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Study Abroad Research Context

My time in Kenya was filled with emotional tumult and academic trials that challenged my perspectives in ways that I am still grappling with on a day-to-day basis. I chose to study abroad in Kenya with the hope of gaining tangible experience in development studies; studying development in a classroom setting provided me with a theoretical grounding but left me struggling to grasp the reality of the situation facing much of the world's population. Thus, I embarked for Kenya hoping to attach real-life experience to the academic foundation offered by my University and to jump on the exciting opportunity to carry out field research as an undergraduate.

The first months of my experience abroad were crucial for my eventual research: I learned basic Kiswahili, attended development and health seminars, learned field research techniques, and visited various NGOs. My travels throughout Kenya offered me an appreciation for the complex and multifaceted nature of Kenya's social and political climate.

By the time I embarked on my research, I had acquired necessary skills for carrying out my project. The cultural understanding I gained through living with Kenyans and becoming acclimated to Kenyan social mores was imperative, enabling me to approach local fisherfolk in a culturally sensitive manner. My status as an "outsider" created a continually precarious position and required my constant awareness and sensitivity, particularly when dealing with the delicate issues that arose in my research. Appropriately dealing with my "outsider" status was only possible due to my months of living and learning in Kenya. Ultimately, my studies and travels in Kenya proved essential for the success of my research.

Socio-economics of Lake Victoria's Fisheries: An Analysis of the Shifting Roles and Status of Women Fish Traders

I n t r o d u c t i o n

Fishing industries around the world are currently undergoing a process of industrialization and commercialization. A similar story is unfolding in many fishing communities: large-scale industrial fishers who possess enormous capital and advanced technologies are threatening the lives of small-scale fisherfolk. The fishing industry in Lake Victoria exemplifies the detrimental impacts of economic globalization and evaluation of the role and status in this scenario is crucial for the future of Lake Victoria and its communities.

Lake Victoria, with a shoreline divided between Kenya, Uganda, and Tanzania, provides an economic livelihood and food supply for communities in all three countries. According to the Lake Victoria Environmental Management Project, approximately one third of the combined populations of the three countries are supported by the lake's catchments; much of this livelihood is based on the fishery sector. Development of such a valuable natural resource carries grave implications for millions of lives. Women represent 70 to 80 percent of those involved in the fishing industry of Lake Victoria (Medard 155). Women are an invaluable resource in the social and economic climate of any community and play a crucial role in the achievement of sustainable development, but their involvement is often overlooked. According to Wendy Harcourt, "feminists involved in the ecological and women's movements are concerned that the complex social, cultural, economic, and political relations, which inform women's lives and gender inequities, are not being addressed" (2). Development efforts must take into account the multi-faceted involvement of women in 'social, cultural, economic, and political relations,' and acknowledge gender inequities that are inimical to sustainable development.

Over the last twenty years, Lake Victoria's fishery sector has witnessed a rapid transformation from non-commercial, local-level fishing to a commercial, export-oriented fishing industry. Trade liberalization and industrialization have "left the local community entrenched in poverty" (Van Soest 3). The socio-economic impact of this transformation on the lives of women fish traders is an

issue of vital importance. The aim of this study is to examine how local women fish traders have responded to global forces of development, specifically focusing on how their roles and statuses have shifted as a result of commercialization, industrialization, and trade liberalization.

Methodology

This research was carried out in Kisumu town and at beaches located outside of Kisumu town through interviews and observation. Preliminary, background research was conducted at the libraries of the United Nations, the World Bank, Kenya Marine and Fisheries Research Institute, and the Women in Fishing Industry Project.

The first phase of research took place in Kisumu town, where interviews were conducted with representatives from governmental and non-governmental organizations, including: Women in Fishing Industry Project (WIFIP), OSIEN-ALA- Friends of Lake Victoria, the Department of Fisheries, AfricaNow, Kenya Marine and Fisheries Research Institute (KMFRI), the Uhai Lake Forum, and ActionAid Kenya. Interviews were also conducted with members of women's fishing groups and one employee of a fish processing plant. Observations were made and interviews were conducted at various markets in Kisumu town, where women sell fish for local consumption, and at Obunga Fish Market, where locals process Nile Perch frames from nearby processing plants. The second phase of research involved visits to various beaches outside of Kisumu town: Dunga Beach, Usoma Beach, Koginga Beach, and Pier Beach. At each beach, time was spent observing the beach activities. Observations focused on the social atmosphere of the beaches and the various roles filled by men and women. At these beaches, interviews were conducted with women fish traders, women boat owners, fishermen, representatives of Beach Management Units (BMU's), and members of fishing groups.

Interviewing organizational representatives and men and women involved in fishing served as a cross-sectional representation of the fishing industry in Lake Victoria. The responses of and knowledge derived from these individuals provided wide-ranging data that was used to elucidate the roles of women in a transforming fishing industry. It is important to note that the ideas espoused in this research paper are my own attempt to portray the situation facing women fisherfolk in Lake Victoria. My learning is based on the accounts and opinions of various people and groups. I have attempted to merge these accounts into what I believe is the most accurate portrayal of the situation facing women fisherfolk, but one that is inevitably rooted in my own socio-cultural understanding.

Setting

This study was conducted along the Kenyan shores of Lake Victoria, in Kisumu and Homa Bay. In Kenya, there are approximately 307 fish landing beaches along the shores of Lake Victoria (Odhacha 7). The communities surrounding Lake Victoria are largely dictated by the Lake's presence. In Kenya alone, the lake supports the lives of eleven million people:

It provides freshwater for human consumption, irrigation, farming, and sustainability. For centuries, the lake has provided a rich variety of resources to the communities. Lake Victoria fisheries resources serve as a source of food for the locals and as the foundation of economic welfare of the region by providing employment opportunities and attractive incomes for the people (Ong'ang'a 1).

