The Implications of Globalization and Environmental Changes for Smallholder Peasants: The Bangladesh Case

by

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A thesis submitted in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

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Abstract

The objective of this dissertation is to examine the socio-ecological implications of environmental changes and globalization for smallholder agrarian communities in Bangladesh. Drawing on concepts from agrarian political economy, Marxist geography and environmental sociology, this dissertation first outlines Bangladesh's agrarian reform policies since the 1980s, and the resulting peculiarity of the country's development trajectory. It investigates how the reforms have led to a paradoxical situation consisting of simultaneous proletarianization and an increasing number of households taking up smallholder farming. It demonstrates that the particular positioning of the state is central to understanding this paradox. This dissertation also analyzes the ostensibly disparate processes of mounting peasant indebtedness and the phenomenal rise of microfinance institutions in Bangladesh in light of the country's broader agrarian context of agricultural commoditization, input subsidy reduction and a systematic lessening of the subsidized agricultural credit system. It argues that the spread of commercial microcredit is facilitating the process of peasant dispossession in the wake of neoliberal agrarian reforms in Bangladesh. Finally, this dissertation offers an in-depth analysis of how the intersection of markets, institutions and nature – both the immediate ecosystem and the broader climate system – shape peasant livelihoods in Bangladesh. By highlighting the adverse ecosystem effects of modern agriculture, this dissertation questions the merits of the country's recent climate change and agricultural policies, which seek to scale up the use of bio-chemical agricultural technologies in an effort to minimize the impacts of climate change on agriculture.

This dissertation advances our understanding of four different areas of study. First, it contributes to the literature on the agrarian question. Second, it enriches our understanding of rural financing and peasant indebtedness in the Global South. Third, it contributes to an emerging body of literature within the environmental sociology tradition, which seeks to analyze the combined impacts of economic development and environmental changes on resource-based communities. Fourth, this study makes an indirect contribution to the literature on Third World political ecology by highlighting how the interface between political economy and socio-ecological processes affect specific communities in developing economies.

Preface

This thesis is an original work by Manoj Misra. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board 1, Project Name: The implications of climate change and globalization on the food security of the peasantry: Evidences from rural Bangladesh, No. Pro00027356, January 9, 2012.

Dedication

To my parents, wife and son.

Acknowledgement

However clichéd it may sound, the truth is that this dissertation is a collective product of many people. I have only been able to mention a few names here, and missed out on many. This omission is not deliberate. However, any error that remains in this dissertation is exclusively mine.

First, I would like to take this opportunity to thank my research participants for sharing their valuable time with me and help me understand the complexities of peasant agriculture. I am indebted to them for not only their gracious support but also their generous hospitality. In interacting with them, I have learned a valuable lesson in life: You must not lose hope even in the face of greatest adversity.

I would also like to thank ActionAid Bangladesh, Center for Natural Resource Studies, SHARP, and South Asia Partnership for providing the logistic support in conducting the fieldwork in the first two research sites. They generously helped me connect with my research participants, provided me access to their field-level staff and allowed me to use their lodging facilities. Without their help, carrying out this research would have been very difficult.

Writing a dissertation is a challenging task. Not to mention the cycles of self-doubts, panic attacks, juggling many responsibilities and finding the time to actually write the dissertation. I am immensely thankful to my supervisor, Sourayan Mookerjea, for helping me keep my calm and stay focused. There were numerous occasions when I barged into his office without any prior appointments and wasted his time venting my frustration at my slow progress. Sourayan always gave me a patient hearing and ensured that I walked out reassured of my ability. Over the course of this long arduous journey, our relationship transcended the traditional supervisor-student boundaries and became a fertile space for more meaningful intellectual sharing. Thank you, Sourayan, for being patient and believing in me.

I gratefully acknowledge the contribution and support of Ken Caine and Dip Kapoor, the two other members of my dissertation committee. Ken was always there whenever I needed his support. He helped me locate resources, spent hours editing my writing, and gave me invaluable suggestions on how to further improve my dissertation. He was instrumental in helping me strike a balance between my academic and personal lives. I thank Dip for always reminding me that the focus of research must always be the welfare and empowerment of marginalized social groups. Dip has been a great mentor, and I benefitted immensely from his advice on publication strategy and career development. On a lighter note, I would like to thank Dip for buying me lunch during our scheduled meetings. Graduate students always appreciate the opportunity to have free lunch. I am thankful to Dr. Rob Aitken for agreeing to serve on the committee on such a short notice. I would also like to thank Dr. Marcus Taylor, my external examiner, for his encouraging comments and suggestions on my dissertations.

Dr. Gordon Laxer is one of the several people outside my dissertation committee who deserves a special mention here. Gordon agreed to take me on as his student since I first came to Canada in 2006. This association continued until he decided

to retire from active teaching. I am greatly influenced by his ideas, intellectual journey, and above all his down-to-earth demeanour. I must also thank Drs. Harvey Krahn, Karen Hughes, Sara Dorow, Kevin Haggerty, Mike Gismondi, and Debra Davidson for their support at different stages of my graduate program.

The administrative support I received from the sociology departmental staff has made my academic journey far less painful. I could always count on Nancy, Cris and Flora for any type of administrative help. Especially, I want to thank Lynn and her husband Henry here. From inviting us to dinners to giving us rides to the airport in the early morning, Lynn and Henry made sure that we did not miss our family in this faraway land.

I have been fortunate to have an excellent peer group here who are not only my good friends but also helped me became a better researcher and a person. Josh, Greg, Patrick, Paul, Barret, Anne, Ashok, Ariane, Tope and the names go on. I will always miss those informal study groups and the intellectual conversations with this amazing group of friends.

In the past eight years, Shawkat Bhai, Rafia Bhabi, Kamrul Bhai, Mila Bhabi and Nurullah became some of my closest friends here. I sincerely thank Shawkat Bhai and Rafia Bhabi for their love and affection. Their able guidance helped me adjust to the lifestyle in Edmonton. I fondly remember the innumerable lunch and dinner invitations at Kamrul Bhai's place. Nurullah has been my go-to-guy whenever I ran into any tech troubles. These people became my family away from home. Thank you!

I would like to thank the University of Alberta, the Department of Sociology, the Faculties of Graduate Studies and Research, the Social Sciences and Humanities Research Council of Canada, and several other institutions for their generous financial and administrative support. I want to thank the anonymous journal reviewers for giving me insightful comments on my dissertation chapters that I submitted for publication. Their comments helped make this dissertation read better. I also want to thank those who attended my conference presentations and gave me feedback. It is due to their collective effort that this dissertation has achieved certain intellectual rigour. I must also acknowledge the contribution of GESA participants and resource persons.

This dissertation would not have been possible without the support of my friends: Mamun, Manzoor, Mahmud, Juel, Polash, Mehedi, Zahir and so many other friends. Juel, Mehedi and Zahir were instrumental in helping me connect with the organizations and gain access to the research sites. They ensured that I was being taken care of while I was on the field. Manzoor was gracious enough to accompany me to the first research site as the area was completely unknown to me. I am lucky to have made such excellent friends who always stood by me and extended any kind of support that I needed. I also want to thank Milon here. His assistance was invaluable in carrying out the fieldwork in Panchagarh. It would take an entire dissertation to write about their contribution in the completion of my doctoral research. I am really lucky to have you guys as my friends.

I take this auspicious moment to remember my father. He was my philosopher guide. I came this far because he believed in me. He cultivated the desire in me to dream big. I wish he were alive today. Perhaps, he would have patted on my back and congratulated me. I miss him more than anyone else. I am eternally grateful to my mother. She is the most selfless and simplest person in this whole world. She endured great pains so that I could achieve my own dream. I have not seen a single day in my life when my mother sat idle. I am forever indebted to my parents. I want to thank my sisters. They were always supportive of my decisions and went to great lengths to help me pursue higher education.

I want to thank my in-laws. They truly have been my greatest well-wishers, and I always found them willing and ready whenever I needed their support. Finally, no amount of words can adequately capture my gratitude towards my wife and life partner, Arpita. Whatever success I have achieved so far, I owe it to her. It's her love, passion, companionship, sacrifice, perseverance and encouragement that kept me going. She has stood by me during my darkest and brightest days. I am perhaps not the easiest of persons to share one's life with but she stuck with me. She not only was the source of much needed oxygen in this relationship but also supplied the nutrients that helped this relation flourish. She gave me the most prized gifts of my life, my son Aum. His birth renewed my resolve to complete this dissertation. In interacting with him, I found the meaning of life.

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CHAPTER ONE

Introduction

The scope of this dissertation is to examine the socio-ecological implications of environmental changes and globalization for small agrarian communities in Bangladesh. More specifically, it offers an in-depth analysis of how, since the 1980s, agricultural liberalization, the introduction of microcredit programs and ecological degradation resulting from the adoption of modern farming technologies have affected the livelihoods of smallholder rice-growing peasants in Bangladesh. This dissertation is interdisciplinary in nature with concepts borrowed from agrarian political economy, Marxist geography and environmental sociology. In return, it also makes a novel contribution to four different areas of study. First, it highlights the trajectory of agrarian reforms in Bangladesh and its bearing on peasant agriculture. In so doing, this dissertation contributes to the literature on the agrarian question[1] – first conceived by Marx and Engels and later developed by Lenin and Kautsky – which has seen a resurgence of interest from scholars following the ascendance of neoclassical economics in the international arena. Second, it enriches our understanding of rural financing and peasant indebtedness in the Global South by offering a thorough analysis of how the use of microcredit increases debt peonage among peasant producers. Third, it contributes to an emerging body of literature within the environmental sociology tradition, which seeks to analyze the combined impacts of economic development and environmental changes on resource based communities. Fourth, this study

[1] Please see Chapter Three for a detailed discussion on the Agrarian Question. Also, see below for a summary discussion on the topic.

makes an indirect contribution to the literature on Third World political ecology by highlighting how the interface between political economy and socio-ecological processes affects specific communities in developing economies.

Bangladesh is predominantly an agrarian economy, and smallholder peasants are the backbone of its agricultural production. Although the agriculture sector's contributions to the Gross Domestic Product (GDP) have declined from 55 percent in 1976 to only 19 percent in 2010, the sector continues to employ nearly half of the country's active labour force. Of this labour force, an estimated 15.18 million households are engaged in agricultural production, and 84.38 percent of them are small peasant farms (BBS, 2010a; 2010b; GoB, 2012). Amid all the disparaging remarks against and neglect of peasant agriculture, these small peasant farms have achieved a feat that was unimaginable just a few decades ago – to attain self-sufficiency in rice[2] production. This achievement is especially remarkable considering that the country had been beset by devastating famines and starvation deaths for much of the 19th and 20th centuries. The consistent negative gap between domestic production and an ever-increasing demand for food grains made the country extensively dependent on foreign aid to feed its population, for which the former US Secretary of State Henry Kissinger once derided Bangladesh as an "international basket case" (Hitchens, 2002: 74). It would hardly be an exaggeration to claim that the food security of the country's 150 million people depends heavily upon the productive capacity of smallholder

[2] Rice is the staple diet in Bangladesh accounting for more than 70 percent of the national diet intake.

peasants. Although peasants occupy such an exalted place in Bangladesh's economy, the majority of them have been historically condemned to a life of poverty and food insecurity. A historically prevalent bias against peasant agriculture and antagonistic political regimes defined by their exploitation of poor peasantries has resulted in a process of slow peasant dispossession in Bangladesh (Bhaduri et al., 1986).

The reconfiguration of the rural economy and the radical institutional changes brought in by the return of economic orthodoxy since the 1980s have added further stimulus to this process of peasant dispossession in Bangladesh. Directly emanating from this orthodox economic thinking, the state has been reconstituted and its priorities have been redefined to expedite the expropriation of agricultural surpluses away from rural areas with a view to promoting an urban-based domestic capitalist class which will then become the principal driver of national economic growth. As part of this modernization strategy, the deliberate broadening and deepening of the capitalist market system at the upstream and downstream of farming through privatization established an institutional structure by which value created in agriculture could be swiftly transferred away to serve the interests of the urban capitalist class. Along with this privatization of the agricultural input and output market, the systematic dismantling of the public rural financing system in favour of institutional microcredit led by a pseudo private sector paved the way for peasant producers to be further exploited economically. On top of this, the destruction of the ecosystem due to the adoption of modern farming technologies rendered agriculture unsustainable – financially

and environmentally – for peasant producers. In this context, anthropogenic climate change has emerged as an existential threat to peasant livelihoods. The Intergovernmental Panel on Climate Change (IPCC) predicts that by 2050 the country stands to lose 8 and 32 percent of rice and wheat production, respectively, due to the projected temperature rise and sea-level changes (IPCC, 2007a). In the face of these twin threats from economic liberalization and climate change, the future of agriculture, national food security and peasant livelihoods stands at a crossroad. The 2007-08 food crisis, when an additional 12 million people became food insecure as a result of high food prices (Misra, 2012), served as a stark reminder of the fragile food security situation in Bangladesh and the perils of neglecting peasant agriculture.

This dissertation then undertakes an ambitious project to trace the recent trajectories of market-oriented agrarian reforms in Bangladesh. It examines the ways in which the penetration of capitalist market relations in agriculture and the socio-ecological ramifications of the adoption of modern farming technologies jeopardize peasant livelihoods. This dissertation demonstrates that although the state has reoriented its priorities away from peasant agriculture, it continues to play a pivotal role in protecting peasant livelihoods. I highlight this contradictory role of the state to drive home the point that peasant movements must not prematurely discard the state's importance in their fight to stop corporations from invading the agriculture sector. By highlighting how modern agriculture adversely affects the ecosystem, this study also questions the merits of the country's recent climate change and agricultural policies which seek to scale up the use of bio-

chemical agricultural technologies in an effort to minimize the impacts of climate change on agriculture. By deploying a political economy approach, this study problematizes the underlying rationale of this technological optimism.

The Political Economy of Peasant Agriculture in Bangladesh: A Brief Historical Background to the Present Case Study

The British Colonial Era

The root of modern poverty among peasant communities in Bangladesh may be traced back to the colonial era, specifically the promulgation of the 1793 *Permanent Settlement Act of Bengal* by the colonial British East India Company. This Act had a profound impact on the agrarian class structure in what was then known as the Bengal Presidency. The Company in its early days of rule was exclusively concerned with devising an appropriate mechanism to extract maximum revenue from agrarian classes to finance its massive bureaucratic and military operations in the Indian subcontinent. With this in mind, the Company, through the provisions of the 1793 Act, vested proprietary land rights on the *zamindars* (landlords) and abolished the erstwhile customary land rights that the peasant cultivators had enjoyed during the previous Mughal era. It also established a fixed and stable cash revenue regime on the *zamindars* irrespective of annual production fluctuations, and assigned them the right to exact rent from actual producers (Guha, 1996; Jannuzi and Peach, 1980). The *zamindars* thus effectively emerged as the intermediary between the state and the peasant subjects with tremendous juridical and executive power over the latter.

The Company made these provisions on the premise that a de facto private property right and a stable revenue regime would encourage the *zamindars* to invest in agricultural development and would ensure a smooth revenue flow for the Company (M. M. Islam, 1978). The Act did in fact help the Company achieve its revenue targets; however, the possibility of investment by the *zamindars* in agricultural development remained unrealized. Instead, this Act facilitated the exploitation of peasants by the new landlord class. It also commoditized agricultural land and created a land market for the first time in this region's history. Being equipped with their newfound legal power, the z*amindars* imposed exorbitant rents on their peasant subjects[3]. Although the Act did not physically evict peasants from their land since the Company treated land as the main source of its revenue, the Act rendered peasants' land rights insecure, which eventually led to their severe impoverishment. Moreover, the fear that the Company might auction off their *zamindari* (estate) in the event of a non-payment of revenues within the stipulated deadline, many *zamindars* forced their peasant subjects to shift to plantation agriculture and cash crop production e.g., tea, indigo, sugar, jute and cotton (Jannuzi and Peach, 1980).

This Act thus established an institutional mechanism to expropriate agricultural surplus from peasants to British colonial rulers via the *zamindars* and sowed the

[3] Although the Act fixed in perpetuity the revenue amount that the British rulers could exact from the *zamindars*, it said nothing whatsoever about the amount of rent that the *zamindars* could levy upon the actual producers. This legal loophole gave rise to a repressive regime in which the *zamindars* abused the system by imposing exorbitant rents on their peasant subjects. The 1885 Bengal Tenancy Act sought to block this loophole by banning the practice of imposing illegal cesses by the *zamindars* on their tenants, and by conferring limited tenure rights on tenure-holders. However, the Company made no substantial attempt to enforce this new provision on the *zamindars*, and the rampant abuse of the system went unchecked (Jannuzi and Peach, 1980).

seeds of a capitalist agriculture. On the other hand, the combination of cash crop production and the heavy tax burden made many peasants heavily indebted, often at usurious interest rates. Realizing that this peasant indebtedness was a drag on agricultural productivity, the colonial government instituted the Credit Co-operative Societies Act of 1904 to set up agricultural credit cooperatives. The aim was to bring down interest rates on loans by introducing competition in rural lending. Another aim of setting up cooperative societies was to teach peasants basic farming skills and thereby improve agricultural productivity. Despite the impressive horizontal expansion of the cooperative program in rural areas, it failed to bring down interest rates in rural areas (M. M. Islam, 1978; Rutherford, 2009). The purpose behind this productivity increase was not aimed at improving peasant livelihoods; rather the motive was to promote the export of food grains from the colony to the United Kingdom (M. M. Islam, 1978). From a political economy point of view, the British rule in the subcontinent and especially the institution of the 1793 Act can thus be seen as the first moment of a long history of "primitive accumulation[4]" leading to peasant dispossession in the Bengal countryside.

The Second Phase of Colonialism: The Pakistan Era

The departure of the British in 1947 and the associated Partition of India into two separate nations – India and Pakistan – saw Bangladesh becoming the eastern

[4] Marx uses the concept of primitive accumulation to describe the process by which capitalist expansion in agriculture dispossesses peasants from their means of production. Please see Chapter Three for a brief description of Marx's concept of primitive accumulation. Also, see Chapter Four for the recent use of the concept by David Harvey.

province of the latter[5]. The Pakistan Government abolished the *zamindari* system through the promulgation of the 1950 East Bengal State Acquisition and Tenancy Act. While this Act formally eliminated *zamindars* as the intermediary revenue collectors, it had no real impact on the existing landholding pattern (Jannuzi and Peach, 1980). The 1950 Act did not dismantle the control of agricultural lands by rich and large surplus peasants (*jotedars*) who previously held intermediary leases and collected rent from poor peasants on behalf of the *zamindars*. The failure to institute a meaningful land reform meant that these rich peasants emerged as the dominant class in rural areas and the fate of poor peasants remained unchanged in the post-Partition era (Bose, 1974; Jannuzi and Peach, 1980).

In the 1950s, the Pakistan Government initiated several targeted rural development programs and credit schemes aimed at improving agricultural productivity. As part of these initiatives, the government embarked on an educational and social developmental program in rural areas modelled on the Community Development concept that had gained considerable international popularity during the post-World War II era. The 1953 Village Agricultural and Industrial Development (V-AID) program was first such state-led rural development initiative in this region. The V-AID program sought to improve rural

[5] When the British left the subcontinent in 1947, they divided India into two countries: India and Pakistan. The Bengal presidency was split in half along religious lines according to a plan developed by Lord Mountbatten: the eastern half, primarily a Muslim-dominated region, was annexed to Pakistan while the western half of Bengal remained with India. The eastern half became East Pakistan, which was separated by 1200 miles from mainland Pakistan. Soon, the economic fate of East Pakistan deteriorated as West Pakistan treated the region as its colony. Economic, political and cultural exploitation by West Pakistan led to massive popular revolts and resulted in a nine-month war between East and West Pakistan in which three million Bengali civilians reportedly died. In December 1971, East Pakistan won independence and became known as Bangladesh.

livelihood by undertaking a range of measures, including infrastructure development projects, canal excavations for expanding irrigation coverage, providing knowledge of better farming techniques and increasing the literacy rate among rural people (Abedin, 2000; ESCAP, 2003). Along with the V-AID program, the government also continued to experiment with rural credit programs by setting up state-owned specialized banks. It set up the Agricultural Development Finance Corporation in 1952, followed by the Agricultural Bank of Pakistan in 1956, with an aim to offer low-interest agricultural loans to rural producers in East Pakistan (Rutherford, 2009)..

Since the primary focus of the V-AID program was to increase the flow of marketable surplus by improving agricultural efficiency, it mainly tended to the needs of middle and rich peasants (Abedin, 2000; ESCAP, 2003). Similarly, the credit experimentation program also excluded poor peasants from its ambit. Excluding small and marginal peasants from the V-AID and credit experimentation programs prevented the programs from bringing about any tangible positive changes in the peasants' livelihoods. The 1958 power grab by General Ayub Khan through a military coup prematurely ended the tenure of the V-AID program in 1961, although the government retained the credit program (Abedin, 2000; ESCAP, 2003).

The subsequent notable attempt in improving rural livelihoods came in the form of the Comilla experiment. In 1961, Akhtar Hamid Khan, a development activist, started an experiment under the banner of the Pakistan Academy for Rural

Development[6] (PARD) in the Comilla district of Bangladesh. Farmer cooperatives and self-help groups acted as the fulcrum on which Khan built his bottom-up Comilla rural development model. The program was jointly funded by the Ford Foundation and the Pakistan Government. The Comilla model was a catalyst in diffusing Green Revolution (GR) technologies among peasant producers. The small farm sizes in Bangladesh and the scarcity of capital in rural areas made the transition to modern farming technologies a challenging task for the government. For example, a mini 15-gallon capacity irrigation pump in the 1960s required at least 50 acres of command area to be economically viable, whereas the average farm size at that time was less than 2.5 acres. Even many large farmers did not possess 50 acres of agricultural land (Bose, 1974). Facing this problem, the government decided to use PARD cooperative groups to finance the dissemination of high-yielding varieties (HYV) of rice. The government distributed mechanical irrigation pumps at subsidized rental rates to PARD groups under its Thana Irrigation Program, and provided them with easy credit facilities and modern farming inputs. At the same time, the government established the Pakistan Agricultural Development Corporation[7] (PADC), a parastatal agency, to procure and distribute modern agricultural inputs and equipment throughout the country. This government support and the efficacy of the PARD model proved

[6] The PARD has been renamed as the Bangladesh Academy for Rural Development (BARD), and continues to operate in a very limited capacity.

[7] After the Independence of Bangladesh, the PADC was renamed the Bangladesh Agricultural Development Corporation and continued to enjoy a monopoly in procuring and distributing agricultural inputs throughout the country. During the reform years of the 1980s and 1990s, the BADC's operations were downsized and the government slowly opened up the sector to private traders. The BADC continues to play a pivotal role in the agricultural development of the country, but its role is greatly diminished compared to its heyday in the 1960s and 1970s.

instrumental in bringing a greater proportion of rice fields – from 13 to 79 percent– under the coverage of modern winter rice varieties in the PARD control area by 1969. Similarly, rice yields also doubled and in some cases tripled compared to traditional rice varieties. The success of the PARD in raising agricultural productivity and bringing dynamism to the village economy attracted widespread attention, and soon the model was replicated across the country (Blair, 1978; Bose, 1974; Khan, 1979).

Khan's "cooperative capitalism" model, however, took the existing social structure for granted, and did not advocate for any radical changes in the landholding pattern in rural areas. It mainly served the interests of relatively better-off landowning peasants. Both landless labourers and marginal peasants, owning less than half an acre of land, were excluded as they did not fit the criterion of "real agriculturists" who could advance the agenda of capitalist development in agriculture (Khan, 1979). Moreover, locally influential rich farmers took control of the management committees of PARD cooperatives and monopolized the use of subsidized credit. Thus, the cooperatives failed to serve the credit needs of poor peasants, and instead increased the disparity between the poor and rich peasants. As Bose observed, "[B]ecause of the interaction of the diffusion of the new technology and the existing land relations and rural social structure, the Comilla approach, by bestowing larger benefits on the relatively well-to-do farmers, may inadvertently affect the poor and very small farmers" (1974: 26).

The Bangladesh Era: From a State-Managed Economy to Market-Orientation

After the Independence of Bangladesh in 1971, the government adopted a socialist approach to reconstruct the war-ravaged country. It nationalized banks, economic institutions and the existing industries, especially jute and sugar mills. On the rural development front, it retained many components of the Comilla cooperative model and revamped it under the title of the Integrated Rural Development Program (IRDP) (Khan, 1979). The IRDP paid greater attention to expanding the use of GR technologies by supplying cheap credit to the cooperative societies and encouraging savings at the grassroots level. The government left the organizational structure of the cooperative societies intact, thus helping rich and powerful farmers perpetuate their control over these societies. This monopolization of power and control of rural resources by rich farmers pauperized small and marginal peasants and stimulated further differentiation of peasant classes (Feldman and McCarthy, 1984). On the political front, the government made no attempt to alter the rural power dynamics that was heavily tilted in favour of medium and large farmers. Instead, the ruling regime relied extensively on this class to extend its authority in the countryside (Blair, 1978). The political independence of the country thus failed to emancipate small and marginal peasants from their historical subjugation. The government's inability or rather unwillingness to institute any meaningful reform of the agrarian power structure and its overt reliance on foreign food aid subsequently contributed to the starvation deaths of 1.5 million poor rural inhabitants in the

northern districts of Bangladesh during the 1974–75 famine (Alamgir, 1980; Sen, 1981).

Another remarkable development during this 1970s post-Independence era, which would profoundly impact the livelihoods of peasant communities for generations, was the rise of home-grown non-government organizations (NGOs). Foreign Christian missionary NGOs were already operating in a limited capacity in rural areas of the country during the pre-independence era. They mostly targeted *adviasai* (indigenous) communities and focused their attention on converting them to Christianity (L. Karim, 2008). The massive destruction of the country's infrastructure during the nine-month War of Independence and the subsequent need to rehabilitate the war-torn people saw foreign aid pouring into the country. During this opportune moment, a group of activists set up NGOs to spearhead the relief and post-war rehabilitation operations. This first batch of home-grown NGOs fostered radical views, and many of their founders were motivated by Paolo Freire's "conscientization" approach to decolonize development and make meaningful positive differences in the livelihoods of the rural poor (L. Karim, 2008; Roy, 2010). Over the next few years, donor support helped these NGOs expand their services beyond relief and rehabilitation, and into the human development field, into areas including education, health and other services.

The second coming of economic liberalism in the international arena, and the 1975 military coup in which a select group of mid-level military personnel captured state power after murdering the first president of Bangladesh, Sheikh Mujibur Rahman, paved the way for market-oriented economic reforms. The

1970s was a turbulent decade marked by political assassinations and military coups and counter coups, which severely hampered economic growth. During this period, the national economy remained largely stagnant amid continued political crises. In this fluctuating politico-economic scenario, international capitalist donor organizations embraced NGOs as their preferred allies. The widespread corruption in the public sector in distributing development services, the limited reach of government agencies in rural areas and the ideological need to downsize the welfare operations of the state prompted donor organizations to channel their aid money into NGO coffers. Save for a few exceptions, most home-grown NGOs at that time abandoned their radical visions of reforming the social structure, and opted to take this market-oriented turn. The emergence of microcredit programs during this time as pioneered by the Grameen Bank and the BRAC[8], followed by the Association for Social Advancement (ASA), is a watershed moment in the history of rural development programs in Bangladesh. Microcredit programs decisively weakened the reach and ability of public rural financing programs and hastened the death of the cooperatives movement, and fundamentally altered peasant communities' access to agricultural credit, which I discuss further in Chapter Four. The 1980s was a transition decade during which time the junta government abandoned any pretence of socialism and openly embraced market-oriented economic reforms by adopting structural adjustment programs (SAPS) prescribed by the World Bank and International Monetary Fund (IMF). The SAPs

[8] When BRAC started in 1972, it was an abbreviation for the Bangladesh Rehabilitation Assistance Committee, which later stood for the Bangladesh Rural Advancement Committee. Currently, BRAC is no longer an acronym. Since its foray into the international arena, the organization has been renamed, simply, BRAC.

have far-reaching implications for peasant communities, which I thoroughly discuss throughout this dissertation, and especially in Chapters Three and Four.

