DREAMING THE FUTURE: THE GENDERED TECHNOPOLITICS OF DEVELOPMENT

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by

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ABSTRACT OF DISSERTATION

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ABSTRACT

The new mantra of development discourse in the struggle against inequality depicts women as users, producers, consumers, and designers of technologies. Despite a large body of research on use, access, and infrastructure, scholars have paid less attention to the ways in which transnational discourses and local activism around gender and digital technologies (hardware, software, mobiles, internet) intersect in the global south. This dissertation explores the gendered technopolitics of development through examining first, how discourse—produced by the United Nations and the World Bank—constructs gender and technology, and second, how activists train, advocate, and mobilize around issues of gender and technology in Latin America and other regions of the global south. I argue that these official discourses frame “third world” women as ideal agents of technological progress by mobilizing digital technologies in ways that commodify gendered forms of intimacy. Simultaneously, activists in Latin America and other parts of the global south are reimagining the information society and the place of women within it, even while working within development logics.

The main research questions of my investigation are: 1) In what ways are gender, development, and the uses of technology being framed by development institutions and by contrast how are these being understood by activists on-the-ground? 2) What are the origins, trajectories, and consequences of these different frames? My dissertation makes a theoretical contribution to critical sociology of development, specifically to gender and development, by: 1) expanding debates on appropriation and depolitization through the study of both macro-institutional discourse and women’s organizational micro-politics 2) examining digital technologies as a central locus of gender, development, and power 3) and explicitly theorizing violence (in this case online) as inherent to the network society.
I build on interdisciplinary theories of neoliberalism, feminist theories of intimacy and globalization, and postcolonial and decolonial thought to examine the tactics of discipline as well as the modes of contestation in the making of what I call the *third world technological woman*, created through discourses on access, dexterity, and expertise of digital technologies, and gendered tropes of care, nurturance, intuition, and creativity. By bringing these literatures into conversation, my research reveals the tensions and possibilities between macro-institutional development discourses and micro-level organizational politics.

My investigation is a comparative case study of the transnational network Women’s Rights Programme of the Association of Progressive Communications (APC-WRP), the cooperative Sulá Batsú (Costa Rica) and the non-governmental organization Colnodo (Colombia). It draws from 62 in-depth interviews with activists from the region, specialists in gender and technology, and development and government officials, observations of global, regional, and local events, and textual analysis of United Nations and World Bank reports on gender and technology.

I reveal the problems in centering an entrepreneurial woman as the technological heroine of the network society, as well as the possibilities for social transformation. I found that development discourse on gender and technology frames “third world” women as ideal agents of technological progress by appropriating feminist concepts and gendered tropes, while also mobilizing digital technologies in ways that commodify intimate relationships. This discourse reproduces neoliberal rhetoric that privileges market competitiveness, socioeconomic development, and individual empowerment, and undermines collective modes of relating to technology. The reports also extend market-oriented rationalities into intimate areas of life, making technology seem indispensable to numerous forms of wellbeing and success. Gendered
qualities such as care, selflessness, intuition and creativity, are intrinsic to responsibility, discipline, rationality, and self-management. Digital technologies are ideally suited for this endeavor: they can be connected to numerous areas of life and work, from the most intimate to the most public. By contrast, technology activists employ forms of affect and principles of horizontality, prefigurative politics, economic justice, and solidarity, as well as an emphasis on “third world” women’s sexuality and pleasure through digital technologies that question official development frameworks. Also, online violence problematizes teleological plans for the entrepreneurial *technological woman*.

My research advances numerous possibilities for understanding and theorizing feminist technopolitics—concerned with race, sexuality, gender, class, and the environment—in the developing world when the stakes are high for both economic development and feminist and social justice politics, more so in times of increasing inequality and technological ubiquity. Incorporating the study of the “intimate” broadens simplistic and flat portrayals of the communities we study. At the same time, examining intimacy provides a ground to explore how institutions attempt to shape subjectivities for specific agendas. My research also demonstrates that social justice activists reimagine their politics and practices in light of new and increasing forms of appropriation and cooptation. Finally, violence—ranging from the interpersonal to the structural, including racism, misogyny, heteronormativity, ecological devastation, poverty—is constitutive, and not a consequence or a by-product of the information society.
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Chapter I: Dreaming the Future: The Gendered Technopolitics of Development

Imagine if through this [mobile] technology the poor of the world, who are still mostly unbanked, become banked, and you can safely, if you’re poor, make financial transactions to keep your savings safe, move money from an urban job to the village where your family is, wherever it is, the prospect of this money now being available in ways that can have an extraordinary impact. I don't think we’ve even scratched the surface of the possibilities. And that’s just mobile technology. –Melanne Verveer, US Ambassador-at-Large for Global Women's Issues.¹

This vision is a central part of the development imaginary. Technology, specifically digital information and communication technologies (software, hardware, internet, mobiles), is ideally suited to fulfill this dream of the future. Technology can be connected to numerous areas of life and work, from the most intimate to the most public, and it is anchored in the present while simultaneously leading towards the future. Technology is the substance of dreams, of imagining and re-imagining ourselves and our world. In this inexorable race towards the future, women have a particular place. Development discourses on technology—in this case, specifically produced by the United Nations and the World Bank—focus mostly on poor women living in the global south who are mothers. Once invisible, they have become hyper-visible as the ideal agents that will lead the disenfranchised into the future. But these are not just any kind of women, they must be technical, savvy, and dexterous, as well as loving, selfless, and nurturing. They must be disciplined, entrepreneurial, responsible, and self-reliant, while also taking care of their families and communities. This is what I call the third world technological woman: a gendered subject that neoliberal development discourse constructs.

Yet the technological woman is multidimensional. She is more complex than the image of the savvy and selfless entrepreneur. She can feel emotions beyond any paradigms, sustain

relationships that elude boundaries, practice a solidarity-based economy, be subjected to online violence and surveillance, be sensuous, curious, the carrier of raw and unintelligible knowledges, a nurturer of herself, of friends, of strangers and misfits, queer, attached to the local and the global, critical and savvy, entrepreneurial yet not self-reliant. These are some of the cracks and crevices of everyday life. The future is, therefore, as contradictory, complex and uncertain as the technological subject. The making, unmaking, and challenges and possibilities of this third world technological woman lie at the crux of my dissertation.

_Dreaming the Future: The Gendered Technopolitics of Development_ explores the ways in which development discourse constructs technology and gender, as well as the work of activists that train, advocate, and mobilize around issues of gender and technology in Latin America and other regions of the global south. The main research questions of my investigation are: 1) In what ways are gender, development, and the uses of technology being framed by development institutions and understood on-the-ground? 2) What are the origins, trajectories, and consequences of these interactions? Development discourse constructs an ideal entrepreneur who is skilled in digital technologies, and activists both reproduce and contest development plans. The problem is that on the surface development discourse seems to have advanced tremendously. It has incorporated women—since the 1970s—and centered them as important actors, a central claim of contemporary feminist movements. It seems that development discourse is capable of absorbing almost anything: concepts, ideas, frameworks, feelings. This presents challenges for critical theory, as well as for feminist politics based on social justice, structural transformation, collective struggle, solidarity, and economic redistribution. Chakravarty (2009) states that “neoliberal agendas do not require an end to patriarchies, only their management” (16).

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2 Thanks in great part to the work of Ester Boserup (1970).
Neoliberal development plans—development policies built on individualism, personal responsibility, discipline, corporatization, privatization, deregulation, and austerity—do not require an end to inequality, only their management. My research shows that women have become both ideal managers of inequality and managed subjects of development. In this dissertation, I argue that development discourse produces an ideal third world technological woman that combines technological dexterity and entrepreneurial instinct with care, selflessness, creativity, and intuition. At the same time, feminist principles of horizontality and redistribution together with various forms of intimacy are sites of tension amid this linear and emancipatory discourse.

This research is important because digital technologies have become exemplary tools and spaces for social, economic, and political progress in the network society (Castells 1996), and a major part of the agenda of a development industry that is becoming increasingly corporatized. Feminist movements in the global north and south alike have also focused on the necessity to include women in science and technology. The logic is that the economy needs women, science and technology need women, and the future needs women. But what does this mean and what does it entail? Who is being included and for what purposes? Who is being excluded and why? What is obscured? How is technological progress being framed? Why are women central to this agenda? How are activists mobilizing around gender and technology? The stakes are high for economic development as well as for feminist politics, even more so in times of increasing inequality and technological ubiquity.

My dissertation reveals the problems in centering an entrepreneurial woman as the technological heroine of the developing world, as well as the possibilities for social transformation and change. Although my research is grounded in the developing world, more
specifically in Latin America, it offers analytical insights into the current push to integrate women in science and technology in the United States and Europe. The main contribution of my dissertation is in the field of gender and development by examining the intersection of neoliberalism, development, gender and technology. My dissertation advances debates in the field of gender and development, particularly explored by Andrea Cornwall’s critical scholarship on discourse, power and feminism (Cornwall 2007, 2016; Cornwall, Gideon, and Wilson 2008a; Cornwall, Harrison, and Whitehead 2007; Cornwall and Rivas 2015), by using theories on governmentality, feminist theories of intimacy, and postcolonial and decolonial thought to understand how gender is mobilized in technological discourses and practices.

My research employs multiple qualitative methods including semi-structured interviews, participant observation, and textual analysis. It is a comparative case study that maps the flows and encounters between development discourse on gender and technology and on-the-ground activism in Latin America. The units of analysis are the organizations. I employed a qualitative methodological approach to understand the framings, meanings, and implications of contemporary technological discourse. I conducted ten weeks of fieldwork in two trips to San José, Costa Rica, and one to Bogotá, Colombia, in 2015 and 2016, observations at regional and global events, 62 in-depth interviews with activists from the region, specialists in gender and technology, and development and government officials. Most interviews were with activists and staff of my case study organizations: The Women’s Rights Programme of the Association of Progressive Communications (APC-WRP), Sula Batsú, in Costa Rica, and Colnodo, in Colombia. I also observed the meetings at the UN Women’s 59th Commission on the Status of Women (CSW) meeting in New York City focused on the 20th anniversary of Beijing’s Platform for Action, where I interviewed some APC members and UN officials. In addition to this
ethnographic work, I examined 50 development reports and documents on gender, science, and technology in addition to numerous organizational materials. I analyzed and fully coded 50 reports on gender and technology produced mostly by the United Nations and the World Bank since the Women’s Conference in Beijing in 1995. I also examined 29 United Nations and World Bank reports, declarations, and resolutions (1993-2016) on science, technology, and development. I consulted reports from universities, NGO’s, foundations, and technology corporations, and over 100 briefs, white papers, studies, flyers, blog posts, presentations, and guides from APC and APC-WRP, Sulá Batsú, and Colnodo.

I found that development discourse on gender and technology frames “third world” women as exemplary agents of technological progress, by appropriating feminist concepts and using numerous gendered tropes. Development discourse also mobilizes digital technologies in ways that commodify intimate relationships with place and knowledge. The very tools and spaces of digital information technologies also create vulnerabilities and exacerbate inequalities, evident in the so-called “digital divide,” gender and racial gaps in use, the imposition of expert knowledges over local knowledges, and the increasing vulnerability of marginal communities online. Simultaneously, activists are attempting to reimagine the network society and the place of women within it, even while working within certain neoliberal and development logics (Chapter 4). Therefore, the making of the third world technological woman is constantly being reimagined and reproduced by activists. This gendered figure who saves herself, her family, community, and country through technological dexterity, knowledge, and keen entrepreneurial instinct, is both questioned and mobilized. I also found that numerous forms of affect and principles of horizontality, redistribution, and solidarity intervene in the making of the technological woman.
(Chapter 5). In addition, violence problematizes emancipatory and linear development plans for the technological woman (Chapter 6).

In the following sections, I offer information on Costa Rica and Colombia economic and internet access and digital policy environments to better understand Sulá Batsú and Colnodo’s contexts. I also outline the methods and offer details of the selected cases, the theoretical framework of my research, the findings, and summaries of the chapters of the investigation.

Costa Rica and Colombia

Costa Rica and Colombia are considered “upper-middle income economies,” according to the World Bank classification system (2017). This classification decreases their opportunities for access to development aid, although numerous forms of inequality persist (CEPAL 2016). The International Monetary Fund and World Bank structural adjustment policies (SAPs) in the 1980s that demanded governments to slash social spending and protections and adopt austerity measures, deregulation, export promotion, and privatization, as means of economic development impacted both countries. Colombia—which has survived decades of state, guerrilla, paramilitary and drug trafficking related violence—is today one of the most unequal countries in the world, and the second most unequal in Latin America after Honduras, according to the World Bank GINI coefficient system that measures income distribution. Although poverty and inequality increased after the implementation of SAPs, Costa Rica continued to be the most stable and prosperous country in Central America (the military had been abolished in 1948 after a civil war) (Cupples and Larios 2010). Costa Rica has been labeled a “mixed-economy” with a combination of market and state-led economic approaches (Mesa-Lago 2000), and Colombia a “cautious

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3 Upper middle-income economies are those with a GNI per capita between $4,036 and $12,475. Taken from https://datahelpdesk.worldbank.org/knowledgebase/articles/906519.

4 World Bank GINI Index: http://data.worldbank.org/indicator/SI.POV.GINI 7/26/2017 6:05:00 PM
reformer” (Ocampo 2004:68). Costa Rica continues to have social welfare provisions in universal healthcare, education, and telecommunications, and a combination of national, foreign and corporate investment in the areas of eco/tourism, agriculture, and technology. In the 1990s, high tech companies such as Intel (which closed its manufacturing facility in 2014), Microsoft, IBM, and Hewlett-Packard, began to invest heavily making software development one of the country’s prime industries. Costa Rica also has a long and vigorous history of cooperatives, especially in the agricultural sector (Vo 2016)\(^5\), and 98% of its national enterprises are considered small and medium enterprises with less than 100 employees (CEPAL 2009).

Costa Rica and Colombia boast comprehensive digital policy frameworks and national digital plans aimed at amplifying access and use of digital technologies (hardware, mobile, internet, affordable broadband) (CEPAL 2016c). Both countries also have information and communications state ministries in charge of policy design and implementation (Alliance for Affordable Internet 2017; Camacho 2013; CEPAL 2016a, 2016c). Costa Rica has the highest mobile broadband penetration in Latin America among the 24 countries analyzed by the ECLAC in 2016, and the second highest rate among the 58 low and middle-income countries examined by the Alliance for Affordable Internet in 2017. As of March 2017, statistics show that internet penetration in Costa Rica is 86.9% (the highest in Central America), and in Colombia 58.6%.\(^6\) Costa Rica and Colombia have strong policies that aim to ensure infrastructure and access to affordable broadband for marginalized populations, for which they enjoy high rankings in what has become a key indicator of digital development (Affordable Internet 2017). Unfortunately,

\(^5\) Also, see the website of Costa Rica’s National Cooperative Institute (INFOCOOP): http://www.infocoop.go.cr/.
\(^6\) Internet World Stats: http://www.internetworldstats.com/stats2.htm. This website, which collects statistics from various sources including the International Telecommunications Union (ITU), defines “internet penetration rate” as “the percentage of the total population of a given country or region that uses the Internet.”
neither Costa Rica or Colombia have specific gender provisions or integrate a gender perspective in their policy agendas (Camacho 2013), while the digital gap between men and women persists and continues to increase (ITU 2016)\(^7\). Urban and rural, class, and age gaps also endure worldwide as well as in the region (CEPAL 2016c).

**Sulá Batsú, APC, and Colnodo**

My dissertation is a comparative case study of three organizations: the women’s cooperative Sulá Batsú in Costa Rica, the NGO Colnodo in Colombia, and the Women’s Rights Programme of the transnational network and organization Association for Progressive Communications (APC-WRP). I also examine United Nations, World Bank, and technology corporations (Intel) reports on gender, science, and technology mostly produced in the past 20 years since the United Nations Conference on Women in Beijing in 1995, considered the watershed moment for issues around women, information and communication technologies. I selected the United Nations and the World Bank because, although their role in development has been increasingly questioned (Alvarez 2014; Harcourt 2005; Vargas 2009), they continue to be important arbiters of knowledge on development and sites of activism (Bedford 2009; Phillips and Cole 2009). In addition, the organizations under study all have received funding at some point from the United Nations (specifically UN Women), and the activists participate in United Nations conferences and events on women and technology. More technology corporations, such as Intel, Google, and Facebook are also investing in “women and technology” in the developing world. In Latin America, the intersection between communication and development is not new.

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There is a tradition of community-based media with the example *par excellence* of the Zapatista movement’s uses of information technologies (Castells 1997; Cleaver 1998; Juris 2008). But the coupling of gender, digital technologies and development became clearer with advocacy and grassroots activism after the 1995 UN World Conference on Women in Beijing. It has since become central to feminist activism in the region, which makes it a key site to understand these discourses and practices. The United Nations Economic Commission for Latin America and the Caribbean (ECLAC)—the Spanish acronym is CEPAL—has also produced numerous regional reports and policy documents on technology and gender. Activists and experts interviewed for this research have authored ECLAC reports on gender and technology, and participate in their meetings.

Sulá Batsú and Colnodo were chosen because of their prominent work on gender, technology and science in Latin America, while APC offers the transnational perspective and is composed mostly by women from the global south. Sulá Batsú focuses on forming women as entrepreneurs in technology, Colnodo on developing women as skilled users of digital technologies, and both organizations participate in local, regional and transnational advocacy efforts advancing technology policies that integrate a gender perspective. Sulá Batsú is a cooperative founded in 2005 dedicated to advocacy, research, and training on technology and development in Central America. Their project “TIC-as,” which uses the slogan “Science Needs Us,” focuses on training young rural women and girls in information technologies with the goal of reducing the “gender gap” in science and technology fields. The NGO Colnodo, founded in 1994 in Bogotá, is a pioneer in the region in offering massive computer and internet training to the most marginalized communities in Colombia. Since their origins, they have integrated gender throughout their four strategic programs: e-government; information and communication
technology appropriation; information and communication technology policy; and knowledge production. APC, founded in 1990, with consultative status to the United Nations, is both a transnational network and nongovernmental organization that works on Internet rights advocacy on the state and suprastate levels as well as with grassroots organizations. APCs Women’s Rights Programme is a pioneer in activism against online misogyny and surveillance in the global south, and fundamental in promoting a “feminist internet” and internet gender rights. Both Sulá Batsú and Colnodo are organizational members of APC.

**Neoliberalism, Development, and Technology**

This dissertation forges a new direction in studies of gender and development. Building on theories of neoliberalism and governmentality, on feminist theories on intimacy and globalization, and postcolonial and decolonial thought, I work through my case studies to understand the making of the third world technological woman. I draw from Foucault’s (2008a) theories on governmentality to grapple with the creation of the “Third World Woman” as technological subject within development discourse. I also draw from critical theories of development to illuminate the central role of both women and technology in contemporary development discourse (Escobar 1995; Mohanty 1988). Feminist decolonial scholarship explain how violence is inherent in neoliberal politics and the making of the third world technological woman (Connell 2016). Finally, I draw from feminist theories on intimacy to understand the possibilities and the challenges of developmental prescriptions on gender and technology (Anzaldúa 1987; Lorde 2012; A. Wilