for consumption in the home	1	2	3	4	99
<b>Repair of faulty fishery equipment (iv-v)</b>						
iv.	Canoe, Fishing net Outboard motor	1	2	3	4	99
v.	Fish smoking oven	1	2	3	4	99
<b>Purchase of fishing equipment/materials (vi-vii)</b>						
vi.	Canoe, Fishing net Outboard motor, Fuel	1	2	3	4	99
vii.	Fish smoking oven	1	2	3	4	99
viii.	Processing of fish (smoking, frying etc.)	1	2	3	4	99
ix.	Market locations to sell fish	1	2	3	4	99
x.	Pricing of caught fish <b>at the beach</b>	1	2	3	4	99
xi.	Pricing of caught fish at <b>market</b>	1	2	3	4	99
xii.	Major household purchases (cars, lands, etc.)	1	2	3	4	99
xiii.	Household purchases for daily needs (e.g. food)	1	2	3	4	99

31. During the **LEAN SEASON** when fishing activities are minimised, who usually decides on the following?

No.	Statement	Me	Husband	Me and Husband	Others	Me and others	Husband and others
i.	How to spend money made from the sale of fish	1	2	3	4	5	6
ii.	When to go fishing	1	2	3	4	5	6
iii.	How much of fish caught should be kept for consumption in the home	1	2	3	4	5	6
<b>Repair of faulty fishery equipment (iv – v)</b>							
iv.	Canoe, Fishing net Outboard motor	1	2	3	4	5	6
v.	Fish smoking oven	1	2	3	4	5	6
<b>Purchase of fishing equipment/materials (vi – vii)</b>							
vi.	Canoe, Fishing net Outboard motor, Fuel	1	2	3	4	5	6
vii.	Fish smoking oven	1	2	3	4	5	6
viii.	Processing of fish (smoking, frying etc.)	1	2	3	4	5	6
ix.	Market locations to sell fish	1	2	3	4	5	6
x.	Pricing of landed caught fish ( <b>at the beach</b> )	1	2	3	4	5	6

<b>xi.</b>	Pricing of caught fish at <b>market</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>xii.</b>	Major household purchases (cars, lands, etc.)	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>xiii.</b>	Household purchases for daily needs (e.g. food)	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>

**32. Have you ever bypassed your husband in taking certain fishery-related household decisions (e.g. use of income from fish sale)?** [1] Yes [0] No (skip to 34)  
 [99] Not applicable (skip to 35)

**33. If yes, which decisions have you bypassed your husband** (*List as many as may apply*) .....  
 .....  
 .....

**34. What were the main reasons for taking such decisions alone?** (*Circle as many as may apply*).

- [1] Husband not available (e.g. travelled)
- [2] I am the household financial provider hence I have the power
- [3] I have better knowledge about the issue due to my role as trader
- [4] I am more capable than my husband
- [5] Other (specify).....

**35. If no, what are your reasons?** (*Please circle as many as may apply*)

- [1] Society expects the man to always lead in decision-making
- [2] My husband is a better decision maker than me
- [3] It is a sign of respect to my husband
- [4] I do not have the knowledge about the issue
- [5] My opinion has no value to my husband
- [6] Husband provides all household needs hence must always decide
- [7] Other (specify) .....

**36. When you were growing up, what description best characterises the decision making arrangements in your household?**

- [1] My father was responsible for all important household decisions
- [2] My parents shared household decisions
- [3] My mother was responsible for all important decisions [99] Not Applicable
- [4] Other (specify): .....

**37. Do you think women should participate more in household decision-making?**

- [1] Yes
- [0] No (*explain your answer*).....

**38. Which of these do you think are the most important factors hindering women's participation in fishery-based decisions at the household level? (Select as many as possible)**

- [1] Social norms and expectations
- [2] Husbands attitudes
- [3] Women's lack of experience
- [4] Women's deliberate attempt to show respect to husbands
- [5] Other (*specify*).....

**39. What do you think can be done to enhance women participation in household decision making? .....**

#### **Part 4a: Group participation (women participation in community-based fishery decision-making).**

This section examines women participation in decision-making within the public sphere (Community-Based Fishery Management Committees (CBFMCs)).