Despite the opportunities posed by Lake Victoria, the area along the Kenyan shores has become infamously known as "the belt of poverty." The alarming levels of poverty in the region have prompted the government of Kenya to focus policy formation on poverty eradication: According to the National Poverty Eradication Plan, the number of impoverished people in Kenya must be reduced by half by 2015 (Ong'ang'a 3). Although the success of this plan is uncertain, the government is clearly awakening to the direness of the situation and proposing solutions to rising poverty.

The population density among Kenyan communities bordering Lake Victoria is extremely high; Kisumu district, with 549 people per square kilometer, ranks the highest in population density among the Kenyan districts bordering the lake. The high population density places enormous pressure on the environment, ultimately inflicting severe environmental degradation (Aseto 30).

The extreme poverty among the Kenyan communities bordering Lake Victoria is intertwined with rising health crises. HIV/AIDS has had a particularly brutal impact: the prevalence rate of HIV/AIDS in Nyanza Province is 22 percent, the highest in Kenya. HIV/AIDS seeps into every segment of the lake's riparian (waterfront-dwelling) communities and impacts the socio-economic status of its members.

The primary ethnic groups residing on the Kenyan shores of Lake Victoria are the Luo, Suba, and Samia. The culture and traditions of these ethnic groups affect development within the lake's communities:

There is a strong cultural dimension to environmental degradation in the region. The dictates of cultural practices of sons inheriting their fathers' land and wives owning land to cultivate are reinforcing the need to subdivide land into small units which are uneconomic for meaningful

farming. Such practices continue to generate a population of landless youth who migrate elsewhere to earn a living and the cycle of poverty created continues to cause further environmental degradation (Aseto 30).

The cultural climate within Luo communities has played a particularly significant role in development of the lake's resources. Gilbert Ang'ienda of OSIENALA believes that the Luo people lack a structure for internal empowerment and have therefore failed to organize themselves in promoting sustainable development of the lake's resources (Ang'ienda, 2004). Furthermore, Ang'ienda asserts that because the Luo represent a political opposition party, the government has continually paid little attention to the well being of the Luo people.

Ultimately, the Kenyan districts bordering Lake Victoria are suffering intense hardship. Issues of health and development are not being properly addressed and, as a result, many people face impoverishment. The area is facing a crisis and deserves serious efforts towards poverty alleviation.

Analysis

In this analysis, I will begin by examining how commercialization has shifted the roles of women in the fishing industry in Lake Victoria. Next, I will identify the socio-political structures within beach communities that have been informed by commercialization of the fishery sector, and will examine the impact of these structures on women fish traders. Finally, I will examine how women fisherfolk have reorganized in order to deal with commercialization of the fishery sector.

A gendered division of labor exists in the fishing industry of Lake Victoria, one that derives from the socio-cultural atmosphere of the lake's riparian communities. In the regions around the lake, socially constructed gender roles permeate all aspects of society. According to traditional Luo belief, women are the property of men, as evidenced by such cultural practices as dowry-giving and wife inheritance. As such, the tasks assigned to men and women in the fishing industry reflect the rigidly enforced gender roles among the Lake's communities. In Kisumu, the job of harvesting fish from the Lake is reserved solely for men. There are myriad justifications for women's prohibition from harvesting activities, all of which are rooted in deeply ingrained cultural beliefs. Luo tradition holds that menstruating women are not allowed near the lake and, more importantly, are not allowed on boats in the lake. Further, according to tradition, bereaved women are purportedly disallowed from touching a boat until they have been inherited (Ochieng 22). The presence of women is also thought

to bring 'ill-omens' to the fishermen: "It is believed that the spirits of the sea, male spirits which arise at dawn, could be easily provoked by the presence of a woman in their territory" (Oywa 1). Finally, the beliefs that women are too occupied with the responsibilities of home life and are not 'tough enough' for the tribulations of the lake serve to reinforce the strict prohibition of women from harvesting fish.

While women do not participate in offshore fishing activities, they fulfill another, highly important role in the fishing industry: the buying and selling of fish from the beaches. Women wait at the beaches and, when the fishermen arrive at shore with their catch, they purchase fish from the men for resale. This process of 'trading' fish varies between beach communities and among individual women. Some women buy fish and almost instantly resell the fish at the same beach location. Others carry the fish in baskets on their heads to local markets where they sell the fish to established customers. Oftentimes, women fry, smoke, or sun-dry the fish before selling; this process of preservation prevents the fish from spoiling, thereby protracting the time between buying and selling. The trading of fish, although often overlooked as a fishing activity, is a task of crucial importance. The processing and marketing of fish, designated primarily as women's work, sustains much of the fishing industry. Women fisherfolk fulfill a unique and essential niche (Ochieng 14, 15).

Rise of a Commercialized Industry

The process of commercialization that began in the 1980's in Lake Victoria radically altered the nature of the lake's fishing communities. Every facet of fishing communities underwent transformations in the face of industrial behemoths; in the complex web of fishing activities, no person was left unaffected. The participation of women in fish trading, however, underwent a particularly severe transformation.

Before the proliferation of Nile Perch in Lake Victoria, about 350 fish species existed in the lake (Odhacha 4). The Nile Perch was introduced into the lake in the mid 1950's, but its presence and impact remained miniscule until the 1980's. The Nile Perch, a carnivorous fish that grows up to a length of two meters (Aseto 142), feeds on many of the fish species in Lake Victoria. Although the proliferation of Nile Perch carried myriad implications for the fishing industry, one major impact was the dramatic alteration of the lake's ecosystem. As the population of Nile Perch grew, the population of other fish species decreased. This scenario resulted in the disappearance of many fish species. It is important to note that the precise causal effect of the Nile Perch is difficult to ascertain.

Other issues, such as over-fishing, may also have impacted the lake's biodiversity (Aseto 142). The fact remains, however, that today only three species of commercial value exist in the lake: Nile Perch (*Lates niloticus*), Tilapia (*Oreochromis nilotica*), and Omena (*Rastrineobola argentea*) (Odhacha 4).

Prior to the Nile Perch era, the harvesting and selling of various fish species on a small scale, local level prevailed; fish were harvested from the lake and transported in baskets to nearby locations for selling. The presence of Nile Perch, however, drew the attention of large-scale fishing industries, resulting in the introduction of commercialization to the fishery sector. The proliferation of Nile Perch and subsequent commercialization of fishing altered the economic basis of the women fish traders. The Nile Perch is exclusively reserved for the commercial fishing industry and the majority of the Nile Perch are exported: Nile Perch "now make up 50 percent of the total fish exports today" (Odhacha 4). Local fishermen who harvest Nile Perch sell their catch directly to agents from processing plants; the women play essentially no role in the trading of Nile Perch. The only Nile Perch that women deal in "are those that the factories are unable to collect due to delays in arrival at beaches, or arrivals without adequate supplies of ice" (Aseto 71). Although the commercial players began dealing primarily with Nile Perch, they soon began to purchase Tilapia from the fishermen as well, thereby further encroaching on the domain of women fish traders. While women previously had open access to the buying and selling of various fish species, the proliferation of Nile Perch severely limited the availability and types of species in which women could deal. Today, women generally trade undersize fish, most commonly the Omena, a small, nutritious fish that can be easily dried for preservation. Often, the women buy fish that the agents have rejected: The agents select the largest and highest quality fish from the fishermen's catches, and the women are left to buy the smaller, reject fish. The impact of the Nile Perch on the Lake's biodiversity, combined with competition from industrial giants, has relegated women to dealing with fish of the least value.

With the realization of the economic potential of Nile Perch, outsiders quickly entered the scene in hopes of capitalizing on the Lake Victoria fishery sector; a period of rapid industrialization ensued. The first stages of industrialization involved the establishment of fish processing plants, eighteen of which were established in Kenya. The processing plants "fillet and export the products to Europe, the Middle East, Japan, and USA" (Odhacha 4). The processing plants send agents to purchase large quantities of fish — primarily Nile Perch — from the beaches. The agents from the processing plants purchase the best fish and transport them directly to the factories for processing and exporting,

thereby reducing the supply of fish for women fish traders. Agents from the processing plants have encroached on a domain previously reserved for small-scale women fish traders.

Due to recent movements towards trade liberalization and the high value of Nile Perch in foreign markets, the processing plants have managed to overtake the fishing industry in Lake Victoria. Unfortunately, the high revenues from Nile Perch have been siphoned out of the local community and directly into the pockets of foreign entrepreneurs. Since the establishment of fish processing plants in the 1980's, the fishing industry has prospered while the local community has undergone further impoverishment. A disconcerting scenario has unfolded, one in which the advancement of fishing in Lake Victoria has actually undermined local populations.

When asked about the presence of processing plants, many locals responded reluctantly and reticently. One employee of Afro Meats Co. (a processing plant in Kisumu town), who spoke only on a condition of anonymity, replied, "I can't really say... they're not good." The locals' responses seemed to veil an underlying resentment towards the factories, but one that they were hard-pressed to speak openly about. Because the factories provide much-needed employment in the area and also purchase fish from some of the local fishermen, their presence is two-sided: on the surface the processing plants appear to promote economic development in the Lake Victoria region, but on a deeper level their presence starves the local community of their most valuable resource.

Furthermore, the plants are quickly depleting the lake's resources: "The demand generated by the filleting plants is huge and still growing. The processing plants are swiftly expanding their capacity utilization by collecting fish by motorized boat rather than by truck, which deepens their penetration into isolated areas" (Obiero 54). At one point, fish were being caught with trawlers that delivered up to 1500 kg of fish daily. The trawlers negatively impacted the lake's ecology and destroyed the fishing gear of many local fishermen. Because of trawling and other large-scale fishing techniques, the processing plants are depleting the lake of fish, leaving women with continually less fish to trade (Obiero 54). The processing plants deny women of the best fish harvested by purchasing directly from the fishermen and also decrease the general supply of fish available to women fish traders. Although the processing plants have affected all segments of the lake's communities, women have been most adversely affected.

The presence of processing plants has weakened the livelihoods of many women fisherfolk and at the same time opened a new line of work: the cooking and selling of Nile Perch frames that are discarded by the processing plants. After

filleting the Nile Perch, the processing plants are left with only skeletal remains. Rather than disposing of the Nile Perch frames, the processing plants sell them in bulk to locals who are desperate for any means of earning a living. In Kisumu town, the locals transport the Nile Perch frames to a nearby slum called Obunga, where every part of the remaining fish — with the exception of the scales — is processed for local consumption. After the scales are scraped from the remaining skin, the fish remains are dried or deep-fried for consumption.

The fact that locals can afford only to eat the waste produced by the processing plants is indicative of the situation facing women fisherfolk today. The processing plants have pushed women to a point of desperation, forcing them to survive on fish remains. Women who may once have traded fish to earn a living are now forced to cook and sell fish skeletons; although the remains from processing plants are a source of livelihood, this livelihood does not compare with the small-scale fish trading in which women engaged before the entry of processing plants.

Even markets such as Obunga are under threat today. Many of the Nile Perch frames from the processing plants are now being sold to fishmeal factories rather than to local people. The factories grind the remains into fishmeal that is subsequently used as an ingredient in animal feed. Locals no longer have access to abundant Nile Perch frames. While the number of people cooking and selling the fish remains at Obunga Fish Market once rose above 600, today the number has decreased to approximately 150 locals. The founder of Obunga Fish Market, Ben Onyango, has witnessed the decrease in supply available from the factories. He credits the shrinking size of the market largely to the fishmeal factories, asserting that the factories have stolen business from the local people.