Situating this Dissertation within the Broader Debate around Climate Change, Capitalism and Peasant Agriculture

The world is engulfed in a perpetual food crisis. At present, the world produces enough food to feed ten billion people, yet every day nearly one billion people go to bed chronically hungry (Akram-Lodhi, 2013). A large portion of the food we produce is diverted to fuel our cars in the form of biofuel, while another potion is used to feed industrially raised livestock to satiate the incurable and abnormally high consumption of meat in developed countries of the West (Weis, 2007). Food has come a long way over the millennia since our hunter-gatherer ancestors invented settled agriculture. In the present capitalocentric world, food is fetishized as a profitable commodity that can be bet on and used as a hedge against future corporate losses. In this globalized era, the profit rate and the market share of agribusiness corporations are soaring as the production, distribution and sales of agricultural commodities are increasingly being monopolized by a select group of agribusiness corporations. Data show that globally, six corporations control almost 85 percent of the world grain trade (Madeley, 2002). At the same time, farmers' share of the food dollar is gradually declining as farmers now receive less than one-sixth of every consumer dollar spent on food items in the United

States[9]. It is safe to assume that the same situation prevails in other countries as well.

Amid this spectacular ascendance of food as a source of corporate profit lies a grave crisis – a global smallholder crisis. As the World Bank notes, "Three of every four people in developing countries live in rural areas – 2.1 billion living on less than $2 a day and 880 million on less than $1 a day – and most depend on agriculture for their livelihood." (2007: 1) This concentration of poverty in rural agricultural belts of developing countries is hardly surprising. According to the World Development Indicators of the World Bank, the agriculture sector's contribution to the total Gross Domestic Products (GDP) of world economies is now less than five percent. Even in Africa, the poorest continent in the world, agriculture's contribution to the GDP is less than 20 percent, while in Asia it is less than eight percent[10]. The globalization of the food system, precipitated by the Agreement on Agriculture (AoA) under the World Trade Organization (WTO), has formally subjugated the economic interests and livelihood securities of smallholder peasants in developing countries under the hegemony of global food corporations.

The economic orthodoxy and individualism, as expounded by Friedrich von Hayek and Milton Friedman, and the subsequent paradigmatic shift in government thinking under the leadership of Margaret Thatcher and Ronald Reagan, signalled

[9] Data obtained from the United States Department of Agriculture's Food Dollar Series application on its website. The application can be accessed at http://www.ers.usda.gov/data-products/food-dollar-series/food-dollar-application.aspx#.UtCQi55dWcA.
[10] http://data.worldbank.org/data-catalog/world-development-indicators

a new era in which the unrestrained market was heralded as the greatest arbiter of freedom and economic prosperity. The percolation of this thinking in the realm of international development subverted the prevailing Keynesian "New Deal" type of economic development model, and forcefully imposed a drastic restructuring of the Global South economies. The economic restructuring model that the IMF imposed on Mexico after the 1982 debt crisis soon became a general prescription for all developing countries in the capitalist fold under the name of SAPs. Implementing SAPs radically curtailed the ability of the state in ensuring social welfare in the Global South. Smallholder farming communities that were already reeling from the historically low grain prices in the international market were hit hard by this restructuring (Araghi, 2009; Harvey, 2005; McMichael, 2008; Patnaik, 2008). To borrow a term from Karl Polanyi (1980), this drastic "re-embedding" of the society under the hegemony of the market, a process which was euphemistically given the name globalization, altered the terms and conditions of peasant agriculture and its relations with the market. The primacy of the market and the shrinking of state's distributive functions compelled peasants to increasingly carry out production for exchange in the market rather than for self-consumption (Akram-Lodhi and Kay, 2009b). This move to force peasants to depend on the market to secure their livelihoods is a crucial moment in the history of peasant agriculture, which is one of the nodal points of primitive accumulation in a political economy sense.

However, the process of reorganizing the production process to integrate grain-producing peasants of the Global South into the capitalist market economy started

back in the 1940s with what is now famously called the Green Revolution (Patel, 2013; Weis, 2007). For many agronomists, the Green Revolution represented a sincere attempt to raise agricultural productivity to stave off the threat of global hunger. Behind this benevolent and depoliticized discourse of productivity enhancement, there remained a more subtle political agenda. The Green Revolution was deliberately used as an effective instrument to prevent the spread of communism[11] in the Global South, and to germinate the seeds of capitalist agriculture in the newly independent countries of the former colonies. As Patel notes, "The Green Revolution was itself a moment in struggles around the creation of value, altering the balance of class forces, reconfiguring relations to the means of production, and setting the processes of production and reproduction on a new trajectory." (2013: 3) The Green Revolution seriously undermined peasant autonomy – a defining characteristic of the classic peasant classes (Shanin, 1973) – by making peasants dependent on the market for their agricultural supplies and curtailing their individual power to make cropping decisions by imposing the regime of standardized crop monoculture. This market integration and the consequent separation of peasants from land, their principal means of production, escalated the process of peasant dispossession in many Global South countries (Akram-Lodhi, 2013). Besides, modern farming has also spelled disaster for the earth's climate system. The carbon intensity of modern agriculture, which currently contributes 10 –12 percent of global anthropogenic

[11] The term Green Revolution was actually deliberately coined to pose itself as a counter to the Soviet-led Red Revolution. See Patel (2013) for a succinct analysis of the politics of the Green Revolution.

greenhouse gas (GHG) emissions (IPCC, 2007b), has deepened the "planetary rift" between humans and nature (Foster, 2012). This double squeeze – capitalist modern agriculture and anthropogenic climate change – stands to further accentuate the process of peasant dispossession around the globe.

While very few experts disagree with the gravity of the situation that climate change presents to peasant producers, there is widespread disagreement over how to analyze this threat as well as how to respond to it. In the economic mainstream, climate change's threat to global agriculture and the people dependent on it must be overcome by further intensifying the process of globalization, embracing technological innovation and greening capitalism. For instance, the World Economic Forum's (WEF) *New Vision for Agriculture*, an industry-led initiative, prescribes a blueprint to reportedly solve the global food crisis in the wake of the climate and energy crises. As stated in the New Vision:

> The New Vision for Agriculture strives to harness the power of agriculture to drive food security, environmental sustainability and economic opportunity… Building this pillar of the New Vision will require improvements across the supply chain to close yield gaps, promote efficient distribution, minimize waste and improve food access…. It will also require technological breakthroughs to help farmers adapt to the consequences of climate change, enable production and mitigate risk under increasingly difficult conditions. .. Agriculture is and must continue to be innovation-driven: Norman Borlaug's work on rust-resistant wheat brought food security to Mexico…These breakthroughs applied global scientific and technical innovation through the resourceful insight and acumen of local entrepreneurs. Achieving the New Vision requires more of these successes at a large scale … (World Economic Forum, 2010: 4-14)

As is evident from this so-called New Vision, the mainstream discourse on climate change and agriculture is narrowly focused on market mechanisms,

technological innovation, and scaling up the technologies invented during the Green Revolution (notice the emphasis on Norman Borlaug, the father of the Green Revolution). Elsewhere the WEF clarifies that a "sustainable" path to "feeding the billions" in the wake of climate change must involve the adoption of genetically modified organisms[12]. A somewhat similar interpretation can also be found in the 2007 *Agriculture for Development* agenda of the World Bank, which focuses on reducing agriculture's carbon footprint and advances smallholder farming as a way out of rural poverty. Instead of arguing for a departure from the chemical-intensive farming system, the World Bank sees greater potential in reducing agriculture's impact on the climate system through speeding up technological innovation. It says, "Agriculture's large environmental footprint can be reduced, farming systems made less vulnerable to climate change, and agriculture harnessed to deliver more environmental services. The solution is not to slow agricultural development – it is to seek [a] more sustainable production system." (World Bank, 2007: 2) Nevertheless, the World Bank, unlike the WEF, sees a potential for greater participation of the state in ensuring peasant welfare and managing the diffusion of environmentally "sustainable" technologies. It would, however, be preposterous to treat its advocacy for a "more sustainable production system" as an indication of a paradigm shift in its thinking. The World Bank clarifies,

> Revolutionary advances in biotechnology offer potentially large benefits to poor producers and poor consumers… Low public investment in biotechnology and slow progress in regulating possible environmental and

[12] http://reports.weforum.org/global-agenda-council-2012/councils/genetics/

> food safety risks have restrained the development of genetically modified organisms (GMOs) that could help the poor. (World Bank, 2007: 15)

This mainstream economic view is represented in the social sciences by the Ecological Modernization (EM) School. The EM School is primarily a Western European perspective on capitalism and climate change that emerged in the early 1980s in Germany, Netherlands and the United Kingdom. The German sociologist, Joseph Huber, who contributed heavily to the development of this school's platform, emphasized the primacy of science and technological innovation in industrial production to minimize the carbon footprint of modern capitalism. EM theorists argue that the solution to our present environmental crisis must originate from within the capitalist system by decoupling economic growth from material throughput (Mol and Sonnenfeld, 2000; Mol et al., 2013). Of late, the EM perspective has gained considerable prominence in environmental social sciences for its benign portrayal of the current environmental crises (Foster, 2012). As Foster, Clark and York note,

> Ecological modernization theorists … do not view environmental degradation as an inherent characteristic of capitalist development. They remain zealous socio-techno-optimists, believing that the forces of modernization will lead to the dematerialization of society and the decoupling of the economy from energy and material consumption, allowing human society, under capitalism, to transcend the environmental crisis. (2010: 254)

As opposed to this glossy view of the environmental crisis, theorists and activists on the left argue that only a radical reorganization of the current capitalist relations of production can save humanity from the impending environmental disaster. Nevertheless, there is a sharp, if not irreconcilable, division among radical left theorists about the framing of the current agrarian crisis in the wake of

capitalist globalization and climate change. At the risk of oversimplification, I roughly divide these theorists into two broad camps: one is a pro-peasant perspective that can be traced back to the ideas of Chayanov, the Russian agronomist; and another is a labour-centric perspective on the agrarian question[13], originally articulated by Marx and Engels and later advanced by Lenin and Kautsky (Ploeg, J. D. van der, 2013). Among the contemporary theorists, the first perspective is advanced by a wide range of scholars, principal among whom is Phillip McMichael. The food regime perspective, articulated by McMichael and Friedman, shares a great deal of convergence with the ideologies of the transnational peasant movement, La Via Campesina. The second camp, on the other hand, is mainly led by Henry Bernstein and a select group of scholars. I discuss this evolution and divergence of the agrarian question within these two camps in some detail in Chapter Three. The peasant perspective on the agrarian question postulates that the current phase of neoliberal globalization and the corporate takeover of agriculture have intensified the process of agrarian transformation. This has set in motion a general tendency towards depeasantization aided by the institutional arrangements of the Agreement on Agriculture (AoA) under the World Trade Organization (WTO) (McMichael, 2006). In this neoliberal era, agrarian transformation has transcended the

[13] The central problematic of the agrarian question was to articulate a position on the role of peasantries and agriculture in a socialist economic transition. In defining the agrarian question, Kautsky asked, "is capital, and in what ways is capital, taking hold of agriculture, revolutionising it, smashing the old forms of production and of poverty and establishing the new forms which must succeed?" (Quoted in Akram-Lodhi and Kay, 2009a: 5). The agrarian question assumed renewed importance as the debate around the role of peasantries in a globalized economy resurfaced in the international arena in the wake of globalization. For a detailed discussion on the agrarian question, please consult (Akram-Lodhi and Kay, 2010a; Akram-Lodhi and Kay, 2010b) .

boundaries of the nation state and has reached a global proportion by establishing a global food system in which peasantries are pitted against transnational agro-food corporations. When such is the case, the principal form of struggle against food system globalization must be conceived in terms of a fight between peasantries and global agro-food corporations. In McMichael's own words, "[T]he terms of the classic agrarian question have altered profoundly. These terms now situate the peasant question within the multiple impacts of transnational circuits of money, food and labour on states and their citizenry." (2009: 303) The food regime perspective sees imperialism as a key moment in the transformation of the agrarian question from a national to a global phenomenon, which is why it argues that the resistance to this struggle must also involve transnational alliances between peasantries of the Global South.

Having articulated the agrarian question in this imperialistic term, McMichael wholeheartedly embraces the position of the Via Campesina: that an appropriate response to the current food, energy and climate crises can only be achieved through promoting peasant food sovereignty. McMichael asserts, "The modernity of the food sovereignty movement, then, is not only because it addresses the deficiencies of neoliberal food security but also because it offers the means by which its methods of sustainable food production can address the food, energy and climate crises simultaneously." (2010: 172) In addition to promoting food sovereignty, McMichael echoes Via Campesina's call for a redistributive land reform in favour of the peasant to raise agricultural productivity, to care for the environment and to ensure social justice. As the Via Campesina argues, "Access

to the land by peasants has to be understood as a guarantee for survival and the valorization of their culture, the autonomy of their communities and a new vision on the preservation of natural resources for humanity and future generations." In rejecting the mainstream market-based development discourse, it goes so far as to envision an alternative proposal for agrarian reform based on democratic principles, as it adds, "[A]grarian reform also entails the democratic access to and control over all productive resources such as water, seeds, credit and training; it also entails supply management and regulated markets to ensure fair prices to those who produce food." (Quoted in Desmarais, 2007: 36) In embracing this vision for an alternative modernity founded on peasant autonomy, McMichael forcefully asserts, "The food sovereignty movement has emerged as an expression of, and potential solution to, the contradictions of agro-industrialization." (2010: 173)

Henry Bernstein, on the other hand, completely dismisses this optimism placed on the peasant as the vanguard of the fight against capitalist globalization. For him, the framing of the current agrarian question as a battle between peasants versus corporate capital borders on romanticism, originating from a misinterpretation of the reality. He in fact argues that the term peasantry is mistakenly applied to describe those who are still engaged in agriculture in the Global South. Peasantry, for him, is an obsolete category and has no historical relevance at the present time. Much like Lenin, he suggests that the majority of agricultural producers in the Global South today are petty commodity producers engaged in "generalized commodity production" for the market, and that they secure their material

reproduction through the market. This extensive market dependence contradicts the classical notion of the peasantry as autonomous subsistence family farms with limited market involvement. He suggests that the original preoccupation of the agrarian question, that is, how to ensure industrialization through the expropriation of agricultural surpluses, is no longer relevant in this era of financial mobility and foreign direct investments. The unrestricted flow of foreign capital has made industrialization in the Global South possible without necessarily going through the process of domestic capital accumulation. Moreover, for agricultural surpluses to facilitate industrialization, the existence of a robust intersectoral linkage between the two sectors is imperative. Such intersectoral linkages between agriculture and industry, he opines, are almost non-existent in the Global South. Following this, Bernstein suggests that the current agrarian transformation must be analyzed as an agrarian question of labour in which the fight is between capital and labour, rather than capital versus peasant. Having framed the agrarian question in such terms, Bernstein dismisses the argument for a redistributive land reform as demanded by McMichael and the Via Campesina. He contends that since the expropriation of agricultural surpluses to drive industrialization is no longer the preoccupation of the state, a redistributive land reform to increase productivity is irrelevant at this point. However, he is open to the idea of land reform from a social justice point of view (Bernstein, 2010; Bernstein, 2006a; Bernstein, 2006b; Bernstein, 2009).

In this context, this dissertation positions itself at the intersection of these two opposing perspectives led by McMichael and Bernstein. I agree with McMichael

that the current phase of capitalist globalization has subjugated the peasant under the gaze of corporate capital, which calls for transnational alliances and resistance movements to oppose the corporate takeover of the food system. I support the Via Campesina's proposition that an environment-friendly sustainable food system requires democratic reforms of the current agrarian order in which peasants have easy access to productive resources and greater control over their cropping decisions. Moreover, this dissertation also makes a strong case for a repositioning of the state's priorities in favour of peasant agriculture. It calls for pro-peasant policy and institutional reforms at the micro and macro levels, greater public investment in the research and development of environmentally friendly agro-technologies, and market protection and easy credit facilities for peasants to facilitate the transition away from the existing fossil-fuel based food system. However, one must also agree with Bernstein's argument that the peasantries are far from a unified social class and they have little in common with the peasantries of yesteryear. Any analysis of the agrarian question today must begin with recognizing the internal differentiation within the peasantries in which large landowning peasants subjugate and exploit small and marginal subsistence peasants. A general call for peasant emancipation without adequately highlighting this internal power imbalance is hardly desirable from a social justice point of view. Moreover, with the penetration of the capitalist market economy in rural areas, the material condition of living and the class position of small and marginal peasants are increasingly becoming aligned with those of the proletariat rather than the large peasant. That being said, it would also be erroneous to dismiss the

peasant question in favour of an agrarian question of labour as per Bernstein's suggestion. Whatever similarity there may be in the class positions of the peasant and the industrial labour, there still remain significant qualitative differences between these two in terms of how they relate to the market and reproduce themselves. In the Global South where industrial capital is incapable of fully absorbing the non-capitalist classes under its fold, the ownership of land, the principal means of production for small and marginal peasants, remains crucial to peasants' survival. This is entirely different for footloose labour whose material reproduction is completely dependent on the market. Given this centrality of land in ensuring peasant livelihoods, the Via Campesina's call for a redistributive land reform merits theoretical consideration. Whether such a reform is pragmatic or implementable in the current political conjuncture is an altogether different question.

Finally, this dissertation seeks to bring attention back to the nation state as a useful unit of analysis. Both McMichael and Bernstein have so far downplayed the importance of the nation state in shaping the trajectories of the agrarian question in search of a meta-narrative of capitalist agrarian transformation. This dissertation provides a timely reminder that the development of capitalism has a contingent history, which has taken different forms and shapes across the globe. The historical development of capitalism diverged in Western Europe where the English and the French paths took two different directions – the former choosing to dispossess peasants, with the latter opting for a more accommodative arrangement. The long history of colonialism and the differential insertion points

of nation states into the capitalist world-system make it imperative that we treat the agrarian transformation of each individual state on its own merit.

Organization of the Dissertation

The following chapters in this dissertation are independent of each other, and are written in a self-contained manner, although they are all connected. Chapter Two provides an overview of the case study methodology used in this research, the description of the three research sites, the primary and secondary data collection techniques, and the ethical issues. Chapters Three, Four, and Five have been written for specific journals, with their own literature review, theoretical framework and data analysis.

Chapter Three discusses Bangladesh's agrarian reform policies since the 1980s, and the resulting peculiarity of the country's development trajectory. It interrogates the ways in which the reforms have led to a paradoxical situation consisting of simultaneous proletarianization and an increasing number of households taking up smallholder farming. It contends that the particular positioning of the state is central to understanding this process of 'partial proletarianization' amid a huge rush towards the formation of a capitalist market economy. The argument in this chapter unfolds in four sections. The first section deals with the problematic of defining the peasantries, especially in the context of Bangladesh. The second section briefly revisits the classical and contemporary debates surrounding the peasant question in a capitalist economic system to develop a conceptual framework for the subsequent argument. The third section

details the state-initiated agricultural reforms in Bangladesh aimed at a capitalist transformation of the economy, and the ways in which these reforms pauperize peasant producers. The final section demonstrates that the process of partial proletarianization in Bangladesh can be attributed to the mediating acts of the state.

Chapter Four analyzes the ostensibly disparate processes of mounting peasant indebtedness and the phenomenal rise of microfinance institutions (MFIs) in Bangladesh in light of the country's broader agrarian context of agricultural commoditization, input subsidy reduction and a systematic lessening of the subsidized agricultural credit system. It uses Harvey's (2005) concept of accumulation by dispossession to specifically argue that the spread of commercial microcredit is facilitating the process of peasant dispossession in the wake of neoliberal agrarian reforms in Bangladesh. This chapter presents empirical evidence of how the capital accumulation model of Bangladeshi MFIs ensnares peasant producers in debt peonage.

Chapter Five offers an in-depth sociological analysis of how the intersection of markets, institutions and nature – both the immediate ecosystem and the broader climate system – shape peasant livelihoods in Bangladesh. The underlying objective of this chapter is to question the technological optimism inherent in mainstream policy discourse by highlighting the systemic vulnerabilities of smallholder peasants in Bangladesh. It posits that these vulnerabilities emanate from the specific configuration of the market, institutions and agricultural practices, and the way in which these factors, individually and collectively, act

upon environmental variables. This chapter concludes by demonstrating the need for a fundamental rethinking of and an eventual departure from the current practice of rice monoculture based on chemical dependence and an unsustainable use of natural resources.

Finally, Chapter Six contains a conclusion to this dissertation and presents an overview of the findings. It briefly revisits the theoretical divide on the left about the framing of the peasant question in modern times. It also discusses the limitations of this dissertation and future research directions. The chapter ends with a short conclusion and implication of this research. It makes passing remarks about the practically of land reform in Bangladesh. It emphasizes the need for organizing peasants and connecting them with national and transnational social movements to solidify their fight against neoliberal encroachment on agriculture.

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CHAPTER TWO
Methodology, Location and Data

Case Study Methodology

The principal objective of this dissertation is to offer an in-depth analysis of the impacts of agricultural liberalization, microcredit use, and modern farming-led ecological degradations on the livelihoods of small rice-growing peasant communities in Bangladesh since the 1980s. In so doing, it seeks to highlight the trajectories of agrarian change in Bangladesh insofar as they relate to peasant agriculture. This comprehensive scope demands an appropriate methodology that facilitates the examination of the ways in which those above-mentioned factors shape the livelihoods of peasant communities, and how, within a real life context, these communities experience, negotiate and adapt their livelihoods in response to these factors. In other words, this dissertation calls for an appropriate methodology that helps us interpret how the broader macro level changes are filtered, received and reflected at the micro level. This interpretive framework and the comprehensive scope make case study an appropriate methodology for this research. Oram, Feagin and Sjoberg define case study "as an in-depth, multifaceted investigation, using qualitative research methods, of a single phenomenon." (1991: 2) Further, as Yin notes, "A case study is an empirical enquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident." (2009: 18) The topic under enquiry in this dissertation, that is, how a multiplicity of factors intersects to influence peasant livelihoods,

requires multiple data sources and data collection techniques to provide the necessary holistic understanding. This aspect of the dissertation makes case study an appropriate methodology. The advantage of the case study methodology is that it enables the researcher "to address 'how' and 'why' questions about the real-life event, using a broad variety of empirical tools." (Yin, 2004: xii)

Research Questions

This dissertation seeks to answer three specific research questions. These are:

1. How do we explain the ostensibly contradictory trends of simultaneous capitalist transformation and the persistence of small peasants that seem to have deferred the intended course of the agrarian transformation process in Bangladesh?

2. What are the analytical linkages, if any, between the growing incident of peasant indebtedness and the spectacular expansion of Micro Finance Institutions (MFIs) in Bangladesh? If these two are indeed connected, is it separate from the broader neoliberal processes of agricultural commoditization, input subsidy reduction and a systematic lessening of the subsidized agricultural credit system?

3. How the intersection of markets, agricultural technologies and nature shape the livelihoods of smallholder peasants in Bangladesh? Furthermore, in what ways the specific configuration of markets, agricultural

technologies and peasants' agricultural practices acts upon the environment to reproduce peasant vulnerabilities?

Data Collection

I follow a two-stage data collection process for this research. The first stage involves learning from peasants about (a) the nature and extent of their involvement in the capitalist market economy and how this involvement is facilitated and/or imposed upon them; (b) how various institutions including the state, local government bodies, microcredit institutions and other organizations figure in their lives; (c) how they experience environmental changes in carrying out agriculture; and (d) the ways in which they negotiate and respond to these challenges in eking out a living. I use qualitative fieldwork to illuminate these micro-level issues.

The second stage of this research is equally important in that it involves interpreting and situating these micro-level findings within the broader political economy context of Bangladesh. This means analyzing on-the-ground impacts of globalization and environmental changes through the lenses of government policies and practices that play an important role in determining peasants' access to resources, the way they organize production and the extent of their market participation. The focus on the state as an important agent and a unit of analysis in this research may appear contradictory. This may also invite criticism on a methodological level because, theoretically, globalization erodes the state's sovereignty in decision-making and restricts its capacity to control the course of

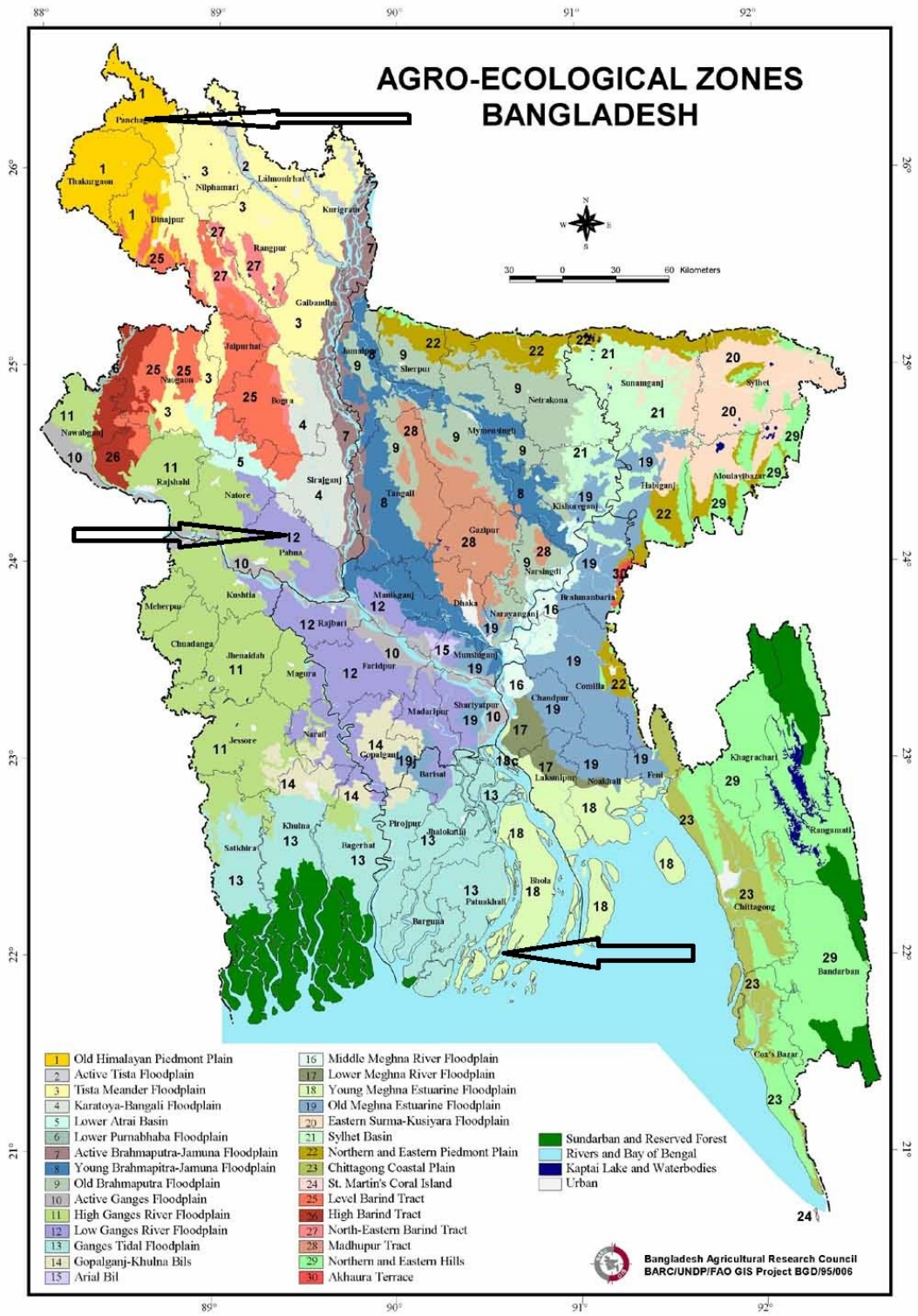
events within its borders. However, as Appadurai argues, "the epoch of the nation-state may not yet be at an end… This is a world of flows … [but also] of stable social forms … The greatest of these apparently stable objects is the nation-state." (1999: 230) Chatterjee (2008) offered another way to look at this, he reminds us of the folly of assuming that the onslaught of neoliberalism has completely decapitated the state's power to make economic decisions in postcolonial countries. As Alavi (1972) would argue, such drastic assumptions ignore the fact that postcolonial states, especially in South Asia, often enjoy "relative autonomy" in the sphere of decision-making, owing to their particular colonial pasts.

Fieldwork Location and Access

Fieldwork for this research was conducted in three Bangladeshi villages over a period of five months, from January to May 2012. The three villages are located in three different climatic zones. The first village is located in Golachipa upazilla (sub-district) in the Patuakhali district, a coastal region in the south of the country that is prone to cyclonic storms, tidal surges, flooding and saline water intrusion into agricultural lands. The village is a *char*[14] and is disconnected from the mainland by a river. It is only accessible through waterways by diesel-run trawlers that operate once in every hour during the day time. Agriculture and fisheries are the two main occupations in this area, and there is a high incidence of poverty and landlessness.