**40. Do you know about community-based fishery management committees?**

- [1] Yes
- [0] No (*skip to 44*)

**41. Do you hold any decision-making position within the community-based fishery association?**

- [1] Yes (please state your position and duration) .....(*skip to 44*)
- [0] No

**42. If you have never run for position or do not hold any position, have you ever thought**

**about running for a position in the Community-based fishery committee?**

- [1] No, I have not thought about it (*if No, skip to 43*)
- [2] Yes, it has crossed my mind once
- [3] Yes, I have seriously considered it

**43. If yes, what is/are your motivation(s)? .....**  
**If no, what are your reasons? .....**

**Are you a member of any other social association apart from the fishery?**

- [1] Yes
- [0] No (*skip to 47*)

**46. If yes, what form of social organization(s)?** [1] Religious [2] Occupational  
 [3] Political party  
 [4] Other (specify).....

**47. Do you hold any decision-making position within this Organization?**

- [1] Yes (please state position and duration) .....
- [0] No

#### 4b. Perceptions and attitudes towards community-based fishery decision-making participation

48. To what extent do you agree with the following statements		Strongly Disagree [1]	Disagree [2]	Neither agree nor Disagree [3]	Agree [4]	Strongly Agree [5]
i.	Women are able to be good leaders as well as men	1	2	3	4	5
ii.	A woman should take good care of her own children and not worry about other people's affairs	1	2	3	4	5
iii.	On the whole, men make better community leaders (e.g. local council leaders) than women do	1	2	3	4	5
iv.	Women should have the same chance of being elected to community-based decision-making bodies (e.g. local council) as men	1	2	3	4	5
v.	Women should take increasing responsibility for leadership in solving social problems	1	2	3	4	5

#### 4C. Participation in community-based fishery decision-making (e.g. setting local fishery regulations) and factors which may influence women's participation.

49. In which of the following community-based fishery activities have you engaged in within the last 3 months? (*Select as many as may apply*).

- [1] Voted [2] Contributed money to the association  
 [3] Attended committee meetings [4] Joined boycotts  
 [5] Never participated (*Skip to 50*)  
 [6] Other (specify).....

50. Within the last 3 months, approximately how many times have you attended community-based fishery association meetings? .....

51. To what extent...

No.	Statement	Not at all [1]	To small extent [2]	To medium extent [3]	To large extent [4]	N/A [99]
i.	...do you follow community-based fishery related issues?	[1]	[2]	[3]	[4]	[99]
ii.	... would you say you are involved in making decision in the community-based fishery association?	[1]	[2]	[3]	[4]	[99]

iii.	... are you qualified to participate or run for decision-making position within the community-based fishery association?	[1]	[2]	[3]	[4]	[99]
iv.	...do you trust the community-based fishery management  Committees/association?	[1]	[2]	[3]	[4]	[99]
v.	... is it that people in your community will cooperate to try to solve a social problem problem?	[1]	[2]	[3]	[4]	[99]
vi.	...do men and women would cooperate in addressing Community-based fishery problems?	[1]	[2]	[3]	[4]	[99]
vi.	...does community-based system of recruiting participants influence your participation in the CBFMCs	[1]	[2]	[3]	[4]	[99]

**52. Do you think women should hold more community-based fishery decision-making positions?** [1] Yes [0] No

**53. Would you be more likely to participate in community meetings or run for community-based fishery decision-making position if;** Yes No No Difference

- |  |     |     |     |
|--|-----|-----|-----|
| i. You had higher level of education                 | [ ] | [ ] | [ ] |
| ii. You were more financially secured                | [ ] | [ ] | [ ] |
| iii. You had few childcare and housework roles       | [ ] | [ ] | [ ] |
| iv. There were issues you felt more passionate about | [ ] | [ ] | [ ] |
| v. Times spent at meetings were shorter              | [ ] | [ ] | [ ] |
| vi. There were respect for women's opinions          | [ ] | [ ] | [ ] |

**54. What other factor(s) would increase the likelihood for you to participate in Community-Based Fishery decision-making? .....**

### **Consent form (In-depth Interviews)**

#### **Statement by interviewer/researcher obtaining informed consent:**

I have fully explained the purpose of the study to the prospective participant ..... and have explained in detail the procedures, potential risks and benefits, to enable the potential participant make informed decision on whether to participate or not.

Date: .....

Name: .....

#### **Consent by participant:**

I confirm that I have understood the information provided on this study. I have had the chance to ask questions about the study and satisfied with the answers that I have been given by the researcher.

I understand that the information collected may be used in research reports and articles without using my name or contact address. I also agree that what I say may be quoted in research reports and articles without using my name.