With the proliferation of Nile Perch and the concomitant commercialization of the fishery sector, large-scale commercial fishers began to utilize technology in the harvesting, processing, and marketing of fish. Outsiders with motorized boats, large trucks, and cold-storage facilities abruptly superseded the traditional, small-scale fishing techniques that prevailed during the pre-Nile Perch era. The implementation of technology afforded outside players a distinct advantage over the local fisherfolk. Motorized boats and trawlers are able to deliver exorbitant amounts of fish every day, an amount incomparable to the fish harvested with traditional canoes (Obiero 54).

The utilization of technology impacted women fish traders particularly in the transporting and processing of fish. The processing plants send agents to the beaches with large trucks and advanced refrigeration equipment; the amount of fish these agents can purchase far exceeds that of the women who have no means of refrigerating the fish. Women are forced to sell their fish immediately for fear

that the fish will spoil. Many women report fish spoilage due to lack of cold-storage facilities as the primary obstacle they face as fish traders. Furthermore, the agents from processing plants are able to transport the fish long distances in trucks, whereas the women must carry the fish to nearby markets. The time and energy women expend transporting the fish — usually by carrying the fish in baskets on their heads — severely limits their productive output. Overall, the technological advantage of processing plants over the small-scale, women traders is enormous: the processing plants are able to harvest more fish, preserve the fish for longer periods, and transport the fish longer distances. The sudden surge of technology in the fishery sector has left women struggling to compete with the industrial giants.

Because the Nile Perch has destroyed many fish species in the lake and the processing plants have hoarded the large, high quality fish, local women fish traders have been relegated to dealing primarily in Omena. Omena is a small, sardine-like fish that the women dry and sell for local consumption. Many locals who can no longer afford higher quality fish now resort to feeding their families Omena, as Omena is an inexpensive source of protein. The streets and markets of Kisumu town are teeming with women selling buckets full of the small, dried Omena. In recent years, Omena has become a significant source of sustenance for the local people.

A large portion of Omena is harvested with mosquito seine nets and beach seine nets. Seine fishing nets hang vertically in the water, with floats at the upper edges and weights at the lower edges. Mosquito seining involves the use of mesh mosquito nets; fishermen deploy the mosquito nets during the night and utilize lamps to attract the Omena. Another method for harvesting Omena involves the use of beach seines; the nets deployed from beaches require ‘substantial labor input’ to haul back to shore. Although reports vary between beaches, women do participate in beach seining on many beaches. Some informants report that men own the nets and local women assist in pulling the nets. In return for pulling the nets, the women receive small allotments of fish that they take home for their families. At some beaches, women own the nets and hire other people, often women, to deploy and pull the nets.

It is clear that in recent years increasing numbers of women have begun dealing in Omena simply because they have no other options. Although it appears that women have uncovered a means of deriving a living from an industry that has been exploited by outsiders, there are severe drawbacks to the Omena trade. To begin, Omena is simply not as valuable as other fish (such as the Nile Perch); the women earn enough money to survive, but the Omena trade is not

economically lucrative. Furthermore, the small mesh size of the mosquito seine nets and the beach seine nets makes it nearly impossible to harvest Omena without also harvesting numerous undersize fish. The harvesting of undersize fish contributes to the destruction of the lake's biodiversity, thereby deleteriously impacting all fisherfolk. By surviving on the Omena trade, the women are actually hindering the long-term stability of their own fishing business. Essentially, increasing economic pressure has forced women to engage in a practice that is inimical to the sustainable development of Lake Victoria. Although recent policy-making has focused attention on maintaining the lake's biodiversity, enormous harm has already been inflicted.

As a result of the massive numbers of undersize fish that are caught in beach seine nets, the practice of beach seining was declared illegal in 2001: "The legal notice banned use, possession, and sale of seine nets. It also prohibits use of less than 10mm net size in the lake to catch Omena. However, some dealers in fish nets have described the new regulation as 'unfair and too restrictive'" (Aseto 82).

Although the new policy may assist in preserving the lake's biodiversity, I believe that the law has negatively impacted the lives of women fisherfolk. As previously elucidated, many women either own beach seine nets or assist in the pulling of these nets. With the outlawing of beach seining, many women have been forced to search for other means of survival or to continue beach seining illegally. Many women still engage in beach seining illegally simply because they know no other means of providing for their families. The outlawing of beach seining has simply placed women in an even more marginalized position.

Many of the undersize fish are sold locally despite the illegality of these sales. Some of the women on beaches admit that they deal in undersize fish; many women are aware that the practice is illegal, but engage in these activities because they lack alternatives. Some women even have systems for disguising the undersize fish. For example, women will combine a few undersize Nile Perch with legal sized Tilapia in order to make it appear that all of the fish are legal sized Tilapia. These women are not disobeying the law out of malice, but simply as a means of survival.

Due to declining fish species, the government has introduced a ban on fishing during the fish-breeding season, from May to August. It is a sad fact that the havoc wreaked by industrialization is actually harming the local fisherfolk who can no longer fish during these months (although some continue to do so illegally). The foreign entrepreneurs "do not care about conservation of fishes. Their interest is only limited to exploiting the fishes immediate financial gains. This has resulted in plunder and depletion of fishes from the lake" (Aseto 62).

Scientists have also discovered a worm that could potentially destroy a portion of the Omena in Lake Victoria: “Research shows that the tapeworm parasite could substantially reduce the population of the indigenous fish if remedial measures are not taken. Empirical research shows that the worm could infect as much as 10 percent of Omena” (Aseto 150). If the worm indeed infects a portion of the Omena, women would again experience the greatest impact.