[14] The local term for a natural island that emerges through the deposition of alluvial soils carried by a river.

Figure 1 Fieldwork Location in Bangladesh



Map Source: http://www.mappery.com/map-of/Bangladesh-Agro-Ecological-zones-Map

Electricity is not available in this village; however, some villagers have recently started using solar-powered lanterns distributed by non-government organizations (NGOs) on a rent-to-own basis. Although the village has largely remained outside the reach of modernization, this has not deterred the California-based multi-national energy giant, Chevron Corporation, from setting up an oil-and-gas exploration site in this remote area. Thanks to its subterranean petroleum reserves, this village saw itself become part of the global capital accumulation juggernaut. Chevron's corporate social responsibility, aimed at building relations with the locals (some people would argue that this is a pre-emptive action to coopt the social classes), brought several NGOs to this village. The NGOs started doling out development services in the form of installing tube-wells to increase villagers' access to safe drinking water. This unexpected shower of "corporate generosity" did not last long as Chevron determined that the extraction of petroleum reserves in this village is not economically profitable. In 2011, Chevron officially abandoned its operations. The rusting tube-wells still bear witness to this village's fleeting encounter with globalization.

The second village is in Bera upazilla in the Pabna district, which is located in the central-west on the Ganges-Jamuna river basin and is prone to frequent flooding. The proximity of this village to the mighty Jamuna River has made it susceptible to frequent river erosions. The braided nature of the Jamuna River and its propensity to shift course in the rainy season lead to frequent erosion of the river banks as the water flow reaches its peak during that time. Consequently, the incidence of landlessness and poverty is high in this village as many people have

lost their residential and agricultural lands to riverbank erosion. The failure to construct a road or rail bridge over the unpredictable river has kept the entire central- and north-west region disconnected from the rest of the country. The secluded status of this region has contributed to extreme poverty and food insecurity. The 1996 construction of a 4.8 kilometer bridge over the river and an associated highway system, however, established a direct connection between this area and the capital city, Dhaka. The direct road connectivity has facilitated the development of this area, and is bringing fast changes to the economic make-up and the agrarian structure. The road network has helped a number of industries flourish, including a dairy industry. This has allowed many landed small farmers to shift to economically profitable hybrid grass production instead of rice. Some medium and large farmers have shifted to raising livestock, thus freeing up portions of their agricultural land for sharecropping. The highway has also contributed to a tremendous rise in land prices as many people are buying up land to open businesses. This is further increasing landlessness as business entrepreneurs generally target land owned by poor peasants.

The third village is in Boda upazilla in the Panchagarh district, which is situated in the upper north-west and falls in a drought-prone zone. This village is the poorest of the three. Its location in the far north of the country, and its dry climate and the sandy loam-type soil generally kept this village out of the purview of agriculture-based development until the late 1990s. Save for a sugar mill set up in the 1960s, the entire district had neither heavy industries nor employment opportunities for the local people. This district is also marked by *monga*, a

seasonal near-famine situation characterized by extreme food insecurity and starvation. Monga, which affects poor peasants and agricultural labourers, occurs every year between the transplantation and harvest of the *Aman* paddy[15]. Things started to change in the late 1990s, when a private firm, Kazi & Kazi Tea Estate Limited (KKTEL) bought a large tract of land at the northern border of the district and converted it into organic tea plantations. This area is close to Darjeeling, the globally famous tea-growing region at the foothills of the Himalayas. Following KKTEL, many other private entrepreneurs set up small-scale tea plantations in this area. Of late, a poultry industry is slowly developing. This has encouraged many peasants to shift to corn cultivation, which can be sold as poultry feed. Another development that has the potential to radically transform the economic make-up of this area is the construction of the Asian Highway. This highway is a multi-country collaboration to establish road connectivity between Asia and Europe. The Asian Highway II intersects this area on its way to crossing the Bangladesh border while entering India. Already, land prices along the highway are shooting up as many wealthy outsiders have started buying land here.

Although the primary criterion for selecting the fieldwork sites was to increase the geographical variation of the study area to capture the variety of ways ecological differences, environmental changes and agricultural practices affect peasant

[15] During this period, a lack of access to gainful employment opportunities and a decline in household food grain reserves causes poor families to cut back on their meals and often to starve. After the *Aman* paddy is transplanted, the demand for agricultural labour generally sees a significant decline. The lack of any alternative employment opportunities in this area means that labour households must take drastic measures to cope with the situation. For poor peasant households, the situation remains precarious until they can replenish their domestic grain reserves after the harvest of *Aman*

communities, the ease of gaining access to these sites also played an important role in their selection. I sought help from two NGOs, ActionAid Bangladesh and the Center for Natural Resource Studies, to gain access to the first two villages. The NGOs provided me with local resource persons and allowed me to use their rest houses during the course of the fieldwork. I obtained these logistic supports through my personal contacts in these two NGOs. These supports were not conditional at all, and I am not obliged to share my research findings with either NGO or consult with them before or after the research is published. Throughout my fieldwork, my research project remained independent and I ensured that my study participants did not associate me with the NGOs in any way. In fact, I largely excluded the beneficiaries of these NGOs from my research to avoid obtaining motivated and biased responses. At the beginning of each interview I disclosed the purpose of my research and my independence from these NGOs to clear any hidden doubt that the respondents might otherwise develop. I also informed the respondents that their participation in the research will neither bring them any benefit nor will their critical assessment of these NGOs result in any reprisal by these organizations. My reservation about the role of NGOs in Bangladesh is the reason behind this extreme precaution. In the past several decades, NGOs have emerged as the primary vehicles for global capital to penetrate the remotest corners of Bangladesh and have created a parallel structure to the state, which Choudhry and Kapoor aptly call the "NGOization" (2013) of the society. I gained access to the third village through a personal friend and

stayed at a rented government rest house. I did not seek any form of NGO support for the fieldwork in this third village.

Primary Data Collection Tools

Participant Observation and Field Notes: Participant observation is the principal means for a researcher to understand the livelihoods of "actual people in the context of their everyday lived experience" (Crang and Cook, 2007: 37). Participant observation may be described as a way of "deep hanging out" (Wogan, 2004: 129) which falls somewhere between complete "immersion" in the community and a "detached" observation (Crang and Cook, 2007: 37). The organization of the social world may not be readily apparent to an outside researcher. Moreover, participants may also make contradictory and circumstantial statements, which require careful assessment on the part of the researcher to tease out the fact from the claim. Participant observation enabled me to carefully assess both the authenticity of the claims participants were making and the circumstances under which they made those claims. One of the important benefits of participant observation was that it helped me build quick rapport with study participants. This rapport proved especially useful during awkward situations. For instance, for many respondents in these remote areas, facing a camera was an entirely new experience. Some interviewees became extremely self-conscious about their activities and how they looked in front of the camera. When I felt that the presence of the camera was obstructing spontaneity and was interrupting the flow of responses, I tactfully invited the respondents to tea stalls for an informal conversation instead of abruptly ending the entire interview.

Often, their responses and the analysis of their everyday life issues during these informal conversations were more candid than what they said during the formal sessions. Throughout the fieldwork, I engaged with local people in tea stalls and *bazaars* (market place) and over an evening walk to glean insights into rural issues there. I also maintained a diary to note my thoughts, reflections, observations and important information about study participants and local issues that cannot easily be obtained through formal interviews.

An entry from my diary:

> Today I visited Char Sharasia. It was a dramatic experience. Unlike Char Kajol, this one is totally a sandy land. We took a river ambulance (an engine boat that carries patients from shoal areas to Bera) that is managed by SHARP to reach the shoal. This shoal is located in a distinct ecology. It shares little resemblance with Bera, the main land. People living in the shoal are generally poor. Most of them are affected by river erosion. They have lost land to the River Jamuna. It is physically tasking to reach the locality in the shoal as you have to walk a long distance amid scorching heat and blazing hot sand. You would not find a single tree or a place where you could rest before you reach the locality. The biggest mistake I made was not to take a cap or an umbrella. When I came back from fieldwork, I could barely recognize myself. My clothes and shoes were full of sand. I came back at around 3:30 pm to have lunch. It takes about 30 minutes of boat ride to cross the river and another 30 minutes to reach the river from where I am staying. Mr. Manik accompanied me.
>
> The char is ecologically in a vulnerable position. Too much flood will wipe out the locality and too much heat will dry up the soil to the extent that people will not be able to do farming. Growing IRRI rice is not possible on the shoal because the land is mostly sandy. It takes lots of water to cultivate IRRI rice, and water is a scare resource in the shoal. Per *bigha* production of IRRI is 25-30 *maund* (37.5 kilograms) in other areas whereas in the shoal farmers get 5-8 *maund* of *Aman* rice per *bigha* (33 decimal). Even one woman pointed out that they had only 5-10 kilograms of paddy per *bigha* last year.
>
> Unlike farmers in the mainland, farmers in the shoal talked at length about climate change. They agreed with farmers in the mainland that rainfall has declined in recent years. They also complained of more pests. They had

> lower yields due to scarcity of water. They opined that flood has become rare in the recent years, mainly after the construction of Jamuna Bridge. They see limited flood as blessings since it carries sediment and replenishes the soil. Due to the lower incidence of flood, soil in the shoal areas is losing fertility. They have to work harder and spend more to produce paddy. They talked about declining level of ground water. This is having enormous impact on the women. It's becoming hard to get water from tube-wells. Since women are responsible for collecting water, they have to toil hard for it. Some women complained of exhaustion and physical problem due to excessive stress arising from water collection.
>
> It seems climate change will have bigger impact on the farmers of the shoal areas. Most of these farmers are not able to sell paddy in the market because per acre productivity is too low. In fact, they have to buy rice from the market at higher prices for household consumption. They however sell peanuts and other cash crops. Some of them work as labourers to meet up their daily living cost.
>
> Source: Research Journal, March 2012, Pabna.

Depth and Semi-Structured Interviews: As Miller and Crabtree note, the depth interview, "is a particular field research data-gathering process designed to generate narratives that focus on fairly specific research questions" by using "open, direct and verbal questions that elicit stories and case-oriented narratives" (2004: 188-89). The depth interview conjures up the image of a conversation as opposed to traditional interviews, which resonate more with "job interviews" or "police interviews," implying a hierarchical relation (O'Reilly, 2009: 78). In total, I conducted 64 formal depth interviews with peasant and agricultural labour households across the three research sites. During these interviews, I carried a checklist to ensure that the conversation covered topics related to this dissertation.

Conducting depth interviews and engaging with participants proved challenging at the beginning of the fieldwork. In addition to the challenges posed by my outsider

status and the cultural difference with study participants, at times it became difficult to sufficiently engage them so that they talked candidly about their problems. However, as time went by, I became more comfortable in shedding my outsider status and engaging with people in meaningful and candid conversations.

Another factor that I perceived prohibited such candidness was that their involvement in this study promised no immediate material benefits. In the first two research sites, where I was accompanied by NGO personnel, I observed that if I disclosed upfront that I did not belong to any of these NGOs or the government, participants tended to be less interested in answering my questions. However, such an upfront disclosure also generated conversations undistorted by the expectation of material gains. This significantly increased the quality of conversations and the reliability and accuracy of the information provided. Mostly, marginal peasants and landless labourers expected materials benefits, which is understandable given their level of deprivation. In some instances, the wives of male respondents stood behind and tried to modify the responses provided by their husbands, perhaps with a view to receive benefits. Some of them simply refused to believe that anyone could come to them to learn about their problems. They informed me that the only time they saw someone coming to collect their data is during the censuses. However, in the third research site I did not face such issues. This may be because I was not accompanied by any NGO personnel and gained access to that site through my personal contacts.

One interesting observation was that participants were more comfortable and spontaneous in their assessment of agricultural problems and environmental issues

when the interview was conducted near the farm. The proximity to the farm seems to have encouraged farmers to talk in-depth about these issues, as opposed to indoor locations when they seemed worried about not being able to entertain me (the guest) properly due to their poverty. Moreover, they talked at length about their poverty and food insecurity when the interview was conducted near the farm.

Figure 2 Interviewing a peasant in the field

Figure 3 Interviewing a peasant in his home

I must, however, admit that initially I faced immense problems in generating responses from female participants. First, I am an outsider in all sense of the word and second I am a male. It is possible that some of the female participants felt threatened in my presence. I also had the problem to bring myself up to their level and develop an unprejudiced understanding of their worldview. At times, I felt lost during my conversations with them. It was a painful learning process for me but I took in in my stride. That being said, often women themselves helped me out in getting out of this mess.

Another factor that prohibited uninhibited interaction with female participants is the presence of male members of the household. Due to the patriarchal nature of Bangladeshi society, some female participants felt insecure about freely expressing their views in the presence of male members. Often, I tactfully sent the

male members away but they would return after a while. Finally, I found a way around the problem. I asked my research assistants to alert me when the male member of the household leaves the house so that I could interview the female participant in absence of the male member. This strategy proved very successful in interviewing female participants.

Figure 4 Interviewing a female participant

In addition to depth interviews, I also conducted 18 semi-structured interviews with NGO professionals, staff members of local agricultural offices, elected representatives of local government bodies, environmental and women's rights activists, central leaders of left-leaning farmers and agricultural labour federations, bureaucrats and key policy-makers.

Figure 5 Interviewing an officer of a local agriculture office

Group Discussions: The combination of group discussions with depth interviews is very common in sociological research, precisely because the former provides greater breadth while the latter reveals deeper insights (Morgan, 2004). Group discussions refer to "setting up a situation in which groups of people meet to discuss their experiences and thoughts about specific topics with the researcher and with each other" (Crang and Cook, 2007: 90). In total, I organized six group discussions in the three research sites. Of these six, three were with male participants, while the rest were with female participants. The initial number of participants in group discussions varied from six to eight. However, in some cases, a few more people joined in uninvited during the course of the discussions. Group discussions with male participants were held on the farm, while female participants preferred their homesteads as the location for discussions.

Figure 6 A focus group with male farmers

Policy Documents and Secondary Data

Yin points out, "Except for studies of preliterate societies, documentary information is likely to be relevant to every case study topic." (2009: 101) In this research, I used a variety of secondary sources including government policy documents and censuses to complement the data gathered from primary sources. This secondary data helped me to construct a background to this case study and situate findings of the fieldwork within the broader narratives of agrarian transformation in Bangladesh. I relied upon agricultural censuses administered by the Bangladesh Bureau of Statistics (BBS) to gather national level data on agricultural farm and labour households, crop statistics and other related agricultural data. In addition, I also used the periodic labour force surveys conducted by the BBS for employment and labour data. For authoritative data

sources on the size and other aspects of the microcredit sector in Bangladesh, I relied on surveys and reports published by the Bangladesh Microcredit Regulatory Authority and the Credit and Development Forum, a national association for microcredit institutions in Bangladesh. Besides these above-mentioned sources, I used data published by relevant Bangladesh Government ministries – the Ministry of Agriculture, the Ministry of Environment and Forests, and the Ministry of Finance – and international organizations such as the World Bank, the Food and Agriculture Organization and the Intergovernmental Panel on Climate Change. Among the national policy documents I used, the most prominent are the 2009 and 1999 versions of the *National Agriculture Policy*, the 2005 *National Adaptation Programme of Action (NAPA),* the 2005 poverty reduction strategy paper (PRSP) entitled *Unlocking the Potential: National Strategy for Accelerated Poverty Reduction (*NSAPR-I), the 2008 second PRSP entitled *Moving Ahead: National Strategy for Accelerated Poverty Reduction II (NSAPR-II*), the 2009 *Bangladesh Climate Change Strategy and Action Plan*, and related editions of the five-year plan documents.

Ethics

Since this research involves human subjects, I obtained ethics approval from the University of Alberta's Research Ethics Office. In order to ensure informed consent, I personally briefed every participant about the purpose of this research, the nature of their involvement and their right to withdraw at any time during the research process. Since the literacy rate is very low among rural peasants in Bangladesh, I asked only for oral consent. Oral consent is a common practice for

research conducted in rural areas of the Global South (Tindana et al., 2006). I recruited three research assistants to help me conduct the fieldwork and transcribe the recorded interviews, and provided them standard ethics training beforehand.

One of the main ethical dilemmas I face in conducting studies involving disadvantaged populations is: For whose benefit am I conducting this study? Many researchers have conducted such studies, but it seems that those studies were mostly beneficial for the researchers without generating any direct benefits for the participants. Unfortunately, I may be accused of the same allegation. My only consolation is that social research has the potential to empower a community if it appropriately represents participants' voices and concerns. To this end, as far as possible, I involved participants during the data collection process and stayed true to my analysis and representation of their situation. I planned to share my findings with my participants before the publication of this dissertation; however, the violent and tumultuous political situation prevailing in the country for the past several months was a deterrent. Nonetheless, I aim to make my findings easily accessible to peasant communities by translating relevant portions of this research into Bengali. Finally, as a token of my appreciation for their support, I made every attempt to use my resources and networks to help my study participants – with advice or by connecting them with appropriate resource persons whenever they brought any solvable problem to my attention.

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CHAPTER THREE

Are Peasants Dead? Agrarian Reforms, the State and Partial Proletarianization in Bangladesh[16]

Introduction

In the late twentieth century, some theorists pronounced the demise of peasantries as if it were a foregone conclusion. Noted historian Eric Hobsbawm even penned an obituary, saying, 'The most dramatic and far reaching social change of the second half of this century [twentieth], and the one which cuts us off forever from the world of the past, is the death of the peasantry' (Hobsbawm 1994: 289). In reality, peasants still constitute a large section of the population in the Global South (Desmarais 2007; McMichael 2008; Ploeg, J D van der 2008). In Bangladesh, an estimated 15.18 million farm holdings are engaged in agricultural production, and 84.38 per cent of them are small peasant farms (Bangladesh Bureau of Statistics [BBS] 2008a). In the 1980s, the country signed onto structural adjustment programs (SAPs) and attendant agrarian reforms to promote industrialization and to reduce the dependence on agriculture for economic growth. When Bangladesh received the first instalment of a structural adjustment facility (SAF) loan from the International Monetary Fund (IMF) in 1986–87, agriculture's contribution to gross domestic product (GDP) was 41.77 per cent, which dropped by half in the following two and a half decades (Government of Bangladesh [GoB] 1998; 2010). The reforms dispossessed a vast number of

[16] This paper has been written for the *Journal of Agrarian Change*. It follows the house style of the journal, including the spelling, referencing, and other formatting issues. It is currently at the revise-and-resubmit stage. This version contains the revisions as suggested by the two anonymous reviewers and the journal editor.

peasants from the land and transformed many of them into agricultural labourers. This development is consistent with the argument advanced by some agrarian reform theorists that capitalist advances in agriculture leads to proletarianization (see Araghi 2009; Bernstein 2006a; 2006b; Kautsky 1988; Lenin 1967; Marx 1977). Ironically, the reforms also coincided with an increasing number of households taking up smallholder farming for their survival. Three decades of neoliberal economic reforms have failed to open up enough gainful employment opportunities to absorb the surplus rural population, despite being successful in carving out a vibrant space for the expansion of a market economy in the upstream and downstream of farming. How do we explain the ostensibly contradictory trends of simultaneous capitalist transformation and the persistence of small peasants that seem to have deferred the intended course of the agrarian transformation process?

Admittedly, the question is too big to answer in its entirety in the limited scope of this paper. Instead, I aim to highlight the peculiarity of the present trajectories of development in Bangladesh where the state is caught up in a double bind. I argue that agrarian reform policies in Bangladesh have not merely polarized the peasantries, but also paradoxically helped increase the size of the small peasant population while promoting a market-based economy. Drawing on recent theories on the role of the state, especially in postcolonial societies, I contend that the particular positioning of the state is central to understanding this development of what Byres (1981) calls 'partial proletarianization.' I demonstrate that while the state apparatus actively sides with capitalist classes in negotiating the

advancement of market principles in the predominantly peasant agrarian landscape of Bangladesh, it nevertheless has saved peasants from mass dispossession by maintaining some form of protectionist policies.

Outline of the Paper

My argument unfolds in four sections. First, I deal with the problematic of defining the peasantries, especially in the context of Bangladesh. Second, in order to develop a conceptual framework for my subsequent argument, I briefly revisit the classical and contemporary debates surrounding the 'peasant question' in a capitalist economic system. Third, I discuss the state-initiated agricultural reforms in Bangladesh, and the ways in which these reforms pauperize small peasants by expanding the capitalist market system. I refer to the recent agricultural census (BBS 2010a) data to show that the reforms coincide with a rise in both agricultural labour and small peasant households. Finally, I demonstrate that the process of partial proletarianization in Bangladesh can be attributed to the mediating acts of the state.

The Definitional Problematic

A quick note on the operationalization of the concept of 'the peasantry' in this paper is pertinent here. The early definition of peasantries came from Engels who, in the context of nineteenth century Europe, defined a small peasant as 'the owner or tenant – particularly the former – of a patch of land no bigger, as a rule, than he and his family can till, and no smaller than can sustain the family' (Engels 2001: 8). Shanin offers a more elaborate and systematic definition in which 'the

peasantry' is seen as 'a process, a historical entity within the broader framework of society yet with a structure, consistency and momentum of its own: emerging, representing at some stage the prevailing modes of social organisation, disintegrating, re-emerging at times' (1973: 64). Such an essentialist definition is problematic precisely because, as Mintz argues, '[T]he peasant sector *in toto,* are not homogeneous, and those within them differ in status, wealth and otherwise' (1973: 96). Furthermore, as Meillassoux (1973) notes, a definition of 'the peasantry' must be consistent with the development of productive forces of a society at a particular historical juncture rather than freezing it in time.

For this paper, in order to maintain consistency with the official data source for historical comparison purposes, I follow the Bangladesh Bureau of Statistics' (BBS) (2010a) descriptive categorization of farm holdings as a proxy for the different categories of peasantries. The BBS defines a small farm holding as a household that operates no less than 0.5 acre and no more than 2.49 acres of cultivable land. Any household with a land area below 0.5 acre is defined as a non-farm holding as the land may be too small to support proper agricultural production. A medium farm holding is one which has a cultivable land area between 2.50 to 7.49 acres of land. Anything larger falls under the category of large farm holdings. Throughout this paper, I use the first category to refer to small peasant households.

I must, however, admit that this adoption of the BBS categories has several shortcomings. From an analytical viewpoint, this broad categorization fails to capture the nuances of what differentiates a peasant from a capitalist farmer or a

rural proletariat. For example, the defining characteristic of a small peasant household ought to be the ability to source the major share of its subsistence needs from the land, using its own household labour in an average production year. The BBS categories are indifferent to this defining criterion. Moreover, these landholding ranges of the categories are not synonymous with land ownership types as the land may be self-owned, rented, or any combination of the two. One does not have to be an expert to realize that the social condition of living on an owner-operated farm unit will be significantly different from that of living on a small tenant holding. One major caveat of the small farm category is that it includes both marginal and small peasant households within the same category. It is more than likely that those households at the lower end of the small farm range are marginal peasants who, in addition to farming their own plots, may sell their labour to other farmers for their subsistence. Their class position may resemble that of rural proletariats. Their use of agricultural machinery may be minimal, while their market participation is likely to take the form of distress selling. On the other hand, those households at the upper range of the category may be relatively better off and may hire agricultural labour in addition to their own household labour. Their class position may have more in common with petty commodity producers. If the household size is relatively small (less than five) and if the land is self-owned, peasants at the upper range may be able to generate a sizeable surplus to sell in the market and expand their asset base. These differences notwithstanding, households at both ends of the range must rely on the market for their agricultural input supplies and to secure their other basic

livelihood needs. The medium and large farm households, as categorized by the BBS, are more likely to share the characteristics of capitalist farmers. Before moving on to the next section, let us not discount the land productivity and household size factors in categorizing farm households. For example, a medium peasant who owns land in an arid, semi-arid or hilly area may fare worse than a small farmer. Moreover, if the land is jointly held by several families within the household, especially when the family patriarch is still alive and decides to postpone the division of land among his adult progenies, a medium peasant's per capita return from the land may be considerably lower.

Peasants, Development and the State in the Global South

Scholarly interest in a systematic study of 'the peasantry' dates back to Karl Marx. For Marx (1977 [1867]), the English enclosure of the commons in the late fifteenth and early sixteenth centuries marks the classical form of mass peasant dispossession and the embryonic phase of agrarian capitalist development. Marx's approach to the study of 'the peasantry' hinges on his deployment of the concept of 'so-called primitive accumulation.' In this process, landlords and rural capitalist classes used violent means to expropriate agricultural land – the principal means of peasant production – from peasant producers. This process led to peasants' transformation as industrial proletariats. Compared to Marx, Frederick Engels, in his 1894 essay *The Peasant Question in France and Germany*, was less candid about the demise of peasantries, as empirical evidence suggested that they constituted the 'most important' and 'essential factors' of the population in contemporary Western Europe. Nonetheless, conceptually, Engels

supported Marx's assertion that the possession of the 'means of production' by small peasants at that time only contributed to their prolonged 'servitude.' He agreed with Marx's prediction that the social existence of small peasants was doomed since 'capitalist large-scale production is absolutely sure to run over their important antiquated system of small production as a train runs over a pushcart' (2001 [1894]: 14-28). Later, Kautsky and Lenin further advanced Marx's theory of primitive accumulation and argued that by creating a greater need for wage labour, industrialization in the late nineteenth century had largely commodified agricultural production in Western Europe and Russia and, in so doing, eroded the material basis of the peasant economy. Kautsky and Lenin contended that the intensification of industrialization and the penetration of capital in the rural economy had a two-pronged effect on peasantries: it transformed large peasants into surplus producers for capital, and small peasants into wage labourers since they were unable to compete with the market forces (Akram-Lodhi and Kay 2009). It is, however, important to note that, as Akram-Lodhi and Kay (2009) remind us, both Kautsky and Lenin were far from advocating 'path dependence,' i.e., a deterministic model of agrarian change.

In the first part of the twentieth century, scholarly interest in peasant studies receded somewhat, which coincided with a brief pause in the process of 'depeasantization' and 'proletarianization' (Araghi 2009) with the arrival of what McMichael (2008) calls the 'development project.' During the period between the October Revolution of 1917 and the 1975 Vietnamese Revolution, liberalism took a back seat, resulting from the expansion of socialism and 'anti-colonial

nationalism.' On the economic front, the rise of Keynesian protectionist policies postponed the demise of peasantries until the second coming of liberalism that swept away the vestiges of Keynesianism from the economic mainstream (Araghi 2009). This second coming of liberalism also brought back scholarly interest in peasant studies. In the following section, I briefly discuss the contemporary debate on the agrarian question as it relates to this paper.

In the contemporary debate over the current configuration of agrarian transformation, Henry Bernstein contends that the current phase of globalization has finally solved the perennial concern with agrarian capital accumulation (2006a; 2006b; 2009), which, according to him, is the central focus of the classical agrarian question. Bernstein argues that the reorganization of productive forces in 'advanced capitalist countries' initiated by primarily transnational agribusiness corporations has outmoded the debate over agriculture's contribution to industrialization. Moreover, the forces of globalization have intensified the 'fragmentation of classes of labour' to the extent that labourers in the South are now engaged in 'insecure' and 'oppressive' wage employments to only reproduce their social condition of living (Bernstein 2006a: 455). Given this reconfiguration, Bernstein posits that agriculture is neither simply reducible to farming, nor does it consist primarily of agrarian classes. This then leads him to argue that the characterization of particular social formations in the Global South as peasant communities is problematic, since this originates, as he claims, from the emotional urge to maintain a historical continuity with the past. Following this logic, he suggests that the analytical pathway to understanding the current

configuration is to conceive it in terms of a crisis of labour and its struggle for reproduction (Bernstein 2009). Furthermore, he argues that subsistence producers of today are, from a theoretical viewpoint, 'petty commodity producers' who are 'subject to the dynamics and compulsions of commodification, which are *internalized* [emphasis original] in their relations and practices' (2010: 103). However, he reminds us of the contingencies of the course of history at any given time and space as the actual reality may deviate from theoretical postulations owing to various factors. He thus insists, '"many determinations" (Marx) mediate between the tendency and particular concrete circumstances and local dynamics' (2010: 109) of social change.

Byres' discussion on class formations in the Indian countryside is a perfect example of how agrarian transformation plays out differently according to the 'local dynamics' and 'concrete circumstances.' In analysing the Indian example, he observed that the use of Green Revolution technologies and the spread of market capitalism around agriculture did not necessitate a complete transformation of agrarian classes in India. He described the Indian agrarian transformation as 'partial,' arguing that 'rural proletarianisation is not simply a matter of depeasantisation, or proletarianisation of the peasantry.' He drew attention to the fact that peasants may 'fiercely' resist any attempt to dispossess them from their land in so far as they remain convinced that no 'substantial employment opportunities in agriculture itself or outside of agriculture' are available for their material reproduction (Byres, 1981: 428–32).