I understand that my participation is voluntary and I have the right to decline any question that I find uncomfortable or decline the entire participation at any point in the course of the interview, without any negative implications on me.

I agree to my interview being audio-recorded. [1] Yes [2] No

I have received a copy of the information leaflet and consent form to keep for myself.

I agree to take part in the study!

Name: .....

Date: ..... Signature/thumb print: .....

## Interview Guide

**Dear Respondent,**

Thank you for accepting to participate in this study. The purpose of the study is to examine the factors relating to women's participation in household and community-based fishery decision-making/practices. Your participation is completely voluntary and you may decide not to respond to any of the questions and may opt out anytime. All information collected is strictly anonymous and confidential.

Please feel free to ask for clarifications on anything you do not understand.

### **Female Fisherfolk**

**Name:** .....

**Interview Number:** .....

1. Age.....
2. Level of education.....
3. Could you tell me a bit about your ethnic background? .....
4. How long have you been living in this community? .....
5. Could you tell me about your religious beliefs regarding marriage? .....
6. How did you become a fish trader? .....
- How long have you worked as a fish trader?.....
7. Where else do you engage in fish trading?.....
8. Name the fishing equipment you own and quantities .....
9. Do you have any other occupation apart from fish trade? .....
10. How are your fish trading activities organized in Axim in terms of;
  - a. Getting fish for sale.....
  - b. Pricing.....
  - c. Marketing destinations.....
  - d. Regulating your activities.....
  - e. Others.....

### **Household decision-making participation**

Please can you show me the pictures you took on the various decisions you made or participated within the last one week? (**Photo elicitation – possible questions: 1-6**)

1. What can you say about the pictures?

2. What was the decision about?
3. Was anyone involved in taking this decision?
4. If yes, which individual or group was involved?
5. What was your role in the decision-making process?
6. Any other thing to say about these pictures?
7. What is most important to you in making decisions in your relationship (examples: mutual satisfaction, equity, fairness, shared communication, etc.)
8. Could you please explain how decisions on the following are made?
  - i. How to spend money made from your fish sale?
  - ii. When to go fishing
  - iii. How much of fish caught should be kept for consumption in the home
  - iv. Repair of faulty fishery equipment (e.g. canoe, fishing net, outboard, fish smoking oven, etc.).
  - v. Purchase of fishing equipment (canoe, fishing net, outboard motor, premix fuel, fish smoking oven, etc.)
  - vi. Processing of fish (smoking, frying, etc.)
  - vii. Pricing of landed caught fish
  - viii. Attending community meetings
  - ix. Major household purchases (cars, lands, houses, etc.).
  - x. Household purchases for daily needs (e.g. food, etc.)
  - xi. Any other fishery related decision not mentioned
9. Which of the above decisions would you normally have the final say and why?
10. Which once would your spouse have a final say? Why?
11. Which once would you jointly take a decision and why?
12. Under conditions such as the **lean fishing season** or **when you have travelled**, would such decision-making arrangements as above persist? **If yes, why?**
13. If there would be changes, in which kinds of decisions and why?
14. Tell me about a time when you made a decision where you were satisfied with the process?
15. Tell me about a fishery related decision you disagreed with your spouse?
16. How do you work it out when you disagree on a decision?
17. Did you try to convince your partner of your argument? If so, how did you go about doing that?
18. Does your partner try and influence you when you disagree about a decision?
  - i. If so, what kinds of decisions and how does he influence you?
  - ii. How does it feel when your partner does or does not try to influence you?



19. Do you think that the ways your decisions are typically made are good or would you like to see changes?
20. What do you think could be challenges to your participation in fishery-based household decision-making?
21. Are such challenges peculiar to you or all other women in your community?
22. What do you think can be done to enhance women participation in household decision-making?

### **Participation in Community-based Fishery Decision-making**

23. Have you ever attended any community-based fishery association meeting?
24. If yes? What was/were the meeting(s) about – election, conflict resolution, ceremony, etc.), and what was your role?
25. If no, what are your reasons for not participating in the association meetings?
26. Have you ever encountered a challenge in your quest to **attend meetings, let your views be known at meetings** or **to contest for association position**? If yes kindly share with me.
27. Do you hold/have you held any position within the community-based fishery association?
28. If yes, what is/was your position and can you share your experiences in the association with me (e.g. roles, challenges, etc.)?
29. If no, what are your reasons for not contesting for position within the association?
30. Do you think women have equal chances as men in participating in such community-based fishery committees?
31. If yes, in what ways?
32. If no, could you share some of the kinds of decision-making activities that women may not equally participate as men and why you think women would not have same chances of participating?
33. What do you think could be done to help address such challenges?