Furthermore, the Omena harvested from Lake Victoria has recently sparked the interest of fishmeal factories; today, a significant portion of Omena is being sold directly to these factories. Consequently, less Omena is available for women fish traders and for local consumption. Women, and the community as a whole, are suffering due to the entry of the fishmeal factories. It seems that wherever women fill a niche, they are quickly supplanted by large-scale industries.

Socio-Politics of Beach Communities

The Kenyan shoreline of Lake Victoria covers nine districts, with beaches lining the shores from Suba district in the south to Busia district in the North. Although each beach community contains unique characteristics, common socio-political structures underlie almost all of the beaches. While it is impossible to universalize the socio-political climate of beach communities, this analysis will address the most prevalent and potent structures within them.

The nature of beach communities is migratory; fishermen generally move from beach to beach, staying on one beach only while the fishing is fruitful. Although a few fishermen remain on the same beach for many years, many migrate seasonally. The women fish traders usually remain on one beach permanently, but many move to the beaches from distant homes. A large portion of women fish traders are widowed, single, or divorced, and turn to fish trading out of desperation; selling fish is their only means of survival. Because fish trading requires little capital, women gain easy entry into the market on condition that they live near the beach. In some cases, widowed women who move to the beaches have been forced from their homes due to familial disputes. For example, the deceased husband’s family may blame the widow for infecting her husband with HIV and chase her from the home. In other cases, the husband’s family plunders the widowed woman’s land on the basis of property inheritance laws, leaving the woman with no land to live on or cultivate. For these and other reasons, women escape their homes and move to beach communities. According to Roselynn Lwenya of ActionAid, many of the non-indigenous inhabitants of beach communities simply run away from the problem. Essentially, women facing impoverishment and adversity migrate to the beaches as a last attempt

to survive. Rising poverty levels in recent years have also motivated increasing numbers of women to move to beach communities. While fishing activities were historically dominated by people indigenous to the lake's communities, today's beach communities are an amalgamation of people from various areas.

With fishermen migrating from beach to beach and the influx of women from distant locations, a unique social atmosphere exists within the beach communities. The mood of many fisherfolk is one of desperation and a struggle to survive. Consequently, beach communities are volatile and ripe for corruption and misconduct.

With the industrialization and commercialization of the Lake Victoria fishery sector, it became increasingly difficult for women fish traders to earn a living through fish trading. With more women entering the fish trade due to poverty in the region and less fish to trade due to the presence of processing plants, the demand for fish exceeded the supply harvested by the fishermen. As a result, women fish traders began to compete heavily to gain access to the fishermen from whom they could purchase fish. Before the commercialization of the fishery sector, women fish traders maintained an affinity with certain fishermen on the basis of commercial transactions. This relationship remained on a business level, financially benefiting both the fisherman and the woman fish trader. With the increased demand and decreased supply of fish, however, this relationship moved to a new level. The women fish traders began to engage in sexual relations with the fishermen in order to attain rights to his daily catch. Within today's beach communities, a bond develops between a fisherman — called *Jaboya* — and a woman fish trader. Every time the *Jaboya* brings fish to shore, a specific woman fish trader has exclusive rights to buy his fish on the condition that she maintains continuous sexual relations with the *Jaboya*. Some *Jaboya* maintain relations with multiple women continuously, depending on the amount of fish caught, while others have relations with only one woman. The nature of these relationships is transitory; the relationships often last only one fishing season and, when the men move to new beaches, new relationships are established. The advent of *Jaboya* is difficult to identify and probably varies between beaches, but the practice has intensified in recent years due to desperation and poverty among beach communities. According to Gilbert Ang'ienda, these relationships first developed on an unconscious and unofficial basis, but became institutionalized within beach communities in 2001 (Ang'ienda 2004).

For women, *Jaboya* is a survival mechanism. *Jaboya* ensures security and protection for women fish traders by supplying the women with a consistent and reliable source of fish. When asked why *Jaboya* exists, women fish traders and

other community members continuously cite poverty as the driving force behind *Jaboya*. On the beaches, “there is an unwritten rule: no sex, no fish” (Oywa 1). *Jaboya* is an alliance for survival and, in some cases, transcends the level of purely sexual relations. For example, if the woman fish trader has money she might provide loans to her *Jaboyaa* for purchasing new equipment. The woman fish trader also has an obligation to her *Jaboya* — if he harvests excessive amounts of fish, she is obliged to dry or smoke the fish for preservation, offering assurances and reliability to her *Jaboya*.

Select beaches have managed to overcome the practice of *Jaboya*. At Dunga Beach, members of the Beach Management Unit and other community members report that sexual exploitation does not occur within their beach community. One system of transcending *Jaboya* — a system that has been implemented on Dunga Beach — is called *Jokwambi*. Through *Jokwambi*, a specific woman acts as an intermediary between the fishermen and the women fish traders. In this system, women are not forced to endure the fishermen’s sexual requests.

Systems of sexual exchange on the beaches are not limited to *Jaboya*. On many beaches, women are ‘forced into sexual slavery’ through a practice called *Abila*. *Abila*, by definition meaning “hut” or “a place of consultation,” has adopted new a meaning on the shores of Lake Victoria. On the beaches, *Abila* occurs when “boat owners enlist one woman to cook for and sleep with their employees” (Oywa 1). Fishing generally takes place during the night and when the men return from a night of fishing, they convene in a communal house to rest and relax; the woman employed by the boat owner stays in the house, cooking for the men and having sexual relations with each man in turn. A representative from the Uhai Lake Forum described the men able to hire women for *Abila* as “influential” and “rich” men. Although women are not coerced into filling the role of *Abila*, women facing poverty and disempowerment are more willing to fill this role.