McMichael (1997; 2006; 2009) criticizes this above-mentioned 'demise of the peasantry' thesis as a form of 'economic reductionism.' McMichael posits that such views are anchored in the misconception that peasants are 'a historical anachronism,' and that capitalism will ultimately dissolve all social formations into the dichotomous 'capital-labor relation' (2006: 475). He rather suggests that globalization has changed 'world-historical relations' to the extent that agrarian transformations and peasant dispossession have now become ubiquitous phenomena. In the current context, for a peasant, this has meant that the once-generous developmental state has withdrawn subsidies and other economic protections. Between these two theoretically opposite positions, Araghi creates a middle ground by suggesting that while 'proletarianization' is a reality, the current nature of peasant dispossession is qualitatively different from the classical form in that peasantries in the Global South today may retain legal ownership over some of their 'means of production,' but due to the retreat of the 'developmental state,' they lose the 'non-market access to the means of subsistence' (public welfare supports). When confronted with this threat to survival, these 'semi-dispossessed peasantries' often migrate, as a 'mobile reserve army,' to urban areas, but they have no access to the formal labour market (2009: 134).

While Bernstein is overwhelmingly preoccupied with the repositioning of the agrarian question within the global circuits of capital flow and labour, which understandably subsumes nation-states as a unit of analysis, McMichael and Araghi invest considerable energy highlighting the role of the developmental state

in the Global South in temporarily postponing the process of peasant dispossession. Nonetheless, they too limit their final analyses to the homogenizing power of global capital. In the process, they underplay the interactions between global capital and state-level factors that give agrarian change divergent shapes. To be sure, these generalizations provide helpful conceptual guidelines, and globalization does in fact have an immense impact on how national economies are configured in the contemporary world. However, we must refrain from valorising the homogenizing power of globalization to the extent that it trivializes the history of colonialism and imperialism, and forces us to ignore the unique experiences of the formerly colonized states of Asia, Africa and Latin America. Precisely then, for Partha Chatterjee (2008), the question of postcolonial specificity emerges as the key to analyzing the historical trajectories of capitalist development in such countries. This then permits him to arrive at a fundamentally different conclusion: that the current capitalist development in countries such as China, India, and Bangladesh actually allows for the continued coexistence of the peasant mode of production side by side with a capitalist economy. Chatterjee argues that peasants no longer see the developmental states in the postcolonial nations as direct exploiters, let alone external entities, because of the state's deeper penetration into their lives through rendering various essential services including education, health, infrastructure, water, and electricity. In so doing, he contends that the state assumes the role of reversing some of the adverse effects of primitive accumulation carried out by corporate capital in these countries. While Chatterjee's argument is not without flaws – principal among these is his

misconception that rural microcredit programs have 'no concern for profitability' and that they have nothing to do with further 'accumulation of capital' (2008:120) – he makes an important point by raising a much broader question about the positioning and nature of the state vis-à-vis the peasantries in postcolonial countries.

Indeed, by arguing that the state has a mandate to reverse the adverse effects of accumulation, Chatterjee indirectly questions popular assumptions that the onslaught of neoliberalism has forced the state to withdraw completely from the economic realm of developing countries. Such assumptions ignore the fact that postcolonial states, especially in South Asia, often enjoy 'relative autonomy' in the sphere of decision-making, owing to their particular colonial pasts (Alavi 1972). Admittedly, in most instances the state sides with capitalist classes as it 'operates in the interest of capital' (Petras and Veltmeyer 2007: 372). Despite this predilection, '[T]he state cannot entirely overlook smallholder interests. As petty commodity producers who own land, they are a source of legitimacy for private property itself, and therefore their continued reproduction has an ideological function for capital and its state' (Das 2007: 358). Moreover, by way of the promise of economic development and welfare, postcolonial states have so far been able to convince subaltern classes to persist with the bourgeois structure of the state (Sanyal 2007), which is by and large a leftover of the colonial administration. Therefore, postcolonial states have a great incentive to maintain the status quo by delivering periodic welfare supports to prevent any violent peasant uprising so long as this facilitates unhindered accumulation of capital.

This unique positioning of the postcolonial state is instrumental in maintaining the political and social status quo as this allows the state apparatus to make concessionary grants to non-capitalist classes, which ultimately benefits the capital accumulation process. As Scott (1976) so famously noted in the context of South East Asia, despite this manufactured harmony, peasants, for their part, confront, contest and resist the capitalist bias of the state in their everyday life, which may at times take violent forms as well. On the other hand, the state seldom hesitates to unleash violence and coercion when it needs to tackle any peasant uprising that threatens the veil of this harmony (Das 2007). There are several recent examples of this in Bangladesh. One is when peasants clashed with police who were enforcing the state's attempt to use eminent domain to dispossess them of their land to build an airport. Another is the paramilitary forces opening fire on demonstrating peasants protesting against the permission granted to a British energy corporation towards operating an open-pit coal mine on their agricultural land. Both highlight the tense relations between peasants and the exploitative state.

The Policy Regime, Agricultural Reforms and Partial Proletarianization in Bangladesh

Bangladesh became an independent nation in 1971 and immediately adopted a state-managed planned economic development model[17]. It nationalized several

[17] In fact, the first constitution of Bangladesh adopted in 1972 declared 'socialism' as one of the four main pillars of the state. The Fifth Amendment to the constitution in 1979, however, watered

key industries and established a central Planning Commission with a mandate to formulate short-, medium- and long-term economic development plans. The Commission introduced the first *Five Year Plan* in July 1973[18] (Misra 2012) with a special emphasis on the rehabilitation of the war-ravaged country and an increase in food grain production to ensure food security for a rapidly growing population. It followed import-substitution policies to protect the domestic agriculture and industrial sectors. In 1986–87, the subsequent junta government implemented a three-year medium-term adjustment program under a Structural Adjustment Facility (SAF) loan established by the IMF, followed by another tranche of a three-year loan in 1990 under the Enhanced SAF loan initiative (The Structural Adjustment Participatory Review International Network 2002). These loans came with stringent conditionalities including liberalization of 'foreign trade and exchange rate regimes, restructuring the industrial sector, strengthening fiscal and monetary management, encouraging private sector participation in development and privatising the state-owned enterprises (SOEs)' (GoB 1998: 36). The country began to liberalize and deregulate the agriculture sector, gradually downsized the operations of a number of SOEs devoted to delivering agricultural inputs to farmers, and started reducing agricultural subsidies in pursuit of these structural adjustment loans. The ultimate goals of the adjustment programs were

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down the original tone of the declaration and confined socialism to mean 'economic and social justice.'

[18] To date, the Commission has produced six five-year plans and an interim two-year plan. After the fifth five-year plan, on the instructions of the World Bank and IMF, the government switched to a Poverty Reduction Strategy Paper (PRSP) framework, replacing the erstwhile practice of five-year plans. In 2012, the government returned to five-year planning after abandoning the PRSP framework.

to alter the historical trajectory of the country towards industrialization and generate an impetus for pro-market reforms led by the private sector.

The inauguration of Green Revolution (GR) technologies in the 1960s and 1970s and their massive expansion in the subsequent decades under the patronage of the state first planted the seeds of such reforms in Bangladesh. GR technologies paved the way for market integration of peasant producers, as the adoption of these technologies forced peasants to sell their surpluses in the market to meet the increased cost of chemical-intensive and irrigation-based farming. These new technologies facilitated the intensive cultivation of rice[19] up to three times a year. With active government patronage and financial incentives, many peasants adopted this modern rice farming method and abandoned their traditional farming practices. Since the maturity period for GR rice varieties is considerably shorter than that for traditional varieties, peasants needed to expedite the production process to reap the full benefit of this new farming method. However, to the frustration of policymakers, peasants' continued dependence on animal draft powers for soil preparation and other production related activities slowed down the growth of GR varieties. On the other hand, as the spread of GR varieties and irrigation facilities revolutionized the production regime, more peasants brought erstwhile fallow and pasturelands under rice cultivation in an effort to increase their income. With shrinking pastureland, the supply of draft animals declined in many parts of the country, threatening the possibility of optimizing production

[19] Rice is the main crop in Bangladesh, and on average, it constitutes more than 95 per cent of the total annual food grain productions.

(Alauddin and Hossain 2001). The spread of GR technologies and the consequent displacement of traditional agriculture was thus just the beginning of a long chain of 'accumulation by dispossession' (Harvey 2005) which peasants, for the first time, became extensively dependent on the market and the state for agricultural supplies.

In the pre-adjustment years, however, the market was still under the control of the state to a certain extent. The state-owned Bangladesh Agricultural Development Corporation (BADC) had the mandate to supply agro-machinery and other inputs to farmers at subsidized prices. In 1978, the then-junta government initiated the gradual liberalization and privatization of the agricultural input and machinery market under a policy regime called the New Marketing System (International Fertilizer Development Center July 1980). The deregulation of the market under this new system transferred the job of importing and distributing machinery and other inputs (including seeds, fertilizer, pesticides, and irrigation equipment) from the BADC to the private sector. The whole process of reform took several years, and by the mid-1990s, the liberalization and privatization of the input market was completed. As the government downsized the volume of subsidies, input prices shot up, while rice prices at the producer level remained depressed. This posed few problems for wealthy farmers. However, the unfavourable terms of trade squeezed the peasants financially, and they found it tough to invest in the purchase of expensive machinery and other necessary inputs. The result was that, on one hand, peasants came under tremendous pressure to produce surplus to meet

the increasing cost of production, and on the other hand, the retreat of the state put a strain on them to a greater degree of market dependence and indebtedness.

Against this backdrop, the country formulated its first-ever agriculture policy in 1999, titled the *National Agriculture Policy* (NAP). The primary goal of the policy is '[T]o modernize and diversify the crop sector, in other words the entire agricultural system, through initiation and implementation of a well-organized and well-coordinated development plan.' It aims to implement free market principles and reorganize the agriculture sector 'in the light of the Agreement on Agriculture under the WTO [World Trade Organization], SAFTA [South Asian Free Trade Agreement] and other international treaties' (GoB 1999: 1–3).

The NAP took up the issue of farm-level mechanization with some intent and proposed new measures in addition to the old ones to complete the privatization of the agro machinery market. These measures included the extension of easy credit facilities, the withdrawal of restrictions on standardization and testing of imported and domestically manufactured machinery, tax exemptions for imported machineries, and using mass media to promote and enhance private sector participation. These measures were largely successful in engaging the private sector in the marketing of agro-machinery and equipment to farmers. From zero private sector participation in the late 1970s, the market share for privately sold agro-machinery rose to Taka 13.08 billion[20] in 2004, and then further increased to

[20] USD 156 million as per the 2012 conversion rate.

Taka 35.29 billion[21] in 2007, suggesting a tremendous boom in the market (Matin et al. 2008). As a result, Bangladesh has emerged as 'one of the most mechanised agricultures in Asia' with 80 per cent of the tillage operations done with the help of mechanized tractors (Biggs et al., 2011: 79–80).

While years of structural adjustment programs had mostly transferred the supply and marketing of agricultural inputs – e.g., seeds, chemicals, pesticides, fertilizers, irrigation equipment and other machinery – to the private sector, prevailing market realities prevented the NAP from proposing a complete withdrawal of the state from the agricultural output market. The state intervenes in the output market mainly through its public food distribution system (PFDS), a common strategy in the Indian subcontinent to stabilize domestic grain markets to supposedly protect both the producers and consumers. The wave of deregulation, however, saw the scope of PFDS greatly reduced from handling an average of 2.5 million metric tons (MMT) in the 1980s to about 1.4 MMT in the early 2000s (Ahmed et al. 2010; Chowdhury and Haggblade 2000). By May 1992, the government successfully abolished both statutory and rural rationing programs, two of the largest PFDS channels in the country, to encourage private sector participation in food grain procurement and distribution (Chowdhury and Haggblade 2000). This scale-down of the PFDS gave private traders enormous control over the grain market, and their excessive profit-seeking behaviour often resulted in artificial grain price fluctuations, putting the livelihoods of both small peasant producers and urban consumers at risk (Misra 2012). However, the severe food crisis of

[21] USD 35289.92 million.

2007–8, which continued into the following years amid bumper rice production, forced the government to reconsider its stance on the PFDS and agricultural subsidies against the wishes of the World Bank and other donor agencies. I return to this point in the next section.

While the 1999 NAP retained traces of protectionist policies, the 2010 final draft[22] of the agriculture policy signals a significant shift in thinking in terms of the future course of agriculture and its bearing on smallholder peasants. The key difference between the 1999 NAP and the proposed draft policy is the reorientation of focus from promoting self-sufficiency in food production to achieving 4–4.5 per cent growth in agriculture in order to attain the targeted 7 per cent overall GDP growth. Moreover, the draft policy proposes to extensively promote modern and postproduction technologies, and to create agribusiness opportunities wherever possible in order to increase agricultural profitability. The language of the 2010 draft adopts the vocabularies of Post-Washington Consensus (PWC) such as, 'pro-poor growth,' 'informatics,' 'market regulation,' 'human resource development,' and 'equity.' Unsurprisingly, it draws heavily on the policy prescriptions of the 2008 World Development Report (WDR) published by the World Bank, which advocates for a 'productivity revolution in smallholder farming' to supposedly eradicate poverty (2007: 1).

In keeping with the 2008 WDR, the draft agriculture policy places enormous importance on further increases in agricultural productivity. It notes that since

[22] The draft policy is up on the Agriculture Ministry's website but is yet to be formally adopted by Parliament.

agricultural land is declining by approximately one per cent every year due to urbanization and industrialization, the country must focus on productivity increases to meet the demands of a growing population. This Malthusian narrative belies reality. As per a projection of the Bangladesh Ministry of Agriculture[23], by 2020 the country will require about 28 MMT of food grains per year (net production of 31 MMT) to meet the dietary needs of an estimated 170 million people. Against this projection, the country produced 34.5 MMT of food grains (GoB 2011) in 2010–11 fiscal year. As may be obvious, the current level of food grain production is much higher than the projected 2020 consumption needs of the population. For the past four decades, Bangladesh's population growth rate has steadily declined from as high as 2.3 in the 1970s to 1.4 per cent in recent times, but the average annual growth of aggregate food grain production over the same period is about 3.7 per cent[24]. The Sixth Five Year Plan (Government of Bangladesh, 2012), however, clarifies that more than ensuring food security, the emphasis on land productivity growth is aimed at augmenting the prospect of exporting food grains to boost the agriculture sector's growth potential and expedite its modernization.

Further investments in modern farming technologies may unlock the agriculture sector's growth potential. Nonetheless, the effects of such a development at the small producer level require attention. Admittedly, the shift towards a liberalized, mechanized and modern agricultural system has increased the per unit rice

[23] http://www.moa.gov.bd/statistics/statistics.htm
[24] Author's own calculation based on Bangladesh Bureau of Statistics annual rice production data.

productivity from 1.22 metric tons per hectare in 1975-76 to nearly 2.52 metric tons[25] in recent times. Along with this, the annual aggregate rice production has more than doubled from 17.6 MMT in 1975–76 to 35 MMT in 2011–12, while the area under cultivation increased by only 22 per cent during the same period, from 9.3 million to 11.36 million hectares (Government of Bangladesh, 2012). For smallholder and landless peasants, an 'absolute decline' of income from rice farming (Hossain et al. 2003) neutralized most of these macroeconomic gains. Several factors arising out of the deregulation and modernization of the agricultural sector, including small plot sizes, high costs of agricultural wage labour, higher fertilizer and irrigation prices, and unfavourable agricultural terms of trade contributed to this declining income and thereby to the profitability of small peasant producers (Ahmed et al. 2007; Hossain et al. 2003; Zohir 2001).

The increased incidence of rural wage dependency over the last few decades is therefore hardly surprising. The 2008 agriculture census data (BBS 2010a) indicate that the number of agricultural labour households increased from 5.4 million in 1983–84 to 6.4 million in 1996, and then to 8.7 million in 2008. Moreover, rural landlessness also increased during the same period, from 8.67 per cent in 1983–84 to 10.18 per cent in 1996, and 9.58 per cent[26] in 2008. What is

[25] The figures represent the average combined productivity of both traditional and modern varieties for both years. A full breakdown of annual variety-wise productivity data is available at http://www.moa.gov.bd/statistics/Table3.01CY.htm.

[26] There is a discrepancy in reporting the percentage of landless households in the web version and the published report of the 2008 Census of Agriculture. The website reports that the percentage of landless households in rural areas was 12.85 per cent in 2008, whereas the published report has it at 9.58 per cent for that year. The 2005 Agricultural Sample Survey estimated rural landlessness at 10.65 per cent. The figure in the published report seems to be an anomaly. However, even if we take the published report as correct and assume that there has been a real decline in the proportion

intriguing, however, is the concurrent proliferation of small peasant holdings that outnumber the growth of labour and landless households. During this same period, small farm holdings cultivating less than a hectare of land increased from 7.6 million (70.34 per cent of all rural farm households) in 1983–84 to 9.4 million (79.87 per cent) in 1996, and 12.53 million (84.27 per cent) in 2008. This 64 per cent growth of small farms over the 1983–84 level is higher than the 61 and 45 per cent growth of agricultural labour and landless holdings, respectively. Consequently, both middle and large farm holding numbers have experienced sharp declines[27]. It is worth mentioning here that the absolute number of farm holdings has also increased, although its proportion to non-farm holdings has declined. As the data demonstrate, the number of farming households has steadily increased from 10 million in 1983–84 to 14.87 million in 2008, indicating a 49 per cent overall growth in just 25 years. This higher incidence of small farms may indicate a temporary postponement of an outright dispossession of smallholder peasants from their land.

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of landless households compared to 1996, we may not interpret it as a reversal of the trend. If we look at the overall landlessness data in the country, we shall see that in 2008, the census reported a disproportionately higher incidence of landlessness in urban areas compared to the 1996 census. Given that there has been a huge migration of people from rural to urban areas during this period, it is logical to assume that a majority of the migrants were rural landless, which may have contributed to the declining proportion of landlessness in rural areas.

[27] Medium farm holdings (2.50–7.49 acres) declined by 42 per cent and large farms (7.50+ acres) declined by 68 per cent between 1983–84 and 2008. In 1983–84, medium farms were 24.72 per cent of all farm holdings, which came down to 17.61 per cent in 1996 and further declined to 14.19 per cent in 2008. For large farms, the respective percentages are 4.94, 2.52 and 1.54.

The State as the Mediator between Capitalist Expansion and Agrarian Transformation

It is difficult to explain these apparent contradictory trends of simultaneous expansion of small peasant and agricultural labour holdings amid a capitalist restructuring, the very purpose of which is to depeasantize the economy. The popular belief that population growth leads to fragmented farm sizes and thereby the growth of small peasantry fails to make a convincing case. It is true that population growth accounts for some of the subdivision of agricultural holdings. Nonetheless, theoretically, it fails to explain why the numbers of both peasant and overall farm households have gone up considering that the reforms promised to reduce the size of the agrarian population by creating employment opportunities in the formal sector and absorbing them there. More importantly, had population growth truly been the cause, we would not have seen any rise in the inequality in landownership over the years. Many researchers as well as the World Bank report a higher concentration of land ownership among big landowners in rural areas of Bangladesh, which has led to a polarization within the landholding agrarian classes (Jannuzi and Peach 1979; Rahman 1986; Rahman 1988; World Bank 2007). These researchers attribute the fragmentation of farm sizes to this polarization of landownership. Interestingly, Bhaduri, Rahman and Arn (1986; 1988), using a survey data of four villages in the Noakhali district of Bangladesh, argue that this very process of polarization 'itself generates a contradictory process of stabilization of the small peasantry through the creation of supplementary income opportunities … in the form of wage employment or

leasing of land for the *remaining* [emphasis original] smaller land owning households' (1986: 82-7). I agree with the authors' contention that small peasants do diversify their income sources by doubling up as agricultural labourers, but their proportion is comparatively low. The households that do take up supplementary wage employment – as the authors themselves suggest – are primarily households owning up to 0.02 acres of land. These households may not be categorized as proper farm households[28]. I also concede that the spread of sharecropping has had a somewhat positive impact on peasant livelihood by opening up additional income sources. Nonetheless, from a political economy perspective, the authors' explanation of the persistence of small peasantry, which is limited to the four villages that they studied, completely misses the role of an important actor – the state.

As I mention above, the deleterious effects of neoliberal economic reforms have pauperized smallholder peasants[29]; nevertheless, the various direct and indirect

[28] The authors note that mostly those households who own up to 0.2 acres of land tend to supplement their income from agriculture through wage labour on other people's farms. These households constitute 61 per cent of all farm households owning less than 1.6 acres of land, their definition of a small farm. They also note that very few households who own more than 1.6 acres of land are engaged in agricultural wage employment. These 61 per cent of households who own up to 0.2 acres of land would be officially categorized as functionally landless and thus non-farm households. The official cut-off point for a functionally landless household is 0.05 acres of land.

[29] It is worth it here to point out that the official poverty data show a gradual improvement in rural poverty. For example, according to the Household Income and Expenditures Surveys by the BBS (the official poverty data source), in 1991–92, the incidence of rural poverty rate was registered at 58.8 per cent which, the survey shows, decreased to 35.2 per cent in 2010. The reliability and validity of this poverty data is highly questionable. The constant adjustment of methodologies and indicators between surveys makes longitudinal comparison of poverty reduction rates problematic. Moreover, poverty rates fluctuate highly within the same survey dataset when measured in different methods – food energy intake and cost of basic needs methods. For an authoritative analysis on the methodological problems of Bangladesh poverty data, please see Ravallion and Sen (1996), and Khan (2005). Moreover, the poverty data is an aggregate measure of poverty,

ways that the state subsidizes agricultural production and extends welfare supports have prevented an outright dispossession of small peasants. Contrary to the theoretical postulation that peasants in the Global South have lost their 'non-market access to the means of subsistence' due to the retreat of the developmental state (Araghi 2009: 134), empirical evidence in Bangladesh suggests the existence of a 'relatively autonomous' state that oscillates between minimalist and protectionist roles. The state has created a dual economy in which market imperatives dominate the upstream and downstream of farming, while the actual act of production is carried out predominantly by small peasant producers under the compulsion of meeting their subsistence needs. The contradiction that resides in the state's reluctance to do away with peasant agriculture has a lot to do with Bangladesh's past memories of famine and starvation, which continue to haunt and shape its policy regime (Pinstrup-Andersen 2000). As Sen's (1981a; 1981b) seminal analysis of the 1943 and 1974 Bengal famines shows, on both occasions, the spectacular failures of the respective colonial administrations and the post-independence state to redistribute food among the rural populace on the eve of their loss of 'entitlements' amid a market failure led to the death and starvation of several million people. In both instances, the ruling regimes were subsequently

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which includes both farming and non-farming groups. A more reliable measure of rural poverty in this context would be income inequality data. Between 1991–92 and 2010, the Gini Coefficient (an index of 'zero' means no inequality at all, while 'one' denotes absolute inequality) for income inequality in rural areas increased from 0.243 to 0.431, indicating a sharp 77 per cent increase in income inequality as opposed to a 47 per cent increase for urban areas during this period. The same trend can be noticed in terms of the percentage share of income accruing to rural households belonging to the bottom five deciles, which has steadily declined over these two decades (Government of Bangladesh, 2005; 2012). Moreover, the per capita income from farming accruing to rural households between 1991–92 and 2005 has declined from 41.44 to 22.17 per cents indicating a general slump in agricultural income (Khan, 2005). All these data, except the poverty data, indicate a pauperization of small peasants in rural areas.

overthrown as the deaths seriously undermined the legitimacy of the respective regimes. The fear of a recurrence of popular revolts resulting from a malfunctioning market underlies the state's steadfast refusal to relinquish its power to control the economy. At no time did the state's distrust for the market become as evident as it did during the 2007–08 food crisis, when the state dispatched the army to indiscriminately round up rice traders on illegal hoarding and syndication charges without the necessary approval of the courts, sending shockwaves through the market.

Another factor that compels the state to protect the subsistence sector is the inability, or rather unwillingness, of the formal sector (industrial and service) to absorb the massively surplus labour force that will be released following the agrarian reforms. Before the first SAF loan, agriculture employed 58.79 per cent of the total labour force, which has recently come down to 52 per cent (Government of Bangladesh 1992; 2010). On the other hand, the industrial[30] sector's share of contributions to the GDP has almost tripled from 9.86 to 29.93 per cent during the same period, whereas employment in this sector has increased by only 6 per cent (BBS 1983; 2010b; GoB 1998; 2012a). Despite GDP growth rates hovering in the 4 to 6 per cent range over the past two decades, the formal sector employs only 22 per cent of the total labour force –11 per cent in manufacturing and the rest in organized services. Of these manufacturing jobs, most are concentrated in the export-oriented ready-made garment industry, which

[30] The industrial sector is comprised of small and large manufacturing, power, gas and water supplies, mining, and construction subsectors.

predominantly employs young women and pays below poverty line wages. As in many other Global South countries, the process of capitalist development in Bangladesh has shown a remarkable tendency to eschew accumulation through expanded reproduction. The unwillingness of capitalist classes in the productive investment of capital has led to an investment boom in unproductive sectors such as the real estate and stock markets. The phenomenal rise of the informal sector partly solved the unemployment problem by absorbing the surplus labour force (Government of Bangladesh, 2012). However, these informal jobs are extremely low paying and provide no job security. This 'informalization' of the economy, the subsequent proliferation of urban slums, and the near breakdown of social order forced the state to initiate a range of poverty reduction, rural development, and social safety net programs (SSNP) to support the subsistence sector in order to stop the ever-increasing deluge of rural migrants into the cities. One may argue that the reforms have diminished the state's capacities to the extent that it is now unable to make any meaningful development intervention even if it so wanted. To a certain extent, this argument holds merit. Yet the state continues to retain ways and means, however diminished, to intervene in the market. These interventions may appear to be anti-market, but the eventual benefit belongs to the capitalist classes since the goal is to maintain the socio-political status quo. Let me present the cases of PFDS and SSNPs to elaborate this point further.

Even though the scope of the PFDS program underwent restructuring in the 1990s and early 2000s, the program still plays a crucial role in distributing subsidized food grains among the rural poor, and setting the benchmark for grain prices to

keep domestic producers interested. In the 1980s, as the government was implementing the reform agenda, it made a conscious decision to move away from foreign grain imports and food aid dependence, and rely on the domestic market for PFDS stock building, especially for rice stock. The objective to switch to domestic procurement was to ensure minimum but stable domestic rice prices (Goletti 2000) along with ensuring a steady market for domestic producers. It is worth mentioning here that millers, traders and large farmers benefit more from the PFDS procurement than small peasants, as the government relies on the former group for procurement purposes. Once procured, the government releases the stock through various distribution channels including the open market sale program and SSNPs at subsidized rates when market prices are higher than average levels. Often, this release of subsidized grains leaves a moderating effect on prices. One positive aspect of this intervention is that since PFDS keeps domestic prices below the international market rates, it discourages cheap foreign imports, except during extreme supply shortages. Without the PFDS and periodic tariff bars on rice imports, the domestic market risked being flooded by subsidized rice exports from India, as the government had already permitted private imports in 1993 (Ahmed et al. 2007). Such a scenario could have forced peasant producers out of agriculture – as has happened in many other countries – since they would be in no position to compete against cheap foreign imports. The important thing to note here is that although the government has protected small peasants through this market intervention, it did not go beyond saving their mere existence.

Ever since the 2007–08 food crisis, the state has gradually increased budgetary allocations to expand the coverage of the PFDS to stabilize the spiralling food commodity prices on one hand, and to bring an increased number of vulnerable people under the umbrella of subsidized food grain distribution. Recent data show that since the crisis, the average annual distribution of food grains through PFDS channels has risen to 2.11 MMT[31], a sharp rebound from the pre-crisis average of 1.4 MMT. In 2010–11, the government distributed as much as 2.29 MMT of food grains through PFDS channels, which is almost at par with the program's peak handling of 2.5 MMT during the pre-reform years (Ahmed et al. 2010; Chowdhury and Haggblade 2000).