### **Husbands/partner of Interviewed Female fisherfolk**

**Name:** .....

**Interview Number:** .....

1. Age.....
2. Level of education.....
3. Could you tell me a bit about your ethnic background? .....
4. How long have you been living in this community? .....
5. Could you tell me about your religious beliefs regarding marriage? .....

6. How long have you worked as a fisherman? .....
7. How are your fishing activities organised in terms of;
  - a. Equipment needed for fishing.....
  - b. Type of fishing nets, canoes, days of fishing, etc.....
  - c. Number of crew members and their roles.....
  - d. Sale of landed fish at the beach .....
  - e. Regulating your activities.....
  - f. Others (specify).....
8. Do you own any fishing equipment? .....
9. Name the equipment and quantities .....
10. Do you have any other occupation apart from fishing? .....

### **Household decision-making participation**

11. What is most important to you in making decisions in your relationship (examples: mutual satisfaction, equity, fairness, shared communication, etc.)
12. Could you please explain how decisions on the following are made?
  - i. How to spend money made from your fish sale?
  - ii. When to go fishing
  - iii. How much of fish caught should be kept for consumption in the home
  - iv. Repair of faulty fishery equipment (e.g., canoe, fishing net, outboard, fish smoking oven, etc.).
  - v. Purchase of fishing equipment (canoe, fishing net, outboard motor, premix fuel, fish smoking oven, etc.)
  - vi. Processing of fish (smoking, frying, etc.)
  - vii. Where to sell the fish
  - viii. Pricing of landed caught fish
  - ix. Attending community meetings
  - ix. Major household purchases (cars, lands, houses, etc.).
  - x. Household purchases for daily needs (e.g., food, etc.)
  - xi. Any other fishery related decision not mentioned
13. Which of the above decisions would you normally have the final say? why
14. Which once would your spouse have a final say? Why
15. Which once would you jointly take a decision and why?
16. Under conditions such as the **lean fishing season** or **when you have travelled**, would such decision-making arrangements as above persist? **If yes, why?**

17. If there would be changes, in which kinds of decisions and why?
18. Tell me about a time when your wife made a decision where you were satisfied with the process?
19. Tell me about a fishery related decision you disagreed with your wife?
20. How do you work it out when you disagree on a decision?
21. Did you try to convince your partner of your argument? If so, how did you go about doing that?
22. Does your partner try and influence you when you disagree about a decision?
  - iii. If so, what kinds of decisions and how does he influence you?
  - iv. How does it feel when your partner does or does not try to influence you?
23. Do you think your wife's decision-making roles is same as other women in your community? **If yes, why do you think it is so?**
24. If no, do you think that the ways decisions are typically made by your wife are good or would you like to see changes?
25. What factors do you think could limit or enhance women participation in household decisions?
26. How could the challenges be addressed?

### **Participation in Community-based Fishery Decision-making**

27. Have you ever participated in any community-based fishery association meeting?
28. If yes? What was the meeting about – election, conflict resolution, ceremony, etc.), and what was your role?
29. If no, what are your reasons for not participating in the association meeting?
30. Did your wife participate in such activities?
31. If no, what accounted for her absence?
32. Do you hold or have u held any position within the community-based fishery association?
33. If yes, what is/was your position and roles?
34. Has your wife ever discussed her plans to participate or run for position in such community-based association before?
35. If yes, how did you feel about that?
36. If no, why do you think your wife has not shown/expressed such interest?

37. Do you think men and women deserve the same opportunity to participate in such activities as in community-based fishery decision-making or running for positions?
38. If yes, in what ways?
39. If no, why do you say so?
40. Could you share some of the kinds of decisions making that women may not equally participate as men and why you think women would not have same chances of participating?
41. Do you think most men in your community share your line of thinking on the above question?
42. What do you think your wife and other women think of themselves when it comes to community-based participation in decision-making?
43. In your view, what factors could limit or enhance women participation in community-based fishery association meetings?
44. What do you think could be done to help address such challenges, if any?

#### **Couple Interviews (Household decision-making)**

1. How long have you lived as a couple? .....
2. How long have you worked together as a couple in the fishery activity? .....