A report compiled by the Women in Fishing Industry Project stated that women possess a “lack of knowledge of the existence of female condoms” (Odhacha 29). On the beaches, much sexual activity occurs without the use of condoms. According to one woman, the use of a condom lessens the ‘cost’ of the woman. Essentially, if a woman agrees to engage in unprotected sex, the man will pay her more than if she demands the use of a condom.

It is important to note that systems of sexual exchange involve complex webs of power and women cannot simply be labeled victims, for they are agents in their participation. Furthermore, some informants reported that women are also the perpetrators of sexually exploitative practices; in certain cases, women

on beaches may sexually exploit young boys. These boys, who are often orphans, might be paid by an older woman to maintain sexual relations with her. Informants explained that many of the older women are widowed or divorced and do not want to have relations with “men who are high” (men who are older, more powerful, and more likely to be infected with HIV). The sexual relations on beaches exist on many levels and women are sometimes complicit in sexual relations with youth.

It is clear that recent years have witnessed an explosion of transactional sex through such practices as *Jaboya* and *Abila*. Given the recent scourge of HIV/AIDS in many African communities, the systems of transactional sex occurring on Lake Victoria’s beaches have advanced the spread of the virus. With fishermen migrating from beach to beach and having sexual relations with multiple women, the rate of HIV/AIDS on the beaches is very high. “Change of residence from one beach to another could be for the reason of disguising identity. This is a dangerous behavior as unsuspecting women or men may be infected through this index case moving to different beaches” (Odhacha 28).

Compounding the problem is the prevalence of polygamy among the lake’s riparian communities. Some of the women fish traders are married and, according to the culture among these communities, their husbands may be married to many other women. When a woman fish trader becomes infected with HIV, she will most likely infect her husband and her husband will subsequently infect his other wives. The process initiates a dangerous cycle of HIV infection.

I believe that the incredibly high rate of HIV/AIDS in Kisumu district is directly linked to the sexual practices within beach communities. The rise of commercialization and industrialization in Lake Victoria fisheries coincided with the HIV/AIDS pandemic, and these issues have served as mutually reinforcing elements in the marginalization of women fisherfolk. Members of beach communities are not unaware of the threat of HIV/AIDS, and many informants report that the loss of lives to HIV/AIDS has detrimentally impacted the economic status of their fishing communities. “Although the people are aware of the dangers of HIV/AIDS, they lack economic empowerment and knowledge to make informed decisions” (Udoto 1).

I propose that the commercialization of the fishery sector has had a domino effect on women in beach communities. Industry has encroached on women’s territory, resulting in systems of transactional sex and subsequent HIV infection. A direct correlation exists between the commercialization of the fishery sector and the HIV/AIDS scourge on the beaches, and women are at the center of this scenario.

The HIV/AIDS pandemic has left the beach communities literally sick and dying — many fisherfolk can no longer carry out their duties and are unable to provide for their families. As a result, children are left orphaned and forced to fend for themselves. The rate of widowed and divorced women on beaches is high and many of these women are the sole caretakers for large families. When these women fall sick or die, their children face even greater impoverishment. Subsequently, many of these children enter fishing communities in desperation. Many young girls either enter the fish trade or become prostitutes near the beaches. Many fishermen possess disposable income after a day's work and, with little or no conception of savings, these men spend their money on social activities, drinking, and prostitutes:

The riparian communities are involved in child prostitution, early marriages, drug taking (Bang) also known as 'Yadh Tich' (drug for work), irresponsible sexual behaviors fueling the spread of HIV/AIDS and compromising the flourishing fish trade as the money got is spent on the night music, good hotels in the beaches and treating of the opportunistic diseases arising. The act has exacerbated poverty resulting to poor living conditions, use of unsafe water and poor sanitation, inadequate diet, poor housing, inability to receive basic education (school drop out) and lack of access to health care as well as income opportunities (Ochieng 13).

An article in the *Daily Nation* addressed the incredibly high school dropout rates in Nyanza Province (63 percent) and asked the pertinent question: "Where do all these girls go to after dropping out of school?" The article proceeds to explain that many of the dropouts become "beach children" and lead lives of destitution and poverty (Oywa 2). Many of these youth fall prey to the prostitution, early marriage, and drug use described above, activities that reinforce impoverishment among beach communities.

Ultimately, impoverishment has had a cyclical effect on beach communities: economic disempowerment has led to increased sickness and disease and, in turn, sickness and disease have led to greater economic disempowerment. "HIV/AIDS and poverty are bedfellows. AIDS impoverishes the infected and the affected whereas poverty exposes people to the risks of infection by engaging in risky behaviors" (Odhacha 28). I believe that this cycle began in the 1980's with the proliferation of the Nile Perch and the commercialization of the fishery sector, and will perpetually continue unless drastic changes occur.

Before the changes in the fishery sector, a significant portion of fishing activities was based on a familial structure. Often, a husband would harvest fish

and his wife would trade his daily catch. In recent years, however, fishing as a family endeavor has largely disappeared and left a greater opening for transactional sex. This change can be traced to the proliferation of Nile Perch and the changes in the fishery sector. As fishing became industrialized, fishermen began selling fish to agents from processing plants, subverting the husband-wife connection that once existed. Deaths due to HIV/AIDS have also left many men and women devoid of their marriage partners.

Within beach communities, a disparity exists between men's and women's willingness to address sexual exploitation. Although most members of beach communities are reluctant to speak about Jaboya, fishermen spoke most tacitly about Jaboya: none of the fishermen interviewed would address sexual relations between Jaboya and women fish traders. While women fisherfolk were also reluctant to speak about Jaboya, those who did address the sexual relations were clearly crossing delicate social boundaries. In one case, a woman fish trader speaking about Jaboya was hurled invectives by a nearby fisherman claiming that she was a "traitor" and a "liar." I believe that the contrast between men and women's willingness to speak about Jaboya reflects power imbalances within beach communities. Because most of the men on beaches own boats or harvest fish, they are more economically empowered than women fisherfolk. On the beaches, where money is almost synonymous with power, men automatically possess a level of control over the women fisherfolk. Although every member of beach communities has experienced the effects of commercialization, I believe that the women fisherfolk have been most deleteriously impacted. A complex hierarchy of power exists on the beaches; in general, women fisherfolk rank low in this hierarchy.