Besides the PFDS, the government, in collaboration with various national and international non-government organizations, administers around 58 SSNPs comprising both food and cash transfer programs (Ahmed et al. 2010). Many of these programs directly and indirectly benefit members of small peasant households. Over the last two decades, budgetary allocations in SSNPs have steadily increased and have more than doubled in tandem with the economic liberalization program (Shahabuddin 2010). For instance, the percentage of rural households benefitting from SSNPs increased from 15.64 per cent in 2005 to 29.16 per cent in 2010 (BBS 2011). Similarly, budgetary allocations in SSNPs have seen a considerable rise. The budget for the 2009–10 fiscal year allocated Taka 160 billion (equivalent to USD 2.3 billion), about 2.8 per cent of the national

[31] Author's own calculation based on data obtained from various issues of the Bangladesh Food Situation Report published by the National Food Policy Capacity Strengthening Program website at http://www.nfpcsp.org/agridrupal/bangladesh-food-situation-report.

GDP, benefitting approximately 20 million people (Ahmed et al. 2010; GoB 2009).

These recent expansions of the PFDS and SSNPs coverage may well be a temporary trend. Nonetheless, they attest to the state's discomfiture with the fallout of market failures, and its willingness to intervene. Admittedly, these miniscule supports did little to improve the economic solvency of peasant producers. However, there is little doubt that these transfers of resources from the state play an important role in supporting peasant livelihoods to a certain extent. In the absence of any viable gainful employment opportunities available for the rural poor in the non-farm or formal sectors, these supports help prolong their farming engagements albeit in an impoverished condition.

In Lieu of Conclusion

To be clear, the narrative of reform and the nature of state intervention that I discuss in this paper are only a snapshot, and are by no means exhaustive. Due to the paucity of space, I have deliberately omitted the discussion on the various legal and financial arrangements through which the state has kept small peasants alive. The intention of this paper is not to convey the feeling that state interventions have improved the livelihoods of peasants. Instead, I view these interventions as a deliberate ploy by the state apparatus to keep small peasants on life support so as to forestall the possibility of any rupture in the process of capital accumulation.

Veltmeyer is right in noting that 'capitalist development of agriculture … is predicated on a process of primitive accumulation – dispossession of the direct producers from the land … [and a] source of poverty in rural society' (2009: 401). Nonetheless, this development does not always necessarily lead to an outright dispossession of peasant producers, especially if the accumulation process occurs without extending gainful employment opportunities to the surplus population. The classical agrarian reform theorists' preoccupation with the inevitable demise of small peasantries through the spread of capitalism in agriculture and the corollary growth of expanded reproduction fails to pay adequate attention to the particular trajectories of national development, the specific role and type of the state, and the markedly different socio-economic global realities encountered by the Global South. Although globalization has largely eroded the economic and political sovereignty of Global South countries, the state apparatus there still enjoys certain decision-making powers that allow it to negotiate the conflicting demands placed by the national and international bourgeoisie and its other constituent subjects. It is true that the ruling classes in the newly independent postcolonial states are all for keeping the cycle of accumulation moving, yet the specific form of the accumulation process and its outcome depends on how these states resolve the contradictory demands placed on them without undermining their own legitimacy. Given this complex social reality, the rejection of the peasant question in favour of an agrarian question of labour at this historical juncture may be tad premature, at least in the Bangladeshi context (if not elsewhere). The partial nature of agrarian transformation that we now experience

in Bangladesh may not be resolved in favour of a complete proletarianization of small peasants in the foreseeable future. That being said, the social condition of living for small peasants will continue to be highly embedded in capitalist market relations, which differs significantly from what their predecessors ever experienced.

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CHAPTER FOUR

'Through the "valley and shadow of death"': Microcredit, Neoliberal Agriculture and Peasant Dispossession in Bangladesh[32]

Introduction

Rosa Luxemburg, in her seminal work, *The Accumulation of Capital,* writes, 'Helpless in the face of the immense capitalist powers, the farmer got into debt – a phenomenon typical for a declining peasant economy' (1963: 406). In highlighting the plight of small-scale American family farms in the late 19th century, she quotes Peffer – then a United States Senator and a leader of the Farmers' Alliance – 'The situation is this: farmers are passing through the "valley and shadow of death"; farming as a business is profitless …. If the farmer cannot pay his debt to date, the interest he has to pay is increased to 12, 15 or even 20 percent' (pp. 406–7). Contrast this scenario from the close of the nineteenth century with the current trend of peasant indebtedness in rural Bangladesh. Data obtained from the 2008 agricultural census show that the average crop loan that rural farm households owed was Taka 17,142 from institutional sources and Taka 16,449 from informal sources (Bangladesh Bureau of Statistics, 2010a: 116), with interest rates on institutional micro-loans ranging from 18 to 60 per cents[33]. This incident of peasant indebtedness coincides with a parallel flourish of microfinance institutions (MFIs) over the past three decades, whose accumulated assets are now worth 3 per cent of the country's gross domestic product (GDP) (Microcredit Regulatory Authority, 2010). I contend that this incident of peasant indebtedness

[32]. This chapter has been adopted as a required reading for undergraduate students at the International Development Studies Department at Trent University, Peterborough.
[33] http://www.brac.net/content/faq-0#.UjSvGT_B-MM

and the spectacular expansion of MFIs are analytically inalienable from the broader neoliberal processes of agricultural commoditization, input subsidy reduction and a systematic lessening of the subsidized agricultural credit system.

The literature on the conceptual linkages between neoliberalism and the rise of microcredit in Bangladesh is impressive (see Bateman, 2010; Cons and Paprocki, 2010; L. Karim, 2008; 2011; Roy, 2010). However, the overwhelming focus of the majority of studies has thus far been concentrated on the implications of microcredit use among the poor or women. This leaves a large gap in the literature on the effects of microcredit use among peasants, who are arguably one of the most important and indispensable social groups in rural Bangladesh. The surprising dearth of literature on microcredit and peasant communities seems to rest on the misperception that microcredit's preoccupation with female-headed and functionally landless[34] poor households effectively precludes the possibility of peasant borrowing (Rashid et al., 2004). MFIs are notorious for not offering a detailed breakdown of the occupational profile of their borrowers. Poverty and gender are neither a substitution for a borrower's occupational identity, nor are the categories poor or women mutually exclusive to peasants. Various studies indicate that peasants are one of the predominant borrowers of microcredit in rural areas, although they may not be officially eligible (see Mallick, 2012; Morduch, 1998). A study conducted by Morduch (1998) reveals that nearly two-third of Grameen Bank borrowers included in his survey owned more than half an acre of

[34] Functionally landless households are those that own less than 0.50 acres of land according to the government's definition.

agricultural land in contravention of Grameen's official client eligibility criteria. Besides, being landless in rural areas in no way forestalls the possibility of taking up sharecropping and becoming a peasant (see Jannuzi and Peach, 1980). Obviously, it is the female member of the household who is the official borrower, while her husband decides the actual use of the loan (L. Karim, 2011; A. Rahman, 1999). Data released by the Palli Karma-Sahayak Foundation (PKSF, 2013), the apex funding body for domestic MFIs, confirm that up to June 2001, agricultural loans comprised 12.23 per cent of the total loans disbursed by 468 listed MFIs. In terms of annual loan utilization, the crop subsector is second in rank after the small business sector with Taka 116 billion in disbursed loans (CDF and InM, 2011). Given this prevalence of microcredit use among peasant communities, this paper seeks to address the gap in literature by drawing our attention away from the much publicized debate about microcredit's impact on poverty reduction – an important debate nonetheless – to the ramifications of the penetration of MFIs among small-scale agricultural communities in Bangladesh.

One must admit, however, that the spread of microcredit has indeed increased the financial choices of millions of rural peasants who were perennially trapped by usurious loans from informal money lenders (Hulme and Thankom, 2011). At the same time, it has also expanded the reach of predatory financial capitalism in rural areas (Bateman, 2010). The specific accumulation model of microcredit programs pivoted on door-to-door loan delivery, flat weekly instalments, comparatively higher interest rates than conventional banks due to high transaction costs and tiny loan sizes, strict enforcement mechanisms to ensure timely repayment, and an

insatiable desire to enlist new members is incompatible with peasant agriculture's long gestational period, extreme seasonality and dependence on nature, and highly fluctuating and low return on investment. Moreover, peasants' participation in the market economy follows an entirely different logic than that of an average microcredit borrower employed in the non-farm sector. Peasants, unlike petty capitalist entrepreneurs, invest in agriculture mainly to satisfy their consumption needs; their only reason to bring a product to market is because it is surplus (Akram-Lodhi, 2013; Scott, 1976). This consumption-orientation drastically reduces the profitability of their investment, even in a good year. Therefore, the interface between these two asymmetrically structured sectors wherein MFIs strive to maximize their profit potential with the power of capital on their side, while the peasant sector invests its precious energy to simply reproduce subsistence for its members produces a friction that perilously thrusts the latter sector to the margins of its existence. While the Indian case of farmers committing suicide at being unable to repay microcredit is an extreme case (Taylor 2012), the situation prevailing in Bangladesh is far more subtle and has long-term implications, and therefore demands careful attention. Given the precarious nature of the situation, I combine Harvey's (2005) notion of 'accumulation by dispossession' with Patnaik's (2008) argument on 'accumulation by encroachment' to specifically argue that the spread of commercial microcredit is facilitating the process of peasant dispossession in the wake of neoliberal restructuring of the agriculture sector in Bangladesh.

This paper is based on my doctoral field data gathered through five months of qualitative field work in 2012 in three different villages in Bangladesh. During my research, I formally interviewed 84 peasant households, MFI staff members, policy makers, and political and social activists. I also draw upon observational data gathered during informal interactions with research participants. The data presented in this paper mainly belong to the first research site, although I have used examples from the two other villages as well.

The argument in this paper is organized in four sections. First, I offer a rudimentary outline of Harvey and Patnaik's theories that inform the analysis in this paper. Second, I present a succinct account of microcredit's commercial turn and the way in which this has transformed microcredit into a capital accumulation juggernaut. Third, I briefly trace the policy regime which facilitated the rise of microcredit in Bangladesh and subjugated peasants under the logic of capital accumulation. Finally, I furnish empirical evidence of how the commercial pursuit of microcredit renders the livelihoods of small, marginal and landless peasants vulnerable and ensnares them in debt peonage.

'Accumulation by Dispossession/Encroachment'

In his book, *The New Imperialism*, David Harvey conjures up an image of contemporary capitalism founded on 'predation, fraud and violence' (2005:144) that is remarkably similar to the description supplied by Karl Marx of Western Europe during the transitional phase of feudalism to capitalism. Harvey insists that since '[a]ll the features of primitive accumulation that Marx mentions have

remained powerfully present within capitalism's historical geography up until now' (p. 145), the concept may still be deployed to analyze the current chain of dispossession of various subjects, albeit in a modified form, which he calls 'accumulation by dispossession' (ABD). Harvey contends that ABD, as in the past, continues to incorporate 'appropriation and co-optation of pre-existing cultural and social achievements as well as confrontation and supersession (p. 146). In echoing Luxemburg (1963), Harvey insists that the sustenance of capitalism requires an 'outside' that can be tapped into and exploited to keep the cycle of accumulation moving, especially when expanded reproduction faces limits to its growth potential. This 'moebius strip'-like character of capitalism (Mookerjea, 2010: 122) becomes all the more apparent as it travels to the Global South where capital is in a constant battle to dispossess the still existing non-capitalist classes to 'circumvent pressures of overaccumulation' (Harvey, 2005: 143). As Mike Davis (2004: 23) so fittingly described,

> [T]he forcible incorporation into the world market of the great subsistence peasantries of Asia and Africa entailed the famine deaths of millions and the uprooting of tens of millions more from traditional tenures. The end result … was rural 'semi-proletarianization': the creation of a huge global class of immiserated semi-peasants and farm labourers lacking existential security of subsistence.

In this current era of financial capitalism, Harvey argues, the process of dispossession of non-capitalist classes has gathered renewed vigour in which 'the credit system and finance capital became … major levers of predation, fraud, and thievery' (p. 147). Accumulating financial capital relies less on surplus value created by exploiting labour, which has motivated capital owners to look for investment opportunities beyond manufacturing and into highly profitable non-

productive sectors, such as the credit market. This is, however, not to claim that cheap wage labour has become irrelevant to the grand scheme of the growth trajectory of capitalism or that ABD has supplanted 'accumulation by expansion.' On the contrary, both methods of accumulation are organically related, and the Global South continues to offer cheap wage labour to industrial capital from the North.

One important aspect of this emergence of financial capitalism has been a profound transformation in the role of the state. The neo-classical state has shaken off the vestiges of Keynesianism that temporarily decelerated the forward march of capital and has reinvented itself as an avatar of financial liberalization. Harvey argues, 'One of the basic pragmatic principles that emerged in the 1980s, for example, was that state power should protect financial institutions at all costs' (2010: 10) and should use its policy-making power to incorporate non-capitalist classes under the gaze of capital (2005: 156). Prabhat Patnaik (2008) offers an excellent analysis of the way in which such realignments of state policies – from welfare-oriented to finance capitalism – devastated the Indian peasantry in what he calls 'accumulation by encroachment.' In discussing the Indian example, Patnaik argues that imposing neoliberal economic policies on agriculture has a two-pronged effect on peasants: income deflation and a subsequent demand compression. He identifies three specific neoliberal processes through which agricultural income deflation can be achieved. First, a reduction in government expenditure and the lowering of tax-GDP ratio to attract finance capital; second, 'the destruction of domestic productive activities' (p. 109) via increased

competition from global producers under a liberalized trading regime and a less protectionist state; and third, deliberate construction of a pricing regime through active policy interventions in which the 'terms of trade' (p. 110) are rendered hostile towards peasant producers. The effect of the first process is to choke the transfer of resources previously made available to peasants by the state under various entitlement programs and subsidy schemes, whereas the second and third processes substantially limit their productive prospects and income opportunities. The upshot is an income deflation effected on the peasantry in favour of global capital. Patnaik insists that capitalism's 'immanent tendency … is to dispossess peasants … [a]nd the squeeze employed on the peasantry by this immanent tendency of capitalism in this current era is itself ipso facto an act of income deflation' (p. 111).

Tiny Credit, Mega Profit: The Commercialization of Microcredit

Microcredit, by definition, means the extension of small credit to poor households without collateral, whereas microfinance refers to an assortment of financial services including credit, savings, insurance and payment services (Ledgerwood, 1999). As the story goes, Muhammad Yunus popularized the idea of distributing collateral-free small loans among poor households as a means to alleviate poverty when, in 1976, he distributed US $27 among 42 women in a remote village in southern Bangladesh (Yunus, 2003). The rapid recovery of these small loans inspired him to initiate 'Grameen Bank Project,' which in 1983 was transformed into a full-fledged bank through a government ordinance. There is, however, an important twist to this story. As Yunus (2003) recounts in his autobiography,

these initial loans were purely an act of philanthropy as he handed them out interest-free and without repayment deadlines. The availability of such generous loans did really help the women escape the skewed contractual obligations imposed upon them by '*paikars*' (whole sellers who work as middlemen), who offered them operating capital for making bamboo stools on the condition that their finished products be sold to them at below-market prices. Yunus's subsequent commercial experiment involving stipulated weekly instalments, high interest rates, and strict payment deadlines is entirely of a different nature and has little semblance to that now famous story. I shall return to the implications of this commercial experiment later in this section.

The practice of providing small loans through institutional means to poor households to alleviate rural poverty is hardly a novel concept. From the colonial era, finding an appropriate mechanism to extend agricultural credit at affordable rates has been a major concern for ruling regimes. Historically, informal money lenders controlled the credit market in the absence of 'organised sources of finance' (M. M. Islam, 1978: 158). A Banking Enquiry Committee established by the British colonial rulers found that during the early 20th century, money lenders were charging 18.75 per cent annual interest on loans in rural areas with land as collateral. In the case of collateral free loans, interest rates could be as high as 300 per cent per annum. Given that the majority of small and landless peasants had very little land or assets to offer as collateral, interest rates were usually on the higher end. Realizing that this was a drag on agricultural productivity, the British colonial government instituted the Credit Co-operative Societies Act of 1904 to

set up agricultural credit cooperatives with an aim to bring down interest rates on loans through introducing competition in rural lending (M. M. Islam, 1978; Rutherford, 2009). After the departure of the British[35], the ruling Pakistani regime experimented with rural credit programs and established the specialized Agricultural Bank of Pakistan in 1956 to offer low-interest small agricultural loans to peasant producers in East Pakistan, which later became Bangladesh. In the 1960s, Akhtar Hamid Khan popularized the idea of self-help groups and the microcredit-based rural development model under the banner of the Pakistan Academy for Rural Development (PARD) in the Comilla district of Bangladesh. Many argue that Yunus's brainchild, the Grameen Bank, is an improvised version of the PARD model (Rutherford, 2009). This may be debatable but there is little doubt that the global popularity of the Grameen Bank and microcredit can be attributed to the emphasis placed on self-help, individual entrepreneurship, fiscal responsibility, the side-tracking of the state, and a promise to reduce poverty, which came at exactly the time when neoliberal policymakers were scavenging the globe searching for a suitable alternative to state interventionism in poverty reduction (Bateman, 2010).

[35] When the British left the subcontinent in 1947, they divided India into two countries: India and Pakistan. The Bengal presidency was split in half along religious lines according to a plan hatched by Lord Mountbatten: the eastern half, primarily a Muslim-dominated region, was annexed with Pakistan while the western half of Bengal remained with India. The eastern half became East Pakistan, which was separated by 1200 miles from mainland Pakistan. Soon, the economic fate of East Pakistan deteriorated as West Pakistan treated the region as its colony. Economic, political and cultural exploitation by West Pakistan led to massive popular revolts and resulted in a nine-month long war between East and West Pakistan in which three million Bengali civilians reportedly died. In December 1971, East Pakistan won independence and became known as Bangladesh.

In the past several decades, microcredit has transformed from an indigenous small-scale experiment to a massive financial operation deeply enmeshed in the global circuits of finance capital, speculative investment and securitization (Aitken, 2013; Bateman, 2010; Taylor, 2012). Buoyed by the embryonic development discourse of the 1990s in which poverty was redefined as an outcome of 'financial exclusion,' MFIs began to roll out an array of financial products to anyone deemed to be 'financially excluded' (Taylor, 2012). These highly profitable new products helped MFIs reduce their dependence on subsidized credit from the state and donor agencies and achieve financial sustainability. The unusually high rate of return on these products also attracted investments from variegated financial agents – from local commercial banks to Wall Street financiers – and exploded MFI's client base (Roy, 2010).

Microcredit's first brush with finance capital, however, can be traced back to 1982 when Citi Bank extended a loan to ACCION, a United States-based non-profit organization (Bateman, 2010). In a landmark report, Jennifer Meehan (2005) of the Grameen Foundation USA, a former employee of JP Morgan Chase, advanced the idea of scaling up microfinance operations and linking them up with global financial markets. Her argument was that the sector offered a tremendously profitable, low-risk and guaranteed growth opportunity outlet for finance capital. She estimated that the market demand for microfinance services stood at a staggering US$ 300 billion with a potential client base of 2.8 billion people vis-à-vis the prevailing credit supply of mere US$ 4 billion. In 2004, Developing World Markets (DWM), a private asset management firm, partnered with BlueOrchard

Finance SA to create a first-of-its-kind collateralized debt obligation in the amount of US$ 40 million based on microfinance risk to sell on the international capital markets. One estimate shows that microfinance investments offer an average return of 20 per cent or more on equity with 233 per cent annual portfolio growths (Swanson, 2007). In the context of Bangladesh, in the 1990s, commercially managed finance capital began to displace the traditional donor- and government-driven microcredit programs under the active supervision of the Consultative Group to Assist the Poor (CGAP), housed at the World Bank, and the United States Agency for International Development (USAID) (Bateman, 2010; Roy, 2010). This commercialization drive, which generally involves 'for-profit orientation' and market-based interest rates, 'financial self-sufficiency,' market-based funding sources, and 'equity investment' (Charitonenko and Rahman, 2002: 2), was spearheaded by BRAC[36] and the Association for Social Advancement[37] (ASA), followed by the Grameen Bank in 2001 (Hulme, 2008). By the early 2000s, all the top MFIs had abandoned subsidized interest rates in favour of cost-effective rates, and introduced highly profitable savings, insurance and retirement schemes. Soon, BRAC's credit operations entered the global financial market. In 2006, Citigroup helped BRAC to structure its first AAA-rated securitization of microcredit receivables. ASA followed suit when in 2008, ASA

[36] When BRAC started out in 1972, it was an abbreviation for Bangladesh Rehabilitation Assistance Committee, which later stood for Bangladesh Rural Advancement Committee. Currently BRAC is no longer an acronym. Since its foray into the international arena, the organization has been renamed as simply BRAC.

[37] ASA was established in 1978 as a radical people's organization devoted to reclaiming government-owned *khas* lands for the rural landless. In the early 1990s, ASA abruptly abandoned its appeal to radical social transformational goals in favour of market capitalism and transformed itself into a conventional microcredit organization

International Holdings, a subsidiary of ASA Bangladesh, raised US $150 million as equity from global private investors to finance its commercial microfinance programs outside of Bangladesh (Rutherford, 2009).

Commercialization turned out to be extremely profitable for the microfinance industry. As per a report of the Microcredit Regulatory Authority (2010) commissioned by the Government of Bangladesh, as of June 2010, the 482 listed MFIs with the Authority had $3.2 billion in total outstanding loans and $2.3 billion in total savings. In only ten years, the client base of these institutions had doubled to 30 million from 15.5 million in 2001 (Charitonenko and Rahman, 2002; Microcredit Regulatory Authority, 2010). Although borrowers' own savings constitute the majority of outstanding loans – client savings and cumulative surpluses constitute 59 per cent of the disbursed loans – they receive significantly lower interest rates on savings as opposed to the rates charged on their loans. The average interest rate spread[38] for the top ten MFIs is 18.88 per cent with an average portfolio yield of 25.02, an unusually high return on investment (Microcredit Regulatory Authority, 2010).

In a column in the New York Times, Muhammad Yunus lamented, 'Commercialization has been a terrible wrong turn for micro-finance, and it indicates a worrying "mission drift" in the motivation of those lending to the poor. Poverty should be eradicated, not seen as a money-making opportunity' (2011,

[38] Interest rate spread is defined as 'the amount of interest earned divided by the amount of interest earning assets minus the amount of interest paid divided by the amount of interest costing liabilities' (Microcredit Regulatory Authority, 2010).

para 5). Commercialization has actually helped MFIs shed their modest origin and catapulted them into the network of global capital. Roy aptly calls this new avatar of microcredit 'poverty capital,' in which 'development capital and finance capital merge and collaborate such that new subjects of development are identified and new territories of investment are opened up and consolidated' (2010: 30).

Pro-Market Agricultural Reforms and the Systemic Need for Credit

The expansion of microcredit among peasant communities did not occur in a policy vacuum. The true extent of complexities in which peasants have become dependent on MFIs for their credit needs and the consequences of this dependence on them can hardly be isolated from the shifting political economy of Bangladesh agriculture. Historically, Bangladesh is an agrarian economy with nearly two-thirds of the population directly or indirectly involved in some form of agricultural activities. At present, it comprises nearly a fifth of the country's overall GDP. A long history of colonial subjugation, first by the British and then by West Pakistan, left much of the country's agriculture in tatters. Productivity was low despite having one of the most fertile alluvial soils in the world, and devastating famines became recurrent phenomena. The pre-independence Pakistan government first inaugurated high-yielding modern cultivation methods, popularly referred to as Green Revolution technologies, in Bangladesh to raise productivity, but the process gained true momentum only after the country's independence in 1971 (Hossain, 1988). In the early 1970s, the government mobilized the Bangladesh Agricultural Development Corporation (BADC), a state-owned enterprise, to speed up the process of adopting high-yielding varieties

of rice among rural peasants. As has been seen in many other countries, this transition from traditional to modern agriculture not only created a dependency on the state for agricultural supplies but also germinated the seeds of an accumulation economy in the rural countryside and brought millions of peasants into the fold of monetary markets (see Akram-Lodhi, 2013; Patel, 2013). This is arguably the first moment of a transition to a system in which peasants required cash to grow subsistence crops. The state's subsequent move to subsidize the bulk of modern agricultural inputs, however, kept the demand for cash relatively low, but not for too long.

The state interventionism and socialization of the economy in the 1970s soon gave way to market-oriented agricultural reforms spearheaded by the Bretton Woods Institutions in the subsequent three decades. Bangladesh was among the first 35 countries to seek Structural Adjustment Facility (SAF) loans from the International Monetary Fund (IMF) in 1986–87, followed by another instalment of Enhanced SAF loans in 1990–91. The loan conditionalities stipulated the liberalization of imports and distribution of irrigation equipment and fertilizer, and the gradual phasing out of input subsidies (The Structural Adjustment Participatory Review International Network, 2002). Despite occasional violent street protests from farming communities, the government went ahead with its reform agenda. By 1995–96, the agricultural input subsidy was brought down to 0.83 per cent of the value of output from the already low rate of 2.53 per cent in 1988–89, price support was down to 0.01 per cent from 0.20 per cent, and the producer support equivalent was down to 0.84 per cent from 2.73 per cent during

the same period (Cabral et al., 2002). Simultaneously, the government ushered in an era of agricultural income deflationary policies by selectively using public grain procurement and food distribution systems to artificially depress grain prices to promote industrialization and urbanization. Due to the government's deflationary policies, between 1977–79 and 1991–93, the real prices of rice declined by 34 per cent (Dorosh, 2000), while income growth in the crop sub-sector crawled at 2 per cent per annum vis-à-vis the non-agriculture sector's average growth of 6.1 per cent (Hossain, 2004).

Two particular outcomes of these reforms are worth focusing on for the purpose of this paper. First, the combination of subsidy reduction and income deflationary policies turned many small peasants into deficit farmers; and second, the need for agricultural credit ballooned after the reforms by making peasants bear the additional costs of farming. In traditional farming, as Scott (1976) describes in his seminal study on Southeast Asian peasants, the demand for agricultural working capital is relatively low and infrequent since peasants grow one crop per year, and they can generally rely on mutual cooperation, e.g. seed and labour exchange, to further cut costs. Modern farming, with its extreme dependence on chemical inputs, is a capital intensive venture. The improvement in cropping intensity – from one crop to two or, in some places, three crop seasons per year – correspondingly amplifies the need for cash since farmers must secure capital as many times a year as there are planting seasons to avail themselves of the opportunity. Research shows that the majority of loans sought in rural areas during the pre-reform era were mainly for consumption purposes (A. Rahman,

1986), unlike the present era in which credit is sought to finance both production and daily consumption needs. The impact of income deflationary policies, on the other hand, not only ushered in an era of distress selling by peasants but also severely hampered their ability to generate surplus capital from agriculture that could be reinvested in the next cropping cycle. Thus, in an anti-agricultural policy climate, the improvement in productivity and cropping intensity magnified the need for credit.

The public financing system, specifically Nationalized Commercial Banks (NCBs), battered by adjustment-related downsizing, largely failed to respond to this burgeoning need for credit among small-scale peasants. In the 1970s and 80s, NCBs by and large depended on donor support to fund their lending programs, and agricultural credit seldom played a major role in their agendas. A report co-written by a former chief of the USAID's Food and Agriculture Office in Bangladesh estimates that in 1982, agricultural credit comprised only 4 per cent of the country's GDP for agriculture (Anholt and Wennergren, undated). Despite such a miniscule scale of lending, efforts were on to commercialize agricultural lending to the detriment of small-scale peasants. In 1977, the government collaborated with USAID to pilot test a three-year Rural Finance Experimental Project involving nine NCBs. The project was aimed at discarding subsidized agricultural credits in favour of market-rate-based lending for small-scale peasants. The experiment yielded an interesting result: as the interest rate moved higher, the demand for the loan declined for cropping purposes (ibid). By the 1980s, the ideological shift in economic thinking made donors reluctant to

strengthen the public rural financing system[39]. With the emergence of the Grameen Bank[40], funding began to be diverted to non-government sectors for rural development purposes. However, the private banking sector's lack of a robust and organized presence in rural areas left peasants desperately searching for external help to meet their credit needs. This private banking sector's lack of presence was due in part to the dominant role of agricultural cooperatives before the reforms and nationalization of private banks in the early 1970s, as well as their apparent disinterest in rural financing in the post-deregulation era (A. H. N. M. Chowdhury and Garcia, 1993). In this context, the Grameen Bank and other MFIs, armed with their door-to-door aggressive marketing strategies and proactive state and donor supports, soon gained a monopoly over the rural credit market and made it impossible for any viable alternative to emerge.