**I am going to read some short stories about couples of which the [wife, husband or wife and husband together] undertake various kinds of fishery-based decisions. After reading these stories, I will ask you about how you view these couples.**

**V1.** Andrea and Steve are couples married in a coastal fishing community in Ghana. Andrea is a fish trader and an entrepreneur in small-scale fishing who owns a canoe and provides fishing equipment, food and other finances required for each fishing trip by her husband Steve with his crew members. Due to her dominant role in providing the resources and the funds used by her household for their fishing and fish trading activities, Andrea is usually the final decision maker on issues such as; how the income generated from her families fishing and fish trading activities should be used, Pricing of landed caught fish at the beach and the processed fish at the market, repair of faulty fishing equipment, how much of fish caught should be kept for consumption in the home and who should attend fishery-based community meetings.

**V2** Clara and Jack are couples married in a coastal fishing community in Ghana. Clara is a fish trader and an entrepreneur in small-scale fishing who owns a canoe and provides fishing equipment, food and other finances required for each fishing trip by her husband Steve with his crew members. Despite her dominant role in providing the resources and the funds used by her household for their fishing and fish trading activities, Jack is usually the final decision maker on issues such as; how the income generated from her families fishing and fish trading activities should be used, Pricing of landed caught fish at the beach and the processed fish at the market, repair of faulty fishing equipment, how much of

fish caught should be kept for consumption in the home and who should attend fishery-based community meetings.

**V<sub>3</sub>** Jenelle and Zouma are married couples working together in a coastal fishing community in Ghana. Jenelle and Zouma are co-owners of their fishing equipment and co-finance all their fishing and fish trading and related activities. However, Zouma is the main decision maker on issues such as; how the income generated from the family's fishing and fish trading activities should be used, Pricing of landed caught fish at the beach and the processed fish at the market, repair of faulty fishing equipment, how much of fish caught should be kept for consumption in the home and who should attend fishery-based community meetings.

**V<sub>4</sub>** Jenny and Adolf are married couples working together in a coastal fishing community in Ghana. Jenny and Adolf are co-owners of their fishing equipment and co-finance all their fishing and fish trading and related activities. However, Jenny is the main decision maker on issues such as; how the income generated from the family's fishing and fish trading activities should be used, Pricing of landed caught fish at the beach and the processed fish at the market, repair of faulty fishing equipment, how much of fish caught should be kept for consumption in the home and who should attend fishery-based community meetings.

**V<sub>5</sub>** Katie and Malcom are couples married in a coastal fishing community in Ghana. Andrea is a fish trader and Malcom is a fisherman who owns a canoe and provides fishing equipment, food and other finances required for each fishing trip by himself and his crew members. Due to his dominant role in providing the resources and the funds used by her household for their fishing and fish trading activities, Malcom is usually the final decision maker on issues such as; how the income generated from her families fishing and fish trading activities should be used, Pricing of landed caught fish at the beach and the processed fish at the market, repair of faulty fishing equipment, how much of fish caught should be kept for consumption in the home and who should attend community meetings.

**V<sub>6</sub>** Claire and Tom are married couples working together in a coastal fishing community in Ghana. Claire and Tom are co-owners of their fishing equipment and co-finance all their fishing and fish trading and related activities. Stemming from their shared contributions, each spouse may take final decisions on various fishery related decisions such as; how the income generated from the family's fishing and fish trading activities should be used, Pricing of landed caught fish at the beach and the processed fish at the market, repair of faulty fishing equipment, how much of fish caught should be kept for consumption in the home and who should attend fishery-based community meetings.

3. What do you think about the different household arrangement and decision-making patterns as in the stories (**V<sub>1</sub>-V<sub>5</sub>**).
4. How do you think members in this community would perceive the different household and their decision-making pattern?
5. Which of these household arrangements do you resemble most?
6. From story (**V<sub>6</sub>**):
  - i. Which of these decisions do you think Claire would have the final say and why?