The marginalization of women fisherfolk plays out in every socio-political structure on the beaches. One organizational structure that deserves serious consideration is the Fishermen Co-operative Societies. Fishermen Co-operative Societies were originally formed in the 1970's with the aim of stimulating "rapid development in the sector through an expanded resource base and collective marketing of fish" (Obiero 41). Essentially, the Fishermen Co-operative Societies were an attempt to help fishermen market their fish by pooling the fishermen's resources and operating collaboratively. Women, however, play a minimal role in the co-operatives and gain almost no benefit from their presence. Firstly, membership in co-operatives is contingent upon possession of capital, as members are required to contribute regularly to the collective funds. The fact that most women fisherfolk possess little or no capital effectively prohibits them from joining co-operatives. Eighty percent of co-operatives require members to own fishing gear, another

exclusionary factor for the majority of women. Furthermore, many co-operatives require women to gain permission from their husbands before becoming members (Abila 167). Some women are actually unaware that co-operatives exist and others dislike co-operatives because they are rife with corruption (Ochieng 18). A study conducted by Richard Abila concluded that women constitute only six percent of total co-operative membership (Abila 168). Overall, the co-operatives are predominantly men's territory. The title Fishermen Co-operative Societies is telling: men are the sole controllers of co-operatives.

Richard Abila, an expert on fishermen co-operatives, describes co-operatives as "a forum for power struggle" and asserts, "The opinions of women are disregarded." Fishermen co-operatives serve not to empower members of beach communities, but rather serve as a tool of corruption, benefiting only power-hungry individuals. The socio-economic impoverishment of beach communities has contributed to the corruption and mismanagement of co-operatives that ultimately serves to marginalize women further. Co-operatives offer a means for men to gain money and power, reinforcing the gender divide within beach communities. Although myriad problems exist in co-operatives, "prominent among the problems is the issue of mismanagement of the societies and embezzlement of funds" (Obiero 46). At Usoma Beach, for example, fishermen and women fish traders report that a fishermen's co-operative once existed on their beach, but two men in the co-operative "disappeared" with a major portion of the co-operatives funds (70,000 Ksh). The embezzlement of funds resulted in the quick dissolution of the co-operative at Usoma Beach. Ultimately, the power struggles that have intensified with commercialization have played out in co-operatives, where men desperate for money and power abuse a system designed to benefit the beach community. Women are excluded from this picture, left powerless and moneyless.

One relatively new organizational structure is Beach Management Units (BMU's). BMU's are a government endorsed management structure designed to keep order on the beaches. The purported tasks assigned to BMU's include law enforcement, collection of fisheries data, the handling of emergencies, and conflict resolution (Heck 18, 19). The BMU's are more gender inclusive than previous organizational structures: Policy dictates that women must constitute thirty percent of representatives in BMU's. Men continue to constitute the majority of representatives in BMU's, but women are gradually gaining a voice in beach management. According to representatives from the Women in Fishing Industry Project, increasing numbers of women are filling the role of treasurer in the BMU's because women are more "trustworthy" than men.

Despite being an official, government-endorsed management structure, the BMU's do not possess total control over beach activities. Positions in BMU's are voluntary; no financial compensation is awarded to representatives in BMU's. Given the poverty on the beaches, representatives in BMU's often fall prey to corruption. Members of beach communities gain power through corrupt measures, such as bribing representatives of BMU's. Corruption within BMU's ultimately serves to disadvantage women fisherfolk. Some BMU's cooperate with agents in the selling of fish; too often, the BMU's accept bribes from the agents and ignore controlled pricing regulations. This corruption benefits the agents and the representatives in BMU's at the cost of the small-scale fish traders. Also, the BMU's often deal solely with fish in bulk; this system benefits agents who possess the means of storing and transporting large quantities of fish, but is severely disadvantageous to the women who deal in small quantities of fish.

Additionally, representatives of BMU's often secure their positions through corrupt methods. The beach communities hold elections to determine representatives of BMU's; some men bribe the community to attain votes, essentially buying positions in the BMU's. Women play almost no role in this circle of corruption.

The power held by BMU's is tentative. Consequently, individuals with a pecuniary advantage easily usurp the BMU's authority. On some beaches, an informal social network as powerful as the BMU's exists and largely dictates beach management. There is a very thin line between the 'official' management structure and the 'unofficial' management structure; ultimately, the vague and tentative power structures on beaches allow massive room for corruption.

Reorganization of Women Fisherfolk

In response to their marginalization, women are filling new roles and reorganizing themselves in an attempt to gain economic stability. A few women have begun to own boats as a strategy for gaining socio-economic status. Traditionally, strictly men are allowed to own boats. Only in recent years have a small number of women adopted this practice. I propose that the advent of women boat-owners is in direct response to the socio-economic hardship facing women fisherfolk today. Most women who own boats have been involved in the fish trade for many years and have saved some capital to purchase boats, nets, and other fishing equipment. Because it is rare for women to possess capital at all, many women boat owners have been assisted by non-governmental or governmental organizations; these organizations provide women with loans

at the outset of their business endeavor. In some cases, the women who own boats gain an esteem and authority on the beaches that exceeds that of most women fish traders.