Commercial Microfinance and Peasant Dispossession: Stories from the Ground

It was in late January, 2012. I was travelling on a trawler to reach my research site in Dighipar[41], a remote coastal village in Bangladesh. Dighipar is situated on a vast *char*, an island that emerges naturally through the deposition of alluvial soils

[39] Bangladesh has several specialized state-run rural banking institutions e.g. the Bangladesh Krishi Bank (Bangladesh Agriculture Bank) and the Rajshahi Krishi Unnayan Bank (Rajshahi Agricultural Development Bank).

[40] Although the Grameen Bank was established through a government ordinance, it enjoys broader autonomy in the sphere of decision making and daily operations. Unlike other banking institutions in the country, it is not directly regulated by the central bank. The modus operandi and public image of the Grameen Bank is similar to an NGO than a conventional banking institution.

[41] I have used pseudo names of persons and places in this section to protect the privacy and anonymity of the research participants.

carried by a river, in this case the River Nanda. The winter sun was about to set and I could tell that almost all the people on board were returning home, except Mohammad Aslam. Mohammad is a short, thin young man with a good demeanour. He is an average guy, and you would be forgiven if you did not notice his presence. Yet what set Mohammed apart from the largely unremarkable crowd was the way he was dressed. His neatly ironed full-sleeve white striped shirt was tucked in in his black trousers, and his hair was carefully parted to the side. Mohammad is a field-level employee at a local MFI. He has to be very professional in the way he presents himself so that his clients, the women borrowers of the MFI he works for, fear and respect him. He was going back to the village at this late hour so that he could begin his weekly collection of loan instalments early the next morning. I befriended Mohammed and he proudly explained how extensive and successful his MFI's microcredit operation was in this village. I asked him how the borrowers' livelihoods have changed since taking out loans. He casually replied, 'I don't know whether the loans have made any positive impact or worsened their lives. It is none of my businesses. I get paid for collecting loans and inducting new members.' Mohammed's statement runs counter to the official discourse on microfinance, which states that field-level employees carefully assess the proper use and qualitative impact of loans before any new loans can be issued against an existing borrower. It is possible that Mohammed is not a typical employee. However, research suggests that the gulf between the official discourse and the realities on the ground is really wide (see A. Rahman, 1999).

In this village of 33,000 people[42], nearly 45 per cent live in poverty. Agriculture and fisheries are the two main occupations, while 10 per cent of the population is landless wage labourers. The majority of permanent structures are thatched houses – built of mud, straw, bamboo and wood. A few tin-roofed semi-concrete structures belong to relatively wealthy people and local businesses, while government offices are housed in old concrete buildings. The 12 MFI offices in the village are an exception, though. These are housed in newly built fully concrete plush structures with colourful acrylic paints on their outer and inner walls. A short walk in the local bazaar made it immediately evident which business was flourishing in this village: microfinance.

The majority of farmers in Dighipar are small, marginal and landless peasants. They sharecrop on lands leased out by landlords on a yearly basis. As per the 1984 Bangladesh Land Reform Ordinance, landlords are granted only one-third of the produce in cases where the cost of production is borne out by the sharecropper in its entirety[43]. However, the sharecropping peasants are forced into an illegal arrangement in which they give one-half of the produce to the landlord, but the landlord makes no investment and has no risk-sharing arrangement. This arrangement is very common in Dighipar. In cases where the land is very fertile, landlords demand upfront payment of a lump sum amount to lease out land for a

[42] I collected the demographic data cited in this section from the NGOs operating in this village.

[43] The 1984 Land Reform Ordinance provides that '(a) one-third shall be received by the owner for the land; (b) one third shall be received by *bargadar* (sharecropper) for the labour; (c) one-third shall be received by the owner or the bargadar or by both in proportion to the cost of cultivation, other than the cost of labour, borne by them.' http://bdlaws.minlaw.gov.bd/print_sections_all.php?id=665

certain number of years. This puts an extra burden on marginal and landless labourers who are unable to afford large sums of money. More often than not, the dearth of capital forces them to be content with low quality land and, therefore, lower yields. Like other parts of the country, the high-yielding dry season *Boro* rice varieties are the major crops grown in this village, followed by *Aman* rice.

It may sound paradoxical but the livelihood security of peasants in Dighipar is now intimately tied to the market. The monetization of the rural economy has successfully ushered in an unforeseen market dependency among peasant producers. If peasants fail to receive decent prices for their products, livelihood security may become extremely precarious. In 2011, the post-harvest rice market was unusually good and peasants were able to sell paddy rice for Taka 900–1000[44] per *maund* (40 kilograms). With the exception of marginal and landless peasants, most were able to make a profit out of agriculture. In the current year of 2012, however, the market is depressed and prices have fallen below Taka 550–650 per *maund*. This is after the government increased the price of urea fertilizer from Taka 12 to 20 per kilogram (kg) to reportedly bring it in par with the international market. It is worthwhile to note that the government had earlier increased the price of urea from Taka 6 to 12 per kg in June 2008. This latest price hike alone has increased the cost of production by Taka 800 per acre or Taka 32 per *maund*[45] of paddy. To top it off, peasants had a bad harvest because of

[44] In 2011, The US Dollar to Bangladesh Taka exchange rate was USD 1 equal to Taka 70.
[45] In a relatively good year, peasants get an average of 25–30 *mands* of rice per acre in this village.

increased pest attacks and excessively dry weather. No crop insurance is available, nor are government relief measures. The rising cost of production, the depressed paddy market, a bad harvest and the increased cost of living due to high inflation forced peasants to borrow large sums of money in 2012.

Despite the apparent success of MFIs, peasants continue to borrow from anyone who is willing to lend them money – friends, families, local acquaintances, *paikars* (intermediaries), *mahajans* (informal money lenders) and MFIs. Many peasants prefer to borrow from *mahajans*. In this traditional arrangement, borrowers make one-time payments with 50 per cent[46] interest on top of the principal loan amount after 4–8 months depending on the particular agreement between the parties involved. Peasants generally seek loans from *mahajans* at the beginning of the production season and repay after the harvest. The advantage with the informal loan arrangement is the flexibility often granted by money lenders in regard to repayment deadlines that has its roots in the historically practiced culture of leniency expected of the patron (in this case moneylenders) when the client is in distress. Nevertheless, a peasant must generally repay the existing loan to be eligible for further loans.

Some peasants defaulted that year on their loans. One landless peasant recounted that he failed to pay back his loan of Taka 3000 from a *mahajan* and therefore insisted his wife take out Taka 5000 from an MFI. His plan was to repay the

[46] Locals call it *der taka rin* (one-and-a-half taka loan). The way this works is if a person borrows TK100, he/she has to pay back TK150 in the time period agreed upon by the parties.

mahajan's loan and buy inputs for sharecropping with the new loan. As per MFI rules, every week the peasant's wife now pays an instalment of Taka 160, of which Taka 150 goes toward repaying the loan plus the interest and Taka 10 is deposited in her mandatory savings account. She must do so for forty continuous weeks without any reprieve. I asked the peasant whether he wanted to save money, to which he wryly smiled and replied, 'I can't afford food three times a day to [feed] my children. Why would I want to save money?' Due to the depressed rice market he was unable to continue with microcredit loan instalments on time. But the weekly loan collector would not give in to any of his excuses. In the beginning he sold off some petty household items for cheap. He had already sold off his inherited lands in the previous years to clear off prior debts. One week the loan collector got so angry at the peasant and his wife for repeatedly failing to repay instalments on time that he started yelling at the peasant's wife. At one point, he locked their house and refused to leave until they paid back the instalment. They felt very embarrassed and insulted. These days, the peasant does not take chances with the loan collector. He has since sold off the rice he had saved for consumption and has cut back on his family's daily diet. His three little children often cry for more food but he is unable to provide it. Being underfed, he himself often feels dizzy while working the soil, but he insists that 'the loan has to be paid back.'

This story of having to sell rice saved for self-consumption to repay microcredit instalments is illustrative of small-scale peasant producers who have little or no access to NCBs. Historically, subsistence peasants in Bangladesh and elsewhere

have grown food for self-consumption (Shanin, 1973). Their relationship to the market was generally of a secondary nature in that they would sell surplus grains only after storing enough for six-month worth of family consumption or to support them till the next harvest (Scott, 1976). In Bangladesh, the memories of frequent starvation and death from famines, with the latest one occurring in 1974–75 in which 1.5 million people reportedly died of starvation (Alamgir 1980), reinforced their scepticism about any external help in the event of a tumultuous market. From the early days of colonialism, the state would only manifest itself to collect taxes and then disappear again, leaving its poor subjects fending for themselves during periods of hardship. Such is the scale of their insecurity that many landless non-farm labourers engage in part-time agriculture in sharecropping arrangements to grow some rice for consumption. Such an arrangement may make little economic sense to an outsider because the labourers could easily earn more by working fulltime in the non-farm sector and buy food from the market, rather than invest their time in this apparently zero-sum game. However, in a country where market failures are pervasive and famines are recurrent, this backup arrangement (i.e. the farming for consumption) may turn out to be a crucial safety valve. Besides, in a peasant culture, the ability to grow food for self-consumption is an integral part of peasants' identity and definition of poverty. A peasant interviewed for this research put it this way: 'if you have to buy rice from the market because you can't grow it, you are the poorest of the poor'.

The compulsion to sell grains to pay off loan instalments jeopardizes a peasant's livelihood security, which has both cultural and economic implications. The cultural implication is that it degrades peasants' identity by incapacitating their ability to store food for self-consumption, which in their eyes makes them worse than poor. The economic implication is even more nefarious. In the past, peasants' dependency on the market, as I mention above, was secondary, but with the introduction of microcredit, this becomes primary and often permanent. When peasants are constrained to sell rice that had been saved for family use, their food provisioning must now rely upon external sources. The breakdown of the patron-client relationship of the earlier era has already taken away that extra layer of livelihood security available to peasants. Moreover, peasants, by choosing to seek credit from MFIs, free up the local patron of any moral obligation he/she might have felt towards protecting his/her subordinate subjects. In this social vacuum, the market emerges as the only available option. The peasants' access to food in this case undergoes a profound transformation in that it becomes predominantly mediated by the market. This exposes them to the very market volatility that they wished to avoid by taking up subsistence farming.

In addition to this long-term structural vulnerability, peasants also suffer immediate losses when they allow the market to mediate their food provisioning. In Bangladesh, a few powerful and rich groups of intermediaries exercise outsize control over the rice market in the absence of a strong market regulatory mechanism (Misra 2012). Moreover, in an 'hourglass shaped' (Carolan, 2012: 40) market, such as the one that exists in Bangladesh, the abundance of producers and

consumers at the two ends of the glass grants a concentrated group of intermediaries a tremendous monopsonic power. Due to this asymmetric power relationship, intermediaries are often able to artificially depress the wholesale purchase prices of rice below the market level. As a result, peasants have to sell their product at discounted prices. However, when they turn into buyers, the situation is simply reversed. Just like any other consumer, they must now also pay the existing retail prices – which are generally much higher than wholesale prices – to buy the same product they had earlier sold at discount prices. This negative price differential seriously compromises the food and livelihood securities of peasant families.

The ground on which MFIs rationalize their higher interest rates —that borrowers invest microcredit in profitable entrepreneurial activities, which yield regular and high returns on investment (Yunus 2003),— is seldom true. At least, the return from agriculture is always low. The money peasants invest in agriculture hardly returns enough to pay for the supplies, while their labour is taken for free. MFIs may argue that their loan programs are not designed for agricultural communities. The fact remains that the triumphant arrival of microfinance has effectively driven out the existing subsidized agricultural credit system, leaving peasants bereft of any viable alternatives. In a depressed and crisis-prone agricultural market where peasants regularly struggle to make ends meet and fail to save enough re-investible capital, the benefits of subsidized credit cannot be overstated. The interest forgiveness and agricultural loan waivers up to a certain limit announced by the state throughout the 1980s and early 1990s were a great relief to indebted

peasants. With commercial microfinance, any such reprieve is beyond imagination. MFIs' compulsive focus on organizational sustainability, high interest rates and rigid payment schedules further elongates the misery of peasants and locks them in a cycle of debt, as we shall see below.

The demand for agricultural credit is at its peak during the *Boro* planting season in December and January. *Boro* rice cultivars are highly dependent on extensive irrigation and adequate supply of chemical inputs. In addition, the maturity period of *Boro* rice is considerably short (four to five months) compared to traditional varieties, and late planting increases the risk of lower yields. Logically, therefore, peasants turn desperate at the beginning of this season to secure loans. Since the majority of agriculturists grow *Boro*, loans are extremely hard to come by from friends, families or local acquaintances. Seeking a loan from m*ahajans* or MFIs is the only alternative. Peasants who borrow from MFIs must start repaying weekly instalments after a grace period of one week. Of course modern peasant agriculture is embedded in the capitalist market system, yet as Mann and Dickinson (1978) famously noted, the rate of return on investment in agriculture is substantially delayed by the long production time. During this nature-imposed prolonged gap, peasants will have no immediate access to money, yet they must find a way to repay instalments. Faced with this, many peasants borrow a second loan from another MFI or from informal money lenders. This solves the problem but only in the short-term.

As a respondent in this research described, his wife had borrowed Taka 5000 from the Grameen Bank to help him buy inputs, and two weeks later, she borrowed

another Taka 5000 from ASA to repay the Grameen loan instalments. The couple had to pay back both the loans simultaneously and in weekly instalments. The repayment amounts are predetermined as per standard loan terms. At the end of the 45 weeks term, the couple ended up paying back Taka 14,400. Interestingly, unlike the first loan, which for all practical purpose was an operating capital or an investment, so to speak, the second loan had no investment purpose. It was purely sought to repay the first loan and part of the second loan instalments itself, and thus had no productive use and return potential. This way, the wife paid Taka 3500 as interest (total repayment 14,400 minus 10,000 principal amounts and 900 savings) on her productive investment of Taka 5000 in 45 weeks at an effective flat rate of 81 per cent. Unless they made at least 90 per cent profit that year, an absurd proposition to begin with, the peasant and his family would sink in further debt and eventually be forced to sell whatever remaining land or assets they possessed. The story does not end here though. Within four months the second loan was exhausted as well, which roughly coincided with early harvest season since the loan was sought at the beginning of the growing season. The peasant was now under immense pressure to immediately sell his rice paddy to clear off the remaining instalments. Since *Boro* accounts for nearly 60 per cent of the total domestic annual supply, the glut of rice in the market exerted a downward pull on prices. The peasant incurred considerable loss due to the pressure to sell in this depressed market. Although at that point he was willing to repay the remaining amount in one instalment, the loan collector refused it as it was not permitted.

Borrowing from MFIs thus puts a double squeeze on peasant producers: they not only pay appalling interest rates on their loans but also lose out on the market due to the colossal pressure applied on them to hurriedly sell their products to repay the loans. Informal money lenders at least would have waited till the harvest, thus relieving much of the psychological pressure during the intervening period. MFIs do not allow that, for their entire model is built around maximizing repayment rates and ensuring organizational sustainability, come what may. I do not, however, suggest that the peasant's economic situation would be any better had he taken out a loan from money lenders. The point is that the narrow focus on organizational sustainability precludes the prospect of microcredit emerging as a viable alternative to fight poverty and break the cycle of debt. On the contrary, the systematic pressure applied by MFIs encourages premature market participation and, in the process, renders the peasants' existence precarious.

Peasants, however, have survived centuries of exploitation, marginalization, forcible expulsions from the land and oppressive tax regimes. Their flexibility and coping mechanisms have helped them thwart the ever-present dangers of imminent dispossession. To stave off the pressure of debt, many sharecropping peasants work as labourers on neighbouring plots to generate periodic income. This has been an effective coping mechanism for decades. As the rural economy became monetized, a growing number of peasants sought part-time employment in the local non-farm sector to generate cash income. An emerging trend, which is fast becoming popular among marginal and landless peasants, is to migrate to cities for a short period and work in the construction or informal sectors.

Admittedly, it is primarily the peasants' poverty and their need for cash that is at the root of these trends. Nevertheless, microcredit plays a crucial role in these trends by heightening the demand for cash, as loan instalments cannot be paid in kind. The weekly nature of instalments constrains peasants to look for a steady source of income outside of agriculture throughout the loan term. These trends align well with the World Bank's vision of 'three pathways out of rural poverty,' outlined in the annual 2008 World Development Report (World Bank, 2007). Microcredit, according to the World Bank's vision, can therefore be seen as facilitating a transition towards a 'poverty free' rural Bangladesh. The reality, though, is markedly different.

The temporary migrations usually last from a few weeks to a few months during the period between sowing and harvesting rice paddies. Modern rice cultivation requires constant care and is a labour-intensive process. Generally, the male member of the household migrates, leaving the female or children the responsibility to water, weed and apply pesticides. This extra workload on top of their daily household work, not to mention their regular agricultural work schedules, adversely affects their health. The women I interviewed complained of various health problems (e.g., increased exhaustion, intermittent fevers, colds, headaches, stomach upsets, bodily pain) due to the extra time spent in the field. In the case of children, work-related absences from school affected their education. In some cases, such households occasionally hire wage labourers, if they fail to convince a relative to do the job for them. They then spend their income mostly

repaying loans and paying for hired labour without making any sustainable contribution to their own standard of living.

Another common strategy among peasants to extend livelihood security has been to diversify income sources by engaging in some form of off-farm activities, such as small craft production and raising poultry or livestock. Typically, women carry out these tasks with or without the help of male members of the household. Profit motive is the last thing that drives peasant women into these activities. Normally, they would sell these products in the local market for a modest price. Nonetheless, the extra cash flow effectively offers peasant households some buffer against starvation or contingency needs when the next harvest is still a few months away and no help is readily available in the locality. When a peasant woman seeks microcredit to generate extra income, she is essentially trying to maintain her family's subsistence rather than attempting to transform herself into an entrepreneur. Many peasant women reported that they used their entire proceeds from off-farm activities to repay loan instalments. One respondent described the difficulty she once faced when her husband suddenly fell sick and missed several days of work in the field. She had already exhausted her entire savings from raising poultry to pay off loan instalments and had nothing left to spend on arranging proper treatment for her husband. They could not manage hired labour and consequently had comparatively low yield that year due to inadequate care.

To MFIs, these women represent emergent entrepreneurs. The 'higher income margins' from such activities vindicate their notorious interest rates. As Scott so eloquently pointed out, 'treating the peasant as a would-be Schumpeterian

entrepreneur misses his key existential dilemma' (1976: 4). There is a clear conceptual difference between a peasant woman who undertakes off-farm activities to secure her family's subsistence, and a petty capitalist entrepreneur who establishes a small business as her primary source of income with profit as the main motive. MFIs' gross categorization of peasant women – struggling to secure their livelihood through a secondary income source – as independent capitalists, whose identity ceases to be tied to their peasant origin and is supplanted by only their gender, misses this key conceptual distinction. The deceitful trickle up of extra little income generated through what Chayanov ([1926] 1966) would call 'peasant self-exploitation' by imposing outrageous interest rates may help MFIs accumulate massive capital, but it ruthlessly exposes peasant households to future risks and undermines their very survival strategy.

Many peasants interviewed for this research expressed their resentment toward and fear of the microcredit loan collection process, which often borders on harassment and violation of their rights to privacy. Nearly a quarter of them, in fact, stopped taking loans from MFIs and permanently returned to informal lenders. The fact that MFIs are powerful institutions and any defiance would inevitably invite grave consequences deterred the peasants from confronting the intimidating tactics being used again them. They pointed me towards abandoned houses where once landless peasants used to live. Being unable to repay their loans and in the face of unremitting pressure from MFI loan collectors, they fled the area with their families without any trace. When I asked one elderly peasant whether he had sought any loan from MFIs, he replied, 'I would rather commit

suicide than taking NGO loan' (local term for microcredit). He did not elaborate further. By then I already knew why. Every peasant takes immense pride, though often hidden, in their profession, knowing that they feed the rest of the country. The degrading consequences of microcredit – not just economic but psychological as well (i.e. the humiliation) – hurts this source of pride and the peasants' self-esteem. For some, therefore, microcredit is no alternative at all.

Conclusion

In this paper, my intention has not been to hold microcredit responsible for everything that plagues peasant agriculture, nor do I accuse it of being the principal cause of peasant dispossession in Bangladesh. The dispossession of small-scale, marginal and landless peasants in the country has been in the making since the colonial era. My goal has been to highlight the precariousness of the current conjuncture in which microcredit has emerged as one of the major levers of peasant dispossession. The depressed agricultural market, manufactured by deflationary income policies and pro-market reforms, provided the right conditions and impetus for MFIs to penetrate the peasant sector. The commercialization of microcredit in the 1990s undercut any remaining elements of MFI's anti-poverty agenda by reorienting the focus away from social development and firmly into organizational sustainability. Adopting higher interest rates to generate profit transformed microcredit into an effective instrument for capital accumulation. Therefore, the phenomenal expansion of MFIs during this period had more to do with bringing in new subjects under the logic of capital than to eradicating poverty on a greater scale. The peculiar nature

of peasant agriculture in which a large part of production is channelled to satisfy domestic consumption, and the nature-enforced delay on the return on investment, runs counter to microcredit's requirement of highly productive investment and consistent return. This incompatibility of the two sectors has quite predictably reduced the far inferior peasant sector into debt peonage, the first sign of an imminent dispossession, as Luxemburg (1963) argues.

Many NGO personalities and the government have now come to realize the perils of weekly instalment based microcredit use among peasant farmers. Dibalok Sinha, the executive director of an NGO, Dushtha Shasthya Kendra (DSK), admitted to this researcher that the seasonal nature of agricultural income makes conventional microcredit disadvantageous for peasant communities. DSK began its microcredit operations by replicating the Grameen Bank model, but later introduced seasonal one-time loan repayment options to make it convenient for peasant farmers. Several other MFIs are also experimenting with their own agricultural microcredit schemes that do not require weekly repayments. Nevertheless, MFIs are constrained to charge comparatively higher interest rates to maintain organizational sustainability, which makes their credit operations unsustainable for peasant agriculture. As I argue in this paper, there is no alternative to subsidized agricultural credit administered by the government. Recently, the central bank of Bangladesh directed the NCBs to increase the volume of their agricultural credit distribution among farmers. The government and the central bank must ensure that the NCBs are able to charge lower interest rates and that they proactively bring small and marginal farmers under their loan

operations. The government may opt to use the existing vast network of MFIs in rural areas to distribute subsidized credit where the presence of NCBs is limited. However, any such attempt must be strictly monitored and strongly regulated by the government. The government must also seriously reconsider its neoliberal agricultural policies to reign in the growing incidence of peasant indebtedness in Bangladesh.

Finally, markets have always played an important role in the life of peasants, who always welcome the opportunity to make a decent profit by selling their surplus. Nevertheless, when the market begins to mediate a peasant's own access to food, the entire foundation of the peasant economy runs into an existential crisis. Persistent borrowing from MFIs makes the market ubiquitous in a peasant's life. This exposes them to the risks and volatilities of the market that a peasant must avoid to survive. This very market dependence, though, keeps the cycle of accumulation moving for MFIs, for no accumulation is possible unless the market is mediating a peasant's everyday transactions.

To conclude, by way of demonstrating the ways in which microcredit creates indebtedness among poor peasants, this paper makes an important contribution to the emerging debate about MFI's role in propagating over-indebtedness and poverty-traps among their borrowers. I expect that this sector-specific analysis will deepen our understanding of the circumstances in which microcredit borrowers are forced to seek simultaneous multiple loans, and the impacts of these loans on their livelihoods. This emphasis on the qualitative impacts of indebtedness on the livelihoods of microcredit borrowers will add an important

dimension to the current research in this area, which mostly focuses on the extent of indebtedness.

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CHAPTER FIVE

Environmental Changes, Markets and Smallholder Farming in Bangladesh: Questioning the Technological Optimism[47]

Introduction

> In 2011, we had a really good harvest of BR 29[48] rice. We applied TSP (Triple Super Phosphate), MoP (Muriate of Potash) and urea fertilizers, which cost us Taka[49]18000 for three *bighas*[50] of land. This year (2012), the fertilizer price increase has added Taka 7000 to the cost. Meanwhile, private traders are selling substandard fertilizers. We will have to spend additional money on irrigation too, since we could only manage a dry patch of land. You know, we do not own the land. We sharecrop. We have to pay Taka 3500 per *bigha* in advance to the landowner, just for the *Boro*[51] season. Already, heavy fog has twice damaged our (paddy) seeds. On top of it, the recent hailstorm destroyed a good part of our standing crops. Last year, we harvested 29.5 *maunds*[52]of paddy per *bigha*, and the price was decent too. The market has since crashed and the weather has turned hostile. We also have to pay back our loan from the Grameen Bank. Both my wife and I work tirelessly, because we cannot hire outside labour. I am really worried... Only Allah can save us!
>
> – Joynal, 32 years old male sharecropper.

This above narrative of peasant[53] agriculture illustrates the unprecedented extent to which the market and environment presently dominates the livelihoods of

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[47] This Chapter has been submitted to *Climate and Development* and is undergoing review. It has also won the Canadian Association for the Study of International Development's prestigious 2014 Kari Polanyi-Levitt Best Graduate Paper Award.

[48] BR 29, officially called BRRI *Dhan* 29, is a high yielding *Boro* rice cultivar developed by the Bangladesh Rice Research Institute.

[49] Taka is the Bangladeshi currency. In early 2012, one US dollar was equivalent to Taka 70.

[50] *Bigha* is the traditional land measurement unit, which is widely popular in Bangladesh. One *bigha* is equivalent to 33 decimals (0.134 hectare) of land in this village.

[51] *Boro* is an irrigation-fed dry season rice crop. The two other crop seasons are *Aman* and *Aus*.

[52] The *maund* is the traditional weight measurement unit. One *maund* is equivalent to 37.5 kilograms.

[53] Throughout this article, I use the terms peasants and smallholders interchangeably. I do not make any analytical distinction between capitalist peasants and subsistence peasants. However, I do recognize the difference between small-scale, medium-scale and large-scale peasants. That being said, it is the first category – small-scale peasants typically operating less than a hectare of farmland – which is the preoccupation of this paper. These peasants may be owner-operators, sharecroppers or a combination of the both.

smallholder peasants in Bangladesh. The inauguration of Green Revolution technologies in the 1960s and the ensuing fundamental transformation of agriculture from subsistence- to productivity-orientation ruptured the existing largely symbiotic relations between peasants and nature. Besides, the Green Revolution also rendered peasants' traditional agricultural inputs and knowledge obsolete and made them dependent on the state for agricultural input supplies and technical know-how. The globalization-led economic reforms of the 1980s and the subsequent decades gradually diminished this state-centric support structure, and exposed peasants to the vagaries of the market. In this context, climate change-related erratic rainfall, increased flooding, extended droughts, frequent tropical cyclones, tidal surges, and saline water intrusion pose significant threats to the country's agricultural communities (Adger et al., 2003; Agrawala et al., 2003; Huq and Khan, 2006; M. F. Karim and Mimura, 2008; MoEF, 2005; MoEF, 2009). Literature suggests that the intersection of climate change, market-oriented economic reforms, institutional factors, and chemical-intensive Green Revolution technologies seriously undermines livelihood securities of smallholder peasants (Appendini and Liverman, 1994; Eakin and Lemos, 2006; Eakin et al., 2009; Leichenko and O'Brien, 2008; O'Brien et al., 2004; Silva et al., 2010).

Independent scientific studies have extensively documented the extent of potential hydro-meteorological impacts of climate change on Bangladesh's agriculture and future grain production scenarios (Thomalla et al., 2005). Yet what is severely lacking is thorough sociological insight into the livelihood implications of these hydro-meteorological changes on peasant communities in the context of their

existing structural vulnerabilities. Arguably, these changes will play out differently according to the particular structure and organization of specific communities, the nature of their agricultural practices, their geographic locations, the institutions that mediate their access to livelihood resources, and the processes through which they secure their material reproduction. To be sure, a number of scholars have conducted research using the vulnerability and hazard-risk analysis perspectives to focus on the 'adaptation,' 'coping-mechanisms' and 'resilience' of different rural communities affected by floods, cyclones, river erosion, and other forms of extreme natural disasters (see Ahmed, 2006; Brouwer et al., 2007; Mutton and Haque, 2004; Pouliotte et al., 2009; Rawlani and Sovacool, 2011; Thomalla et al., 2005). These studies offer a thorough and rich understanding of the susceptibility of natural resource-based communities to major environmental disasters, and the strategies they deploy in the face of such events. One major shortcoming of these studies, however, is their implied treatment of the social as a static and given category, which prevents them from analyzing the present vulnerabilities of these communities as contingent upon their specific historical trajectories of systemic exploitation and power struggles. Moreover, methodologically, their macro focus on broader atmospheric factors tends to ignore the consequences of local communities' actions and practices upon the shaping and modification of their micro environments. In so doing, they limit the possibility of arriving at a holistic understanding of human-environment interactions at both the macro and micro levels. This insufficient focus on the nature of the existing social and the methodological limitations of these studies –

the two features that share a striking resemblance to mainstream environmental policy discourse – subtly promotes a status quo by discouraging any radical break from the current practices and actions at the micro level. Further, as I will show, by framing these environmental threats as exogenous factors, these studies misunderstand the gravity of the problem and in so doing breed false technological optimism that the accelerated use and sophistication of technologies could successfully protect local communities from the dangers of future environmental crises.

To illustrate the preceding shortcoming, consider Bangladesh's landmark climate change policies formulated by the Ministry of Environment and Forests (MoEF) – the 2009 *Bangladesh Climate Change Strategy and Action Plan* (BCCSAP) – and the 2005 *National Adaptation Programme of Action* (NAPA). These policies are based on the assumption that severe climatic events and sea-level rises stand to lower the country's annual crop production capacity and undermine national food security. The BCCSAP proposes to introduce highly sophisticated 'climate resilient cultivars' (CRCs) to maintain crop productivity (MoEF, 2009: 34-35). The MoEF as well as the Ministry of Agriculture are convinced that the successful breeding and dissemination of heat, drought, salinity and submergence tolerant crop varieties are the only means to achieve sustained productivity in the wake of climate change. In fact, the Bangladesh Rice Research Institute (BRRI), the Bangladesh Agricultural Research Institute (BARI), and the National Agricultural Research System (NARS) have already undertaken research projects to develop such cultivars by engineering crop germplasm with the help of gene modification

technology. CRCs are no different than the existing High Yielding Varieties (HYVs) insofar as the focus is on their external input reliance and propensity to promote rice monoculture.

In this context, this paper offers an in-depth analysis of how the intersection of markets, institutions and nature – both the immediate ecosystem and the broader climate system – shape the livelihoods of smallholder peasants in Bangladesh. In carrying out this ambitious research agenda, this paper resorts to a methodological adjustment by placing an equal emphasis on both the micro ecosystem, which is subject to a particular community's practices, and the macro atmosphere, which may be immune to such localized actions, but is vulnerable to the collective actions of many such communities across time and space. Following the leads of Foster, Clark and York (2010), this paper posits that the present states of both the natural and social worlds, to a certain extent, share a common dialectic history, which is evolved and modified by the mutual interactions of the natural and social worlds. That being said, this paper's limited scope does not permit a Braudelian investigation into global nature-human interactions. For that, I rely upon the existing literature on global environmental changes. The underlying objective of this paper is to question the technological optimism inherent in mainstream policy discourse by highlighting the systemic vulnerabilities of smallholder peasants in Bangladesh. I posit that these vulnerabilities emanate from the specific configuration of the market, institutions and agricultural practices, and the way in which these factors, individually and collectively, act upon environmental

variables.

This paper is primarily based on my doctoral fieldwork conducted in early 2012 in three Bangladeshi villages. Over the course of five months, I formally interviewed 64 smallholder households; facilitated six focus groups, separately with female and male farmers; and conducted 18 semi-structured interviews with environmental and women's rights activists, non-government organization (NGO) professionals, local government officials and key policymakers. I supplement this with secondary data collected from government censuses, policy documents, local government offices, baseline surveys conducted by different NGOs, and personal communications with my key informants and resource persons. The three villages included in this study are located in three different climatic zones. The first village is located in Patuakhali district, a coastal region in the south of the country and is prone to cyclonic storms, tidal surges, flooding and saline water intrusion into agricultural lands; the second village is in Pabna district, which is located in the central-west on the Ganges-Jamuna river basin and is prone to frequent flooding; and the third village is in Panchagarh district, which is situated in the upper north-west and falls in a drought-prone zone. For the convenience of this paper, I substitute the actual village names with their geographic locations – South, Central and North villages, respectively – to refer to the three villages.

Climatic Change, Peasant Livelihood and Agriculture

With more than 150 million people living in a tiny, low-lying and geographically precarious landmass, Bangladesh features among the top five long-term climate-vulnerable countries on the Global Climate Risk Index (Harmeling and Eckstein, 2012). The country's geographical location on the northern littoral of the funnel-shaped Bay of Bengal, its proximity to the Himalayas, and the large proportion of its landmass being on the deltaic plains of the *Ganges-Brahmaputra-Meghna* (GBM) river system make it extremely vulnerable to climate change (Mirza et al., 2003; MoEF, 2009). The Intergovernmental Panel on Climate Change (IPCC) predicts that by 2050 the country stands to lose 8 and 32 percent of rice and wheat production, respectively, due to projected temperature rises and sea level changes (IPCC, 2007a). These future predictions aside, Bangladesh has experienced significant changes in seasonal climatic patterns. The frequency and severity of natural disasters have intensified in the recent past, which many climate experts associate with global warming. In the last three decades, six major floods have hit the country, inundating a large portion of its landmass, causing US$8.38 billion in property and infrastructure damage, and killing an estimated 11,000 people. During the same period, five major cyclones have taken an estimated 144,624 lives and US$3.44 billion in economic losses (MoEF, 2009: 9; Thomalla et al., 2005: 3).

Between 2007 and 2009 – within the space of just 18 months – two major cyclones, *Sidr* and *Aila*, wreaked havoc in the coastal areas of Bangladesh. A large section of the South village, my first research site, was inundated for several

days after these two cyclones struck. This village's proximity to the Bay of Bengal makes it extremely susceptible to cyclones and storm surges. Cyclone *Sidr*, which reached a peak wind speed of 160 miles per hour, killed a large number of cattle and poultry. Standing paddy and other crops sustained extensive damage from flooding. Thanks to a dam, part of the agricultural land escaped saline water intrusion from the Bay of Bengal. Unfortunately, the majority of marginal and landless peasants live in precarious temporary settlements outside the area protected by the dam and adjacent to the river that separates this *char*[54] from the mainland. Many peasants were able to seek refuge in local cyclone shelters; however, their bamboo-made houses were swept away by strong tidal surges. Saline water intrusion rendered their unprotected agricultural lands largely unproductive. Both cyclones attracted international attention, and relief poured in from various government and international aid agencies. Yet these peasants benefitted little as locally influential politicians and their allies misappropriated the relief goods.

Apart from these large-scale catastrophes, even minor weather events disproportionately devastate the livelihoods of smallholder peasants. A few days before my arrival, the North village was battered by a hail storm. Farmers were awaiting the harvest of *Boro* rice in a couple of weeks. Incessant hailstones hit a mother and her infant boy, and both died on the spot. Hail storms are common in Bangladesh during the pre-monsoon summer season. Nevertheless, elderly locals

[54] The local term for a natural island that emerges through the deposition of alluvial soils carried by a river.

were surprised at the intensity of the storm and the large size of the hailstone, something they had not seen before. When the storm struck, BRRI 28 rice paddies had already started heading[55], and the interminable hail extensively damaged rice panicles and dislodged a large proportion of the maturing stalks. Peasants in this village generally grow BRRI 28 rice to raise cash, and they were now looking at the prospect of a substantially lower production. The storm also defoliated and snapped off maize stalks. The entire locality bore the look of a war-ravaged place with torn down structures, uprooted trees and littered debris. This storm was comparatively a minor weather event and remained largely unreported in the national media. However, during my interviews, all the peasants expressed concern about how they would repay their debts and manage food for their families. Their only hope was now pinned on an unlikely bumper harvest of BRRI 29[56] rice, which was relatively young at that time and escaped major damage.

In all three villages, one noticeable common refrain among peasants these days is the blurring of seasonal differences. As an elderly peasant noted, 'We always heard that Bangladesh is a land of six seasons. I cannot say the same anymore. Now all we see are two seasons – winter and summer.' There may be a certain degree of exaggeration in this statement, and meteorologists have yet to prove the veracity of this claim. It is true that the Bengali calendar year has six seasons, but

[55] Heading is part of the reproductive stage of a rice plant when the panicle tip emerges from the flag leaf sheath.

[56] Both BRRI 28 and 29 are HYVs invented by the Bangladesh Rice Research Institute. The main differences between these two varieties are the growing period and yield potential. BRRI 28 takes 140 days to mature as opposed to 160 days for BRRI 29. The yield potential of the former is 5.5–6 tonnes per hectare, and 7.5 tonnes per hectare for the latter.

only three of these – the pre-monsoon summer from March through May, the rainy monsoon from June through October, and the dry winter from November through February – are prominent and readily distinguishable in terms of their climatic characteristics (S. Islam, 2003). Nonetheless, for the largely devout Muslim peasants in Bangladesh, nature is divine and beyond the human realm. Yet the recognition that the climate is changing, which apparently contravenes their religious convictions, speaks volumes about the practicality of the claim. Unlike the educated middle class whose climate indoctrination is mainly attributable to the media, peasants become aware of environmental changes through their everyday interactions with nature and their accumulated knowledge of local climatic patterns. They negotiate the impacts of these changes on a regular basis, whether by altering their cropping decisions, or adjusting the traditional planting and harvesting dates in keeping with weather unpredictability.

The consensus view about climate change across the three villages was that there was a marked shift in the rainfall pattern, which, according to peasants, has become extremely erratic during the monsoon season in recent decades. Granted, the seasonal distribution of rainfall has always been unpredictable, and prolonged periods of drought-like conditions or extremely wet monsoon are not uncommon in Bangladesh, which people often incorrectly equate with climate change. Moreover, annual precipitation patterns depend on a range of atmospheric factors, including the El Nino-Southern Oscillation (M. R. Chowdhury, 2003). The point I make here is not whether the observed anomaly in rainfall patterns actually indicates a broader shift in the climate system. Rather, my intention is to highlight

the observed increases in the degree of this unpredictability that affect peasants' time-tested crop management practices. Sufficient rainfall during the planting and flowering stages of the rain-fed transplanted *Aman* rice is essential for a good harvest. *Aman* is the second important rice crop in Bangladesh after *Boro*. The persistent lack of rainfall during the early monsoon season over the past few years compelled many peasants to postpone planting dates from June/July to August. This problem is especially acute in the North village in my study, which has a history of intermittent drought-like conditions. The problem, however, is that if the *Aman* planting is delayed by much, it may not leave sufficient time to prepare the soil for the subsequent *Boro* planting. In addition, peasants also risk higher production costs as they may need to hire additional labour to manage the simultaneous harvesting and seedbed preparations of *Aman* and *Boro* paddies, respectively. Besides, late planting increases the risk of lower production as the onset of winter may impede the *Aman* grain filling and maturation stages.

Although modern rice varieties, especially the high-yielding *Boro* varieties (HYV *Boro*), are mostly photo-insensitive, scientific research into rice phenology shows that air temperature and the length of the growing season play a crucial role in determining the yield potential (Mahmood, 1997). Smallholders in the South village have been experiencing a gradual alteration in the arrival and duration of seasonal cycles. They observe that, nowadays, winter arrives as late as mid-December instead of November and extends well into March in place of February. The majority of peasants in this village cultivate HYV *Boro*. Depending on the particular cultivar, they generally transplant *Boro* seedlings in January/February

and harvest in April/May. Although the cooler air temperature during the early vegetative stage is beneficial for plant growth, the persistence of low temperatures during the reproductive stage in March slows down the panicle development and heading process, and produces a high proportion of sterile spikelet (Mahmood, 1997).

In the North and Central villages, climate change reportedly manifests partially in the form of early winter arrivals, elongated cold spells, increasingly foggy weather and sudden appearances of cloud cover during the winter season. As a peasant noted, 'Rain has disappeared. Winter was somewhat tolerable. Not anymore. The days are foggy. The cold and foggy weather brings in more pests and insects, which wreaks havoc on green chilli, cucumber, tomato and paddy plants.' Another peasant added, 'There is no respite from this erratic climate. If you take comfort in the fact that the winter is finally gone, there comes the wind.' The month of *Baishakh* (mid-April to mid-May) is the official beginning of summer in Bangladesh, and *kalbaishakhi*[57] is common in the northern and central parts of the country during this season (Yamane et al., 2010). However, nor'westers generally last for a short period of time. Sustained periods of strong wind throughout the day are unusual and not associated with nor'westers. The peasant added, 'This strong wind dislodges paddy stalks and destroys panicles. I had never seen such strong wind when I was a kid.' Many peasants who had

[57] *Kalbaishakhi* or nor'wester is a severe thunderstorm that is often accompanied by wind gusts, squalls and hailstones. During the pre-monsoon summer season, the convergence of dry and cold air from the northwest with the warm southerly wind heading from the Bay of Bengal generates these storms.

planted BRRI 28 found that their rice grains turned blackish brown from excessive wind exposure.

Green Revolution Technologies and Ecological Devastation

While the government and mainstream environmental NGOs are more vocal about climate change's effect on agriculture, grassroots activists and peasants are more concerned about the impact of local ecological devastations on agricultural production precipitated by modern farming practices. In the 1960s, the Pakistan government[58] first inaugurated modern farming technologies in Bangladesh, then East Pakistan (Hossain, 1988; Naher, 1997). Modern farming, which William Gaud gave the moniker Green Revolution, considered food insecurity as a problem originating from inadequate production and declining food availability (Patel, 2013). The emphasis was therefore placed exclusively upon beefing up crop productivity using synthetic chemicals and laboratory-bred hybrid seeds, and scant attention was paid to the potential ecological repercussions of these alien technologies. In the late 1960s, when the International Rice Research Institute (IRRI) announced the arrival of IR8 rice cultivar – a semi-dwarf high-yielding variety, dubbed 'miracle rice' – South Asian countries readily embraced it hoping for a quick solution to their endemic hunger problems (Farmer, 1979). Bangladesh was no exception as the country was consistently grappling with production shortages. The adoption of modern farming methods did actually improve the country's agricultural productivity – the average rice productivity increased from

[58] Bangladesh was a part of Pakistan before the Declaration of Independence on March 26, 1971.

1.05 Metric Tonnes (MT) per hectare in the first half of the 1970s to 2.52[59] MT in recent times. From the very beginning, the imported[60] HYV cultivars relied heavily upon pesticides, herbicides, chemical fertilizers and artificial irrigation to increase productivity (Farmer, 1979). As I describe below, this petroleum-intensive nature of modern farming has inflicted lasting damage on local ecosystems.

During interviews, peasants drew attention to the ever-increasing application of chemical inputs to maintain productivity – a phenomenon best known as the 'agricultural input treadmill' (Carolan, 2012). One of the most worrisome side-effects of modern farming in Bangladesh is the exponential growth of pesticide use in rice farming (S. Rahman, 2003). As van den Bosch (1978) argues, pesticide use creates a vicious cycle in which pests gradually develop resistance against chemical poisons, which becomes an occasion for even greater use of chemicals, thus giving rise to a pesticide treadmill. Peasants voiced frustration at the unrelenting pest attacks on their rice fields even after applying pesticides.

[59] The figures represent the combined average productivity of both traditional and modern varieties. A full breakdown of the annual variety-wise productivity data is available at http://www.moa.gov.bd/statistics/Table3.01CY.htm. According to the Ministry of Agriculture data, HYV *Boro* is the most productive of the modern rice cultivars with an approximately 75 percent higher yield rate over its local counterparts. The yield gap between HYV *Aman* and Aus and their corresponding local varieties is smaller, 50 and 63 percent, respectively. Official estimates show that the average yield of HYV *Boro* is 3.9 metric tons (MT) per hectare. However, this farm level data is partially misleading because the conversion rate of wet paddy into dry milled rice is significantly lower for HYVs. As farmers noted, the conversion rate of the local *Aman* wet paddy into dry milled rice is 65–75 percent, whereas for HYV *Boro*, the rate is 50–60 percent

[60] Of late, the Bangladesh Government has reduced dependence on imported seeds by establishing domestic seed breeding centers. Nonetheless, these domestically bred seeds share the same chemical propensity as the imported ones.

What frustrates them more is that they are unfamiliar with many of the intruder pest species. During a group discussion, peasants noted,

> We never heard of *Majra poka* [*Tryporyza incertulus,* a rice pest that feeds inside the stem] in our locality before we started producing China rice [the colloquial term for HYV *Boro* cultivars]. Earlier, we had lots of trees and jungles here. Mosquitoes and insects use to stay there. Now that we have cleared up the jungle, where would they go? The more chemicals we apply, the greater is the pest problem. We feel helpless.

Apart from the financial costs of, and health hazards from, pesticide use, peasants ranked the destruction of biodiversity high among chemical use impacts. Pesticide and fertilizer runoff from rice fields contaminated local water bodies and affected fish and bird populations. In trying to highlight modern farming's misplaced emphasis upon single crop productivity, an environmental activist noted,

> The government always highlights the higher productivity of modern farming to refer to its success. This is a myopic thinking. We should rather focus on the total systemic yield of an ecosystem that encompasses both the on-farm productivity of different crops, as well as other dietary and livelihood requirements – e.g., fish, poultry, livestock, fodder and fuel – that peasants can generate from the ecosystem. If you combine these two criteria to measure the yield, modern farming lags far behind ecological farming.

Peasants conceded that prior to the adoption of modern farming they could hardly grow enough rice to meet their families' dietary needs, and would frequently go to bed hungry. The higher productivity and cropping intensity of HYV cultivars have enabled them to grow enough rice to feed their families year-round, save for a short period before the harvest. Nevertheless, previously, their diet was more balanced as they had free access to fish from local water bodies and rice fields, various species of edible birds, and green vegetables that naturally grew in roadside ditches and marshlands and on fallow lands. The contamination of local

water bodies from chemical runoff and the indiscriminate killing of insects have seriously hampered the growth of fish and bird populations. The availability of free greens is also fast disappearing due to land use changes. Some peasants still grow vegetables on their homesteads, but the rapid fragmentation of residential plots has left many others with no such space. Consequently, peasants depend extensively on the market for their other dietary needs. The unaffordable prices of these once abundantly available nutritional sources have turned their diet high on carbohydrates and low on protein and other necessary nutritional elements, thus making them malnourished.

In 1981, at the Food and Agriculture Organization's (FAO) insistence, the government introduced Integrated Pest Management[61] (IPM) to curb pesticide use. As of 2002[62], the government was able to provide IPM training to a mere 0.27 percent of the country's peasant population (Ministry of Agriculture, 2002). Nevertheless, officials from the local agriculture departments in the North and Central villages squarely blamed peasants for the failure to successfully integrate IPM in their crop management practices. This lack of training aside, the success of IPM depends on the existence of a robust ecosystem that facilitates 'the dynamic interplay of plant, pests, climate and natural enemies' (Van den Bosch, 1978: 153). In addition, it requires a coordinated effort among neighbouring

[61] There is widespread disagreement over the exact meaning and definition of IPM. The most commonly used definition is by the FAO which defines it as 'A pest management system that, in the context of the associated environment and the population dynamics of the pest species, utilizes all suitable techniques and methods in as compatible a manner as possible and maintains the pest populations at levels below those causing economic injury' (Quoted in Kogan, 1998). Bangladesh's use of the term, as per its 2002 IPM policy, includes any element that contributes to an environmentally sustainable and economically viable crop protection system.

[62] The Bangladesh Government does not have updated data on IPM training recipients.

farmers. Pesticides used in one plot can adversely affect the efficacy of the biological pest management techniques of adjoining plots. Referring to the bamboo and wooden perches planted on his rice field to attract insect-predatory birds, a peasant sarcastically remarked,

> Do you see a single bird on these perches? We hope that birds will rest on these perches and eat insects, but you need birds for that. Most of them are dead. We know frogs are great for gorging on insects. Some years back, local businessmen started catching frogs from here to export to Korea. Many also died from pesticide poisoning. Some of us try to avoid using chemicals, but then all the pests from other rice fields descend onto ours.

The intense nature of irrigated rice monoculture rapidly depletes soil nutrient reserves and decays the topsoil, leading to declining soil productivity. Subsequently, peasants feel compelled to rely heavily on synthetic fertilizers without any expert guidance[63]. Modern farming reduces peasants to mere managers of their farms. Without the guidance of trained agricultural extension workers, they can hardly determine the required balanced doses of chemical inputs to maintain productivity and protect soil health. One peasant aptly asserted, 'You know, we are peasants and not scientists. They (extension workers) always accuse us of using too much or too little chemicals. I wish they came here to show us the way things should be done.' For smallholders, testing the soil in a laboratory to determine the required fertilizer doses on their own is expensive, which they can barely afford. Hence, their input use lacks any scientific basis and depends on factors, *inter alia*, the availability and price of inputs in local markets,

[63] During my interviews with agricultural extension officers, they denied the allegation of noncooperation. Instead, they accused smallholders of willfully ignoring their suggestions, because, what they claimed, 'a culture of arrogance and illiteracy prevailing among smallholders.' There seemed to be a hostile attitude among local agricultural officers against smallholders.

the advice from neighbouring farmers, and their own past experience. Peasants are extremely aware of the consequences of applying excessive chemicals, yet they feel helpless. A peasant summarised,

Our land has become sterile as we continue to use chemicals. Earlier, we could harvest decent amount of crops without applying any fertilizers, but these days you wouldn't be able to harvest anything without fertilizers. Twenty years back, we applied only 10 kilograms of urea on a *bigha* (33 decimal) of land. Nowadays, we apply 40-60 kilograms. Now, you tell me whether the land has gained productivity or has lost it?

The problem of excessive fertilizer use leading to declining soil fertility was especially severe in the North village. The sandy loam type soil, persistent water scarcity, dry local climate, and low water retention capacity of the local water reservoirs due to the village's higher elevation are unsuitable for rice farming. Before the arrival of HYVs, winter season rice farming was minimal here. Previously, peasants grew sesame and millet, which were more compatible with the local ecology. Nevertheless, the availability of cheap chemical fertilizers in the early 1990s and the expansion of the public irrigation infrastructure helped spread rice farming in this area. The yield rate at the farm level, however, remained consistently below par. For the local agriculture office, as it claimed to me during interviews, the low yield problem is attributable to peasants' poor crop management practices and an inefficient use of inputs. According to the office, the soil in this village severely lacks potassium and has excess phosphorous. To rectify this, the agriculture officials recommend that farmers apply higher

proportions of urea and MoP, and only limited doses of TSP[64] fertilizers. The majority of peasants neither received any in-person demonstration in this regard, nor were they informed properly. Hoping for better yields, they rapidly increased the use of cheap urea, while the proportion of both MoP and TSP was kept low as these were comparatively expensive. To be sure, a limited number of peasants obtained extension support from block supervisors[65] and followed their prescriptions. These peasants experienced mixed results. Initially, the yield rate improved for a few seasons, but slowly the trend plateaued and then started to reverse. Block supervisors advised the peasants to gradually increase the volume of fertilizer doses in the same proportionate mix. At that time, the retail price of MoP was nearly four times the price of urea. The increased cost of production from using higher volumes of MoP, as suggested, exceeded the going market price of rice. This made rice farming financially unsustainable for smallholders. One of these latter group of peasants observed, 'Yes, they guided us, advised us on the balanced mix of fertilizers, but every year the requirement would only go up. If I continued with them, I would have to sell my house to buy inputs.' It is by no means inconceivable that in a commercialized economy, when science collides with the market, the latter shall prevail over the former in most instances, even if it causes serious long-term repercussions because people are more concerned about the immediate economic losses. Being faced with these difficult choices,

[64] The actual recommendation is 90 kilograms of urea, 75 kilograms of MoP, and only 20 kilograms of TSP per acre.

[65] The Department of Agricultural Extension under the Ministry of Agriculture appoints block supervisors who are responsible for providing extension support to farmers, and oversee the agricultural production of a particular area to which they are assigned.

these peasants abandoned the block supervisors' advice and went back to their usual fertilizer usage.

Although not as serious as in the North village, soil degradation from modern farming was an issue in the other villages as well, and the government's poor flood management practices made it worse. Bangladesh is a flood-prone country, as nearly 230 rivers criss-cross the country carrying an annual average of two billion tonnes of sediment (Mirza et al., 2003; MoEF, 2009). Previously, once in every couple of years, seasonal floods deposited nutrient-rich sediment over large tracts of land in the South and Central villages. This natural replenishment helped the soil regain productivity and minimized the need for artificial fertilization. As the government focused more on flood management to protect the population and agricultural land, it built dams and embankments across the country to prevent rivers overflowing into the adjacent areas. The intention was good, and these preventive structures moderately succeeded in containing the scale of flooding during average flood years. Nonetheless, the poor design and construction of these dams and embankments also prevented the possibility of controlled small-scale flooding that would facilitate soil rejuvenation through sedimentation. Peasants in these villages are critical of flood-prevention structures for indiscriminately blocking floodwater. One of them noted, 'Floodwater may destroy one crop, but for the next several seasons, it's more than compensated. The soil productivity is so much higher after a flood!' Another peasant added,

> It's good that these dams save our residence during regular floods, but they are no match for large-scale severe flooding. I wish the government had built more sluice gates and control points to let the water in up to a

> certain level. After all, our livelihoods depend on the productivity of our soil.

As the popular sources of organic fertilizers – e.g., cow manure, dried water hyacinth, ash from burnt paddy straw and mustard oil cakes – are becoming scarcer in these villages, peasants are increasingly turning towards their synthetic alternatives. The conversion of grazing lands into rice fields, the rapid disappearance of village commons and privately-owned fallow lands on which peasants had enjoyed customary use rights for cattle grazing, and the growing popularity of mechanical tractors over draught animals have had an adverse effect on the supply of cattle. Besides, in rural areas, dried cattle manure is a popular cooking fuel, which further diminishes its availability for agricultural use. The filling-up of wetlands and water bodies to accommodate the housing and commercial needs of a growing population and the atomization of families has shrunk the availability of once abundant water hyacinths. Finally, the tremendous expansion of rice farming has reduced the area devoted to growing mustards. The whole fertilizer-soil productivity nexus is thus locked in a vicious cycle. The intense rice monoculture rapidly depletes soil fertility without the scope for natural rejuvenation due to the flood-prevention structures. The dwindling organic fertilizer supplies, on the other hand, necessitate the use of synthetic fertilizers as the market demands a continuous rise in crop yields. However, the higher the synthetic fertilizer use the greater the harm done to soil health and the surrounding ecosystem, and thus the lower the crop yield. This then becomes the cause and justification for even greater application of fertilizers.

This fertilizer and pesticide treadmill not only endangers the environment, it also amplifies the cost of farming. As Magdoff et al. (2000) pointed out, one particular aspect of peasant agriculture is that peasants buy inputs at retail prices, while they sell their produce at wholesale rates. The heightened cost of inputs due to the rollback of subsidies and their ever-increasing application squeezes small farmers' profitability from farming.

An effective policy intervention for the government to cease this cycle, or at least to slow it down, would be to reform the land tenure system with a view to promoting long-term tenancy rights for small-scale sharecroppers[66]. As this research demonstrates, land ownership, to a certain extent, correlates with the degree of synthetic fertilizer use and soil preservation practices. Compared to landless sharecroppers and large-scale land owners, smallholders owning relatively smaller pieces of land – typically, less than a hectare – tend to be better land stewards and display more inclination towards sustainable farming practices. Being concerned about the long-term effects of declining soil fertility on their own livelihood securities, they feel compelled to prevent soil degradation. For the other two groups, immediate financial returns from the land largely trump any concern over the long-term effects of soil degradation. Since landless sharecroppers have to share one-third to one-half of their produce with the landowner, and they are not guaranteed to receive sharecropping rights for the

[66] Of course, a redistributive land reform would theoretically be a better alternative to a tenancy reform. However, such a reform may be politically too sensitive at this time. Furthermore, there is also a debate about whether such a reform would be pragmatic since the existing land holding sizes are too fragmented, and the availability of surplus land that could be made available by imposing a ceiling on land ownership is too miniscule.

same plot in the coming years, their incentive lies in the immediate maximization of production without caring much about soil health. Large-scale landowners, on the other hand, generally prefer to lease out land, and tend not to intervene in renters' farming practices, insofar as the renters pay them the dues.

One of the most devastating impacts of modern farming has been the depletion of ground water level resulting from the excessive withdrawal of water for irrigation purposes. Since the dry season HYV *Boro* cultivars constitute approximately 55 percent of the country's annual domestic rice supply (Misra, 2012: 125), artificial irrigation is crucial to maintain the success of these cultivars. Bangladeshi peasants' preference for the 'basin' irrigation method in which the paddy field is kept puddled under five to seven centimetres of water throughout the growing season (Shahid, 2011: 436) has resulted in an enormous volume of groundwater extraction over the years. This extensive water mining far exceeds the natural rate of groundwater recharging through rainwater percolation (Shahid, 2011). Multiple studies conclusively show that this disproportionate reliance on groundwater has depleted the shallow subterranean aquifers in the GBM river basin area and has released toxic arsenic in groundwater, causing a public health epidemic in this area (Chakraborti et al., 2002; Fendorf et al., 2010).

All three villages in this study were grappling with groundwater depletion problems. In addition, in the Central village, the water was contaminated with arsenic in a major way. The majority of the households I visited in this village had their tube-wells marked with a red cross denoting the presence of hazardous levels of arsenic in the well water. In all three villages, smallholders experienced greater

financial difficulty due to groundwater depletion. The public irrigation program, administered by the Ministry of Agriculture, seldom covers the entire farm land in a locality. In fact, the South village is completely excluded from any official irrigation coverage. Those whose lands are excluded from the public irrigation networks rely on privately-owned or rented mechanical pumps to irrigate their paddy fields. Earlier, the availability of water at shallow depths allowed peasants to pump water at a low cost by installing low-lift power pumps and shallow tube-wells. The continuous overdrawing of underground water and the resulting depletion has rendered many of these low-cost options ineffective. The problem can be temporarily overcome through installing deep tube-wells. However, these are prohibitively expensive, and peasants cannot easily afford them.

Markets and Peasants

One of the important rationales behind the government's focus on productivity increases is – and has been – to 'enhance the income-earning opportunities of workers remaining in agriculture by raising land productivity' (Government of Bangladesh, 2012: 4). Contrary to the government's thinking though, the growth of agricultural productivity and peasants' net income from farming is far from directly proportional. More often than not, the profit generated from agriculture is mediated by the movements of the market, and a bumper production does not automatically guarantee higher profits. Rather, by exerting downward pressure on prices, a production glut may spell financial disaster for smallholders. The peasants in this research unanimously expressed more concern over the fluctuating paddy market than the prospect of a bad harvest. For instance, in 2011,

farmers in the North village had a bumper potato harvest. Immediately, prices plummeted and they had no option but to stockpile potatoes in local cold storages. For several months, prices remained so low that they abandoned their stockpile to avoid the payment of storage charges. As is the case, their market participation is always fraught with danger. The market being 'the great equalizer,' it does not appreciate the varying costs of production for different classes of producers.

Ironically, the cost of producing HYV rice is higher for poor landless sharecroppers than for landowning farmers. Being landless, sharecroppers must pay cash or share one-third to one-half of their produce depending on their particular risk-sharing agreement with the landowner to lease in the land. In addition, leasing in better quality lands with reasonable water retention capacity that has an easy access to the publicly-run cheap irrigation services requires a comparatively higher advance down payment and rent. Many landless peasants are unable to afford this costly down payment and thus end up renting poor quality lands. This then drives up the production cost because poor quality lands require additional chemical inputs and expensive alternative irrigation arrangements. Finally, unlike the relatively well-off farmers who can generally buy mechanical tractors, smallholders often have to rent tractors to till the soil, which further pushes up their per-unit production cost.

Smallholders, in general, prefer selling paddy at the farm gate to intermediaries. The total milled coarse grain rice – the cheapest and most common type in Bangladesh – sold at the retail market goes for nearly three times the price of what peasants get for wet paddy at the farm gate. The post-harvest conversion of wet

paddy into total milled rice is relatively inexpensive; however, the conversion process is labour intensive, requires a wide open space for sun-drying the paddy to reduce its moisture content, and a milling facility – commercial or traditional homemade. The cost of commercial milling is minimal though – less than half a dollar for 37.5 kilograms. Smallholders, however, avoid this post-harvest processing primarily because of two factors. First, they often lack the facilities required to dry and safely store the paddy; and second, they tend to avoid the risk of bringing rice directly to the marketplace – generally located at a considerable distance – due to the associated transportation and labour costs. Further complications include uncertainty about storage facilities, and additional costs to transport the rice back, in case it cannot be sold on the very day. The second factor plays a more prominent role in deterring peasants from direct selling at the marketplace. If the government could ensure better storage facilities for peasants and a guaranteed sales opportunity, this would reduce the extent of financial loss peasants incur from their market participation.

Currently, the government, through the Directorate General of Food (DGF), administers domestic rice procurement programs to support and stabilize prices and gain leverage over the market (Misra, 2012). Direct procurement by the DGF has certain benefits. The DGF offers comparatively higher prices than local intermediaries, and follows the metric system and standardized scales for procurement purposes as opposed to the traditional measurement units[67] and

[67] On 26th June 1982, the Government of Bangladesh abolished the traditional measurement units through the promulgation of the 'Standards of Weights and Measures Ordinance', and introduced

scales preferred by intermediaries. The traditional measurement system lacks the accuracy and uniformity of the standardized metric system, which deprives smallholders of the fair price for their products. Notwithstanding these benefits, the specific design and implementation of the procurement program largely precludes the possibility of smallholder participation. First, the DGF stipulates that the rice or paddy brought for procurement must adhere to a specified standard in terms of its moisture content (14 percent) and size, which it calls Fair Average Quality (FAQ). The majority of smallholders lack the infrastructure to process their paddy in a way that would allow it to pass the FAQ test. Second, corrupt public officials and locally influential political and business leaders collude to keep smallholders excluded from the program for their own personal benefit (Shahabuddin and Islam, 1999).

A potent strategy that intermediaries apply to keep smallholders from the procurement program is to prolong the duration of the procurement drive. Each year, the DGF announces the procurement target and the floor prices for paddy and rice at the beginning of the procurement season. On knowing that the DGF will procure rice until it achieves the declared target, rice millers and other intermediaries deliberately slow down their bulk buying activities and delivery to the DGF with an aim to extend the program duration. For the past several years, the DGF has seldom been able to achieve its initial procurement target within the

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the internationally recognized metric-based system. The traditional unit for measuring weights, the *maund*, is still the most popular measurement unit for weighing rice in rural areas. Depending on the region, one *maund* may equal to 40 to 48 *sers*. The *ser* is loosely treated as an equivalent of the kilogram. The government, however, specifies that one *maund* must be the equivalent of 37.5 kilograms. However, in rural areas, traders ignore this directive and adhere to the old notion of *maund*.

stipulated timeframe. This rent-seeking behaviour suppresses wholesale prices during the peak season, precisely when peasants are desperate to sell their produce to repay debts. Further, the higher moisture content of HYV *Boro* rice makes it prone to moulding and other damages if not stored properly. These factors discourage peasants from hanging onto the rice for a lengthy period, and so they sell it off at bargain prices. A protracted procurement thus comes as a bane for peasants while it is a boon for the intermediaries. The only time the peasants get a fair price is when the market experiences a general supply shortage and the intermediaries expedite their buying program to take advantage of the market situation.

One may wonder why peasants do not switch back to traditional varieties since HYVs are costly to produce and the market is often unrewarding. Indeed, this is a paradox. Although peasants are aware that higher production may not necessarily translate to higher profits, there are compelling reasons why they may not switch to traditional varieties. The obvious reason is that land degradation and biodiversity loss resulting from a prolonged period of modern farming may not support the growth of traditional varieties. Even if we ignore this reason, smallholders risk being financially penalized for growing traditional rice. In a market where there is little premium for traditional varieties – and where the rice price is benchmarked against HYV *Boro* cultivars – peasants stand to incur substantial loss due to the lower productivity of these varieties. To be sure, some consumers are willing to pay premium prices for organically grown traditional rice varieties, as the success of a local ecological agriculture movement, *Naya*

Krishi Andolon (New Agricultural Movement), demonstrates. Yet *Naya Krishi's* concentration of commercial sales outlets for marketing its participating members' surplus product in the capital city Dhaka also demonstrates that these consumers are part of a small urban niche market. The majority of peasants, who are not part of any such organization, neither have any direct access to this niche market nor do they have the means or capacity to bring their product to the urban market. Let us not forget that smallholders must generally secure their family consumption needs from their own farm produce. Whatever surplus is left to sell after satisfying their subsistence needs may be too insufficient for meeting their other livelihood needs, which they must buy from the market. Finally, we must not underestimate the role of subsidies in propping up modern farming. Despite the recent cutbacks, modern farming, unlike traditional farming, still receives a state subsidy. As Farhad Mazhar, one of the architects of *Naya Krishi Andolon,* pointed out, 'We will welcome any move by the government to phase out farm subsidies. These subsidies have kept modern farming competitive. Insofar as ecological farming is concerned, the withdrawal of subsidies will rather create a level playing field for us.'

Conclusion

Climate change's threat to Bangladesh agriculture and food security cannot be overstated. Bangladeshi peasants' overt dependence on nature in carrying out subsistence farming severely exposes them to the risks of a changing climate, which threatens both their own livelihood securities and national food security. Bangladeshi policymakers are justified in their concern about the country's future

state of food security emanating from the hydro-meteorological changes associated with climate change. Nevertheless, they tend to compartmentalize climate change consequences as an externality. Moreover, they are unwilling to contextualize these consequences within the broader trajectories of how the particular assemblage of institutions, policies, and agricultural practices victimizes peasants, which in turn contributes to the shaping of climate change's threat to food security. Together, these two factors have led to a questionable technological optimism among the policymakers. Technological innovation in itself is incapable of guaranteeing agricultural productivity insofar as it fails to ensure a secured livelihood for the people involved in agriculture. Bangladeshi policymakers' obsession with climate resilient crops underestimates the intricate nature of this interplay. Further, by persisting with technologies that are rooted in the Green Revolution, they demonstrate their stubborn refusal to learn any lessons from the degrading effects of these technologies on peasant livelihoods and the ecosystem.

In conclusion, an appropriate response to climate change-led productivity decline must involve a holistic approach. Such an approach must incorporate not only appropriate technological innovations but also an assessment of their socio-ecological and economic ramifications for peasant communities, for they constitute the majority of the country's agricultural productive force. This requires a fundamental rethinking of and an eventual departure from the current rice monoculture pivoted on chemical dependence and an unsustainable use of water and energy resources. Further, adequate attention must be paid to a reorganization

of the economic and institutional arrangements under which peasants carry out farming. Finally, in order to ensure a sustainable agricultural regime in the wake of a changing climate, policymakers must seriously consider a meaningful national dialogue on adopting environment friendly – and not resistant – agricultural practices such as agro-ecology. They must also focus on instituting an effective pro-peasant land reform, introducing an effective market protection mechanism for peasants, and sheltering them from extreme market turbulence. Meanwhile, appropriate steps must be taken to regenerate lost biodiversity and restore soil health. This is easier said than done and will require long-term planning; for now, policymakers must work on an intermediate action plan to ensure such a transition.

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CHAPTER SIX
Conclusion

Introduction

The word peasant generally invokes the image of an anachronistic figure, living in a serene countryside, completely withdrawn from the outside world, and tirelessly working the soil from dawn to dusk to eke out a living for her family. The peasant is condemned as a regressive social force, unable to form communes, and incapable of advancing a progressive social agenda. This image of the peasant is given permanence by no less than Karl Marx. His famous description of the French peasant in *The Eighteenth Brumaire of Louis Bonaparte* defined the image of the peasant for subsequent generations of left scholars. It reads,

> Their [the French peasantry] mode of production isolates them from one another instead of bringing them into mutual intercourse… Their field of production, the small holding, permits no division of labor in its cultivation, no application of science, and therefore no multifariousness of development, no diversity of talent, no wealth of social relationships… Thus the great mass of the French nation is formed by the simple addition of homologous magnitudes, much as potatoes in a sack form a sack of potatoes[68].

The reality, however, is markedly different. As Akram-Lodhi and Kay note, "Peasants do not live an idyllic rural life; their lives are harsh, are too often short, and are deeply affected by forces outside their control." (2009: 3) In the twenty-first century, peasants are deeply embedded in the global accumulation economy, and they are as much affected by the market as is any other social group. The

[68] http://www.marxists.org/archive/marx/works/1852/18th-brumaire/ch07.htm

penetration of modern science and technology runs deep in peasant agriculture, even in the backwaters of the Global South. The post-Green Revolution radical transformation of agriculture has torn down the veil of peasant autonomy, and has forcefully integrated them in the capitalist supply chain.

In Bangladesh, smallholder peasants play an extremely important role in ensuring food security for its 150 million people. The rapidly growing urban population of the country relies heavily on the cheap rice grown by nearly 13 million small peasant farms (Bangladesh Bureau of Statistics, 2010). These peasants have transformed Bangladesh from an import-dependent to a self-provisioning rice growing economy. Nevertheless, this phenomenal achievement has not guaranteed a better livelihood for poor peasants as they continue to live in abject poverty and seasonal food insecurity. The recent wave of modernization and commercialization of the agriculture sector has increased the cost of agricultural production, while produce prices at the farm-level have declined. This negative growth of agricultural income has left the poor peasant scrambling for a decent survival. In addition to these economy-inflicted threats, a fast changing climate system is adding further strains on the sustainability of peasant agriculture. Already, peasants are struggling to cope with the environmental fallouts of using chemical-intensive Green Revolution technologies. In this context, this dissertation presents a timely case study of the socio-ecological implications of environmental changes and market liberalization for smallholder peasants in Bangladesh.

Theoretically, this dissertation is positioned at the intersection of two opposite perspectives within the radical left, which is divided on the question of: What is the appropriate status of the peasant in a capitalist market economy and whether the analytical category peasant merits relevance at this historical juncture? For example, scholars like Bernstein, who position labour at the centre of their analyses of agrarian changes in the Global South, are vehemently opposed to the idea of deploying the conceptual apparatus of the peasantry to analyze the current agrarian communities in the Global South. They argue that conceptually, the current agrarian communities are far from being a historically distinguished social group – let alone a social class – which is reflected in these communities' inability to materially reproduce themselves outside the market economy. For these scholars, today's peasants are a product of the capitalist market system, forced to sell their labour power under conditions set by the market. On the other hand, pro-peasant left theorists like McMichael reject this linear view of agrarian transition that seeks to confine the agrarian question to how capital forms a labour force via dispossessing other pre-capitalist classes. They instead propose a historically-rooted political history of capitalism in which the ownership of the means of production distinguishes peasants from other capitalist social groups, which positions peasants as a direct anti-thesis to capital. These theorists view peasants not as a product of the capitalist market system, rather a historically immanent resistance force that has the potential to construct an alternative future free of the subordination of global corporate capital.

Taking clues from these two theoretical articulations, this dissertation argues that the corporate invasion of agriculture has accelerated the process of peasant dispossession in the Global South, which necessitates a strong transnational resistance movement to respond to this global capitalist aggression. It also agrees that the global food system is unjustifiably controlled by a select group of agribusiness corporations, which are ruining the earth's natural balance to accumulate capital. It concludes that a democratically reformed food system in which direct producers are able to assert greater control over their agricultural decisions and enjoy an easy access to natural resources are imperative to alleviate the threat of global hunger and environmental destruction. Simultaneously, this dissertation also cautions against romanticizing peasant agriculture. It takes a pragmatic and historically situated approach towards the peasantry by recognizing the ongoing internal power struggle within itself in which large landowning and powerful peasants systematically exploit small and marginal peasants. It also recognizes that history cannot be wished away and we must accept the reality of the market in the life of a modern peasant. Moreover, let us not forget that the majority of humanity currently lives in cities, and they primarily rely on the market for their food supplies. The challenge, therefore, is not how we can sever ties with the market, rather it is how we can restructure and redeploy the market in a way that it facilitates an organic relationship between the producer and the consumer. The challenge is, as Polanyi (1980) would argue, how to disembed the society from the control of the market.

Overview of Arguments

As discussed in Chapter One, this dissertation is interdisciplinary in nature with concepts drawn from agrarian political economy, Marxist geography and environmental sociology. It plots the intersections of state-market-environment as these mediate the way Bangladeshi peasantry is reproduced in this neoliberal era. It has sought to situate the ongoing peasant dispossession within the historical political economy context of agricultural and economic reforms that took place in Bangladesh since the British colonial era. It takes a case study approach to this research and makes use of primary and secondary data to advance the argument presented in chapters Three, Four and Five.

Chapter Three reviews the global literature on the agrarian question, and revisits the classical and contemporary debates surrounding the status of the peasant in a neoliberal economic system. It analyzes the World Bank and the International Monetary Fund-imposed market-oriented agrarian reform policies in Bangladesh and the resulting peculiarity of the country's development trajectory. Using Bangladesh's agricultural census data, it makes a novel argument that the neoliberal agrarian reforms have led to a paradoxical situation consisting of simultaneous proletarianization and an increasing number of households taking up smallholder farming. It contends that the inability of emerging capitalist sectors to absorb surplus labour compels the state to extend nominal support to subsistence agriculture to prevent any social and political unrest that could potentially undermine the very legitimacy of the state, and thereby disrupt the process of capital accumulation. This chapter tentatively uses the examples of public food

distribution system and social safety net programs in support of the argument that the state is still relevant in maintaining a support structure for the survival of the peasantry. It concludes by questioning the rejection of the peasant question in favour of an agrarian question of labour, as Bernstein posits, at this historical juncture in the context of Bangladesh.

Having analyzed in detail the agricultural commoditization process and the reforms of state institutions in Chapter Three, the next chapter discusses the increasing incidence of peasant indebtedness in Bangladesh and relates this to the tremendous rise of microfinance institutions (MFIs) in the country. It analyzes the systematic lessening of the public rural financing system and the introduction of modern farming technologies, and how this has created a fertile ground for the subsequent dissemination of microcredit use among peasant communities. This chapter disputes the mainstream narrative that MFIs target only emerging entrepreneurs in rural areas and play a critical role in alleviating poverty. Instead, it argues that MFIs are part of the global capital accumulation network and their operations are commercially motivated. Using narratives collected during the fieldwork, this chapter details how the commercial pursuit of microcredit, its high interest rates and the weekly loan recovery mechanism, renders the livelihoods of poor peasants vulnerable, and ensnares them in debt peonage. This chapter makes an important intervention in the emerging literature on MFI's role in reinforcing multiple-borrowings and poverty-traps by demonstrating the ways in which the monetization of agriculture and the weekly loan instalment provisions compel borrowers to seek multiple loans.

Chapter Five builds on the policy reforms discussed in the preceding two chapters and uses this discussion as a guide to offer an empirical insight into the environmental effects of these reforms and the use of modern farming technologies on poor peasants. It analyzes how the environmental degradation from using chemical-intensive farming technologies and the forced participation of peasants in the market economy adversely affects their livelihoods. This chapter serves as a critique of the country's agricultural and climate change policies by highlighting how these policies fail peasant communities and the environment. It faults the government's undue optimism placed on biochemical farming technologies, which does not take into consideration the social implications of these technologies on the user as well as their unintended consequences on the environment. This chapter renews the call for a fundamental rethinking of, and an eventual departure from, modern farming technologies that are heavily dependent on chemical substances and an unsustainable use of natural resources.

Limitations of the Study and Future Research

This dissertation is an important addition to the literature on structural obstacles that rice growing peasant communities face in the agrarian countries of the global south. Nevertheless, there are certain areas which I have not been able to give enough attention due to the paucity of time and resources. The principal drawback of this study is its limited analysis of the gender dimension of peasant livelihood challenges. It is well-known that women bring a different ontological understanding of the social world, and they face different set of challenges and

obstacles. Their farm work is inversely related to household income levels, although their contributions are often invisible to the outer world. Due to the gendered division of labour within the peasant household, women face greater degrees of hardship during times of crisis than men do. Moreover, climate change has gender-specific impacts on agrarian communities. During my fieldwork, I found peasant women complaining of various health hazards from excessive daytime heat. Also, the dropping water level during the summer season takes specific toll on women as they are assigned the task of pumping water through tube-wells for household usages. Admittedly, this dissertation would have benefitted a lot had it focused on these gender-specific aspects of peasant agriculture. That being said, gender in itself is such a comprehensive analytical lens that it is impossible to summarily deploy this lens. Since the objective of this dissertation is to critically analyze the implications of environmental changes and globalization for peasant communities, I had to make a practical decision. I treated the peasant household as the unit of analysis at the micro-level, and deliberately avoided the intra-household dimension of livelihood challenges. Nevertheless, I would like to emphasize that this dissertation is not gender insensitive. I have interviewed almost equal number of women and men during my fieldwork. Also, I have made a conscious attempt to point out the difficulties that specifically trouble women as long as the analysis and the structure of the paper permitted me to do so. I have saved it as a future research project to publish articles based on my fieldwork data using gender as the main analytical lens.

A second limitation of this study is its lack of focus on other rural occupational groups beside peasants. Although I have interviewed several agricultural labour households, I have eschewed formally interviewing other occupational groups that are not directly involved in agriculture. I believe that a comprehensive understanding of the trajectory/trajectories of rural transformation requires an analysis of the dynamics of interactions among different social groups. Moreover, one must also investigate the structural changes taking place in the broader economy to be able to identify how those changes shape and configure the rural economy. I have tried to overcome this deficiency by supplementing my fieldwork findings with observational and secondary data. However, I look forward to manage future funding to conduct a thorough analysis of rural livelihood changes with more time spent in the field and undertaking more elaborate interactions with other social groups.

A third limitation of this dissertation is its lack of focus on agribusiness corporations in Bangladesh. Over the past two decades, there has been a steady proliferation of agribusinesses in Bangladesh that are slowly transforming the country's agricultural landscape. These corporations have grabbed large tracts of land in rural areas, and are directly competing against peasant producers by gradually shifting consumer preferences from fresh produce to processed food. Moreover, they are also buying up land from poor peasants and then employing these same peasants as agricultural labourers. Part of the reason I left out agribusinesses from my analysis is unintentional. The areas where I conducted fieldwork are yet to experience any substantial agribusiness penetration. There

were a few agribusiness enterprises in Bera and Boda, the second and third fieldwork sites. However, I could not establish a connection with those agribusinesses, and therefore failed to interview any of the owners or labourers working there. Research dedicated exclusively on the emerging agribusinesses' impact on peasant agriculture and the rural landholding pattern in Bangladesh would be a fascinating topic for a future study.

Finally, during my fieldwork, I noticed an increasing trend of absentee ownership of agricultural land. Many well-off urban professionals are buying up agricultural land in rural areas through their local contacts, and are employing sharecroppers to cultivate the land. In some cases, these absentee landowners simply employ agricultural labourers to produce fine grained rice for their self-consumption. While this is not a new development, the trend is increasingly becoming widespread and is significantly shaping the rural landholding pattern. The impact of this absentee land ownership on rural economies needs greater attention.

Conclusion and Implications

One of the greatest transformations of the twenty-first century is that the autonomous peasant is now almost fully integrated in the capitalist market economy. This transformation of the peasant economy from a self-provisioning to a market-oriented production regime has been achieved on the back of some relentless manoeuvring by the state. This integration of peasants has not always been smooth, and they are yet to experience any significant benefit from this market participation. The classical liberal idea of the "invisible hand of the

market" that restores equilibrium in transactions has been amply proven wrong as the market has remained remarkably insensitive toward the power asymmetry prevailing between capital owners and the impoverished classes of peasants and labourers. As this dissertation demonstrates, the role of the state remains vital in regulating the market and ensuring livelihood securities for marginalized social groups. However, the ruling classes that control the state are often prejudiced against these disadvantaged social groups. The real challenge, therefore, is how to decolonize the state from the control of parasitic ruling classes and make it work for the poor. We must not forget that the state is a contested space, which must continuously seek legitimacy from its citizen subjects by negotiating a balance between the demands placed by capitalists and other vested interest groups, and the welfare needs of its great masses (Akram-Lodhi, 2013; Das, 2007; Scott, 1976). This instability of the state opens up the possibility for broad-based social movements to exert pressure on the state and compel it into delivering welfare supports to disadvantaged social classes. It would be a profound mistake to buy into the misleading discourse of globalization that falsely preaches the end of the nation-state as we know it. This dissertation underscores the importance of reclaiming the state than to abandon it at the hands of national and international capitalist classes.

In order to apply such a pressure on the state to compel it into pro-peasant structural reforms, there needs to be a strong peasant movement. Bangladesh has a glorious history of peasant resistance movements against the British colonial forces. Also, in the recent past, there have been incidents of violent peasant

protests against the state. The latest one is when peasants clashed with police who were enforcing the state's attempt to use eminent domain to dispossess them of their land to build an airport. However, these protests are rather localized and sporadic in nature, centered on specific issues. At present, peasants have no strong national platform to organize themselves and launch effective movements to realize their constitutionally guaranteed rights to food, clothing, housing and a decent life free from exploitation[69]. During my fieldwork, the lack of an organized peasant movement repeatedly came across as one of the main barriers towards realizing peasant demands. The few left-oriented peasant movements that still exist in the country are organizationally weak and have an anaemic membership base. The domination of NGOs in rural areas and their cooptation of rural issues have largely dented the prospect of a radical peasant movement. More attention must be given on how to regenerate grassroots peasant movements, and connect them with other radical social movements, both horizontally and vertically.

One of the important issues around which a strong peasant movement can be formed is land reform. Although land reform dominated a good part of the second half of the 20th century in Bangladesh and in other Global South countries, it has since fallen off the agenda of the state. As this dissertation shows, the ownership

[69] Section 14 of the Constitution of the People's Republic of Bangladesh asserts, "It shall be a fundamental responsibility of the State to emancipate the toiling masses, the peasants and workers and backward sections of the people, from all forms of exploitation." Section 15 and the subsections "a" and "b" of the Constitution add, "It shall be a fundamental responsibility of the State to attain, through planned economic growth, a constant increase of productive forces and a steady improvement in the material and cultural standard of living of the people, with a view to securing to its citizens – (a) the provision of the basic necessities of life, including food, clothing, shelter, education and medical care; (b) the right to work, that is the right to guaranteed employment at a reasonable wage having regard to the quantity and quality of work." http://bdlaws.minlaw.gov.bd/print_sections_all.php?id=367

of land does make a positive difference in the livelihoods of poor peasants. However, the proposed land reform has to be pragmatic, doable and effective. While a comprehensive redistributive land reform is desirable from a social justice point of view, more thought needs to be given to the potential scale of benefits from such a reform. In the context of Bangladesh, an all-encompassing redistributive land reform may be of little consequence. The existing land holdings are already too fragmented, and the availability of surplus land that could be made available by imposing a ceiling on land ownership may be insufficient to meet the demands of a bourgeoning landless population. That being said, a combination of limited redistributive land reform and tenancy reform may be more practical for Bangladesh. Taking away land from large land owners and redistributing it among landless peasants, and giving existing sharecroppers permanent and stable enforceable rights over the land that they cultivate could solve some of the problems. This would benefit both the landless peasant and the environment as a stable tenure would encourage her to make long-term investments toward protecting soil health.

Finally, the rapidly unravelling global climate and its consequences for agriculture demand that we closely scrutinize every aspect of agriculture's contribution to greenhouse gas emissions. Time is running out fast on us to arrest and rectify the "planetary rift" between humans and nature (Foster, 2012). We must immediately part ways with the chemical treadmill of modern agriculture to conceive an economically sustainable and environmentally friendly agro-ecosystem. The Green Revolution has succeeded in overcoming the spectre of a global production

shortfall; however, that has neither translated in better livelihoods for peasants nor has it solved global hunger problem. There is no scope for compartmentalizing the policies to deal with climate change from their wider socio-economic implications. As this dissertation shows, modern agriculture further marginalizes smallholder peasants and degrades the environment. Therefore, the mainstream focus on continuing with modern agriculture and scaling-up the use of biotechnologies is deeply misguided. The public display of optimism by policymakers that technology can solve the present environmental and smallholder crises is actually an attempt to depoliticize and mask the true motive of using technology that is accelerating the process of agricultural capital accumulation. An appropriate response to climate change-led productivity decline must involve a holistic approach. Such an approach must incorporate not only appropriate technological innovations but also an assessment of their socio-ecological and economic ramifications for agricultural communities. Time is ripe to move away from modern agriculture and consider alternatives which nurture the environment without compromising productivity, such as agro-ecology (Carolan, 2012).

This dissertation has attempted to demonstrate the need for a transition to a production regime and economic system that is sensitive to the intricate relationships among agriculture, climate, markets, and peasant livelihoods. Admittedly, there is no silver bullet or a single solution to the manifold crises that beset smallholder peasants and the environment. This dissertation neither proposes a mega solution to the smallholder crisis, nor does it pretend to offer a

single metanarrative of agrarian transition in Bangladesh. The analyses presented here should be read in their specific contexts, and the conclusion drawn here should not be generalized without qualification. One of the purposes of this dissertation has been to offer a political economy-informed framework to think through the issue of peasant dispossession in Bangladesh. And finally, this dissertation is my modest attempt to revive the critical rural sociology tradition in Bangladesh from the grab of capitalist NGOs and donor agencies.

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