- ii. Which of these decisions do you think Tom would have the final say and why?
7. What is most important to you in making decisions in your relationship (examples: mutual satisfaction, equity, fairness, shared communication, etc.).
8. Do both of you know how much income each brings in?
9. Are there any decisions related to **fishing, fish processing** and **trading** that wives make alone? Which ones and why?
10. What does it mean to make decisions together?
11. Which fishery-based decisions do the two of you usually make together?
12. Under what circumstances decisions of fishing, fish processing and trading would be made together or alone?
13. Are these decision-making arrangements peculiar to you or same for other couples in this community?
14. If peculiar to you, what do you think other members in this community think about your household decision-making arrangement?
15. If your decision-making arrangement is found in other household, why do you think it is so?
16. Tell me about a time when you made a decision where you were both satisfied with the process?
17. What are the most common topics of disagreement? Why
18. How do you deal with such disagreements?
19. How do you think about households where women make most fishery-based decisions to that which men dominate in same kinds of decisions?
20. Do you feel that decision-making in your relationship is typical for your generation?
21. If yes, what do you think may have caused such changes?
22. Do you think couples would ever have equal role in fishery decision-making?
23. If yes, in what ways?
24. If no, what do you think can be done to address that?
25. Anything else that you feel is important for me to know or anything else you'd like to add?

### **Community-based Decision-making participation**

- 26.** Do you think men and women deserve equal opportunity in terms of participating (e.g. voting, standing for position, attending meetings, etc.) in community-based fishery committees?
- 27.** If yes, in what ways? .....
- 28.** If no, why? .....
- 29.** What arrangement do you have as a couple in terms of participating in community-based fishery management associations?
- 30.** What do you make of your level of participation in community-based fishery management as a couple?
- 31.** Does each of you have equal chances and opportunities of participation in these community activities?
- 32.** If yes, in what ways?
- 33.** If no, which of you has a limited opportunity of participating, in which community activities?
- 34.** What factors account for the imbalance in the level of participation?
- 35.** How can this be addressed?

## Key Informants Interview Guide

### Dear Respondent,

Thank you for accepting to participate in this study. The purpose of the study is to examine the factors relating to women's participation in **community-based fishery decision-making**. Your participation is completely voluntary and you may decide not to respond to any of the questions and may opt out anytime. All information collected is strictly anonymous and confidential.

Please feel free to ask for clarifications on anything you do not understand.

### A. Community leaders

1. Name of Respondent .....
2. Position in Community .....
3. What are your roles as a leader in the regulation of fishing activities in this community? .....
4. Can you give a brief history of small-scale fishing in this community? .....
5. What is the current state of the small-scale fishery industry in this community?
6. Do you see changes in the ways that fishing and fish trading is conducted in this community?.....
7. If yes, in what ways and what could account for those changes? .....
8. Which individuals/groups are involved when taking decisions relating to fishing and fish trading in this community? .....
9. Do you think there has been changes in the ways men and women participate in community-based fishery decision-making? .....
10. If yes, in what ways and what could account for such changes?
11. What do you think could be done to ensure equal participation of men and women in community-based fishery associations?

### B. Community-based NGOs (e.g. Friends of the Nation, SNV, Daasgift Quality Foundation, etc.)

1. Name of NGO.....
2. Position of respondent.....
3. Can you give a brief history about your operations in Ghana as an NGO?.....



4. What are your roles as an NGO with regards to fishery activities in this community?.....
5. What is your relationship with fishermen, fish traders and other organizations in terms of community-based fishery decision-making? .....
6. Do you think women have equal chances as men in participating in community-based fishery associations? .....
7. If yes, in what ways? .....
8. If no, what do you think are the reasons for the inequality? .....
9. How do you think such inequalities can be resolved? .....

**C. Fishery-based governmental organization Officials (Fisheries Commission, MoFAD, etc.)**

1. Name of Respondent .....
2. Position of respondent .....
3. What are your roles as a government organization in fisheries management? ...
4. What is the state of small-scale marine fishery in the country? .....
5. Which individuals/groups are involved when taking decisions relating to fishing and fish trading? .....
6. How are such regulations enacted, disseminated and enforced at the community level?.....
7. Do you think some groups or individuals are more active or have better chances of participating than others? .....
7. What do you think about the level of participation between men and women in the community-based meetings?.....
8. Do you think both men and women have equal chances of participating or running for positions in community-based fishery decision-making? .....
9. If yes, in what ways? .....
9. If no, what could be the factors responsible for the unequal levels of participation between men and women? .....
10. How do you think such inequalities can be resolved? .....
11. What are some of the challenges you face as a government organization in organizing fishermen and fish traders for community meetings? .....
12. What are the implications of such challenges on:
  - a. Formulation of fishery policies

- b. Inclusion of local views on such policies
  - c. Compliance to fishery rules and regulations?
13. Which other groups or individuals do you collaborate with in organizing community based fishery meetings

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