Joyce Oyuka, a boat owner on Dunga Beach, has been involved in the fish trade for thirty years. With the assistance of her family and various organizations, she accrued enough capital to purchase boats. Today, Joyce sells much of her fish directly to the nearby processing plants. While most women have been pushed aside by the presence of processing plants, Joyce has identified a means of benefiting from the commercialization of the fishery sector. Through her economic success, Joyce has gained authority on Dunga Beach and now serves as chairlady of the Dunga BMU.

According to an article in the Daily Nation about the plight of women fisherfolk, “if they had their own boats, the sexual harassment would be history” (Oywa 1). Although there are no simple solutions to the problems facing women fisherfolk, owning boats is one means for women to gain economic empowerment.

Women boat owners, however, still face severe disadvantages. Because women are not allowed to harvest fish, women boat owners must hire men to fish in their boats; therefore, women have no means of supervising fishing activities. Often, hired fishermen deceive women boat owners by returning only with a portion of the daily catch. The men might sell the remainder of the catch to fish traders at other beaches or collaborate with men from another boat, secretly transferring fish to the other boat (later, men from both boats divide the profits from the surreptitiously transferred fish). Essentially, men control the management of boats owned by women and thereby maintain a power over the women boat owners themselves. According to Roselynn Lwenya, “women own the boats, but they don’t have control over the boats.” Men who own boats are also more cohesive than women boat owners and therefore possess a social advantage over the women boat owners. These inequities demonstrate that even the most empowered women on beaches experience some level of marginalization.

The economic hardship facing women fisherfolk in recent years has motivated increasing numbers of women to join together in the formation of women’s groups. Women’s groups have long existed for various income-generating activities; in the last two decades, however, membership in women’s fishing groups has grown dramatically. Most women’s groups consist of approximately fifteen members (although group sizes vary) and are overseen by the District Social Development Officer of the District Commissioners Office.

Various factors motivate women to join fishing groups. For instance, officially registered women's groups are eligible to apply for loans through the District Social Development Officer. Money is never awarded on an individual basis; therefore, it behooves women to be members of a fishing group. Women's groups can also apply for loans from non-governmental organizations.

Although the government and other organizations provide financial assistance to women's groups, the women themselves generate the majority of their funds. Each woman's group conducts "merry-go-rounds:" every member periodically contributes a specific sum of money to the group's funds. Group members utilize the money in the "merry-go-round" for various purposes. For example, if a woman possesses insufficient funds to purchase fish, she may borrow money from the group fund. Members of the Rainbow Fresh Fish Group report that they allot a portion of their funds to pay for the medical needs of group members suffering from HIV/AIDS.

One prominent women's group is the Fresh Fish Slab Owner's Group in Kisumu town, an umbrella group for approximately fifteen small women's groups. Many of the women in the Fresh Fish Slab Owner's Group are widows or divorcees and many support entire families solely through the income earned selling fish. One member of the group, Mary Abuto, is a widowed woman of sixty-three years; her family consists of ten children and three orphans, all of whom she supports. Mary began selling fish in 1970 and joined the Fresh Fish Women's Group at its outset in 1982 (now a subgroup of the Fresh Fish Slab Owner's Group). The Fresh Fish Women's Group was the second of its kind in Kisumu (the first group was formed earlier in 1982). According to Mary, the situation facing women fisherfolk has worsened in recent years. Mary attributes the economic hardship to many factors, including poverty, the government, and the advent of processing plants. As with most women fish traders, Mary emphasizes the lack of refrigeration as the primary obstacle for members of the Fresh Fish Slab Owner's Group; this obstacle precludes the women from competing with nearby processing plants. Although the group members once stored fish in a large cooling system, the cooling system became dysfunctional and they lack sufficient funds for its repair. Today, the women buy ice from a nearby Coca-Cola factory; the women claim that the factory "sympathizes" with them. According to the District Social Development Officer, the factory owners who can refrigerate massive quantities of fish serve to "kill the morale of the women."

Ultimately, the women's groups provide a financial basis for borrowing and lending and also provide a means of survival for women whose financial lives are in jeopardy. Furthermore, the women's groups stimulate financial circulation on

the beaches, thereby impacting the fishery sector on both individual and community levels. It is no coincidence that the formation of women's groups came at the same time as the proliferation of the Nile Perch and the commercialization of the fishery sector. Women are joining groups in an attempt to survive in an ever-changing industry. Although women's groups are not a perfect solution, they help women to survive in the face of incredible economic hardship. In some cases, membership in women's groups provides economic empowerment that is sufficient to evade the sexual exploitation that most women are forced to endure. Ultimately, women's groups are not a panacea for the problems of women fisherfolk, but are one element in their empowerment.

Conclusion

Lake Victoria's fishery sector has undergone massive transformations over the last two decades. Beginning with the proliferation of Nile Perch, the fishery sector rapidly shifted from small-scale, artisanal fishing to large-scale, export-oriented fishing. The advent of processing plants, technology, and foreign competition brought increased hardship to the lives of local fisherfolk. In this complex transformation, women have experienced the greatest marginalization.

Commercialization, industrialization, and trade liberalization have wreaked havoc on the communities around Lake Victoria, and are the primary culprits behind the region's poverty and health crises. I propose that the proliferation of Nile Perch and subsequent commercialization of the fishery sector in Lake Victoria have contributed to the incredibly high rates of HIV/AIDS in western Kenya. The missing piece of this puzzle is the small-scale women fisherfolk.

An examination of the roles and statuses of Lake Victoria's women fisherfolk elucidates the importance of proposing multi-sectoral solutions to the issues facing beach communities. The stories of women fisherfolk in Lake Victoria reveal the interconnections that underlie development, or lack of development, today: Addressing the intersections between globalization, HIV, sexual exchange, and other issues is the first step in promoting sustainable development. In Lake Victoria, the state of women fisherfolk today is heart wrenching and will only improve when people begin to address the intersecting issues underlying women's marginalization.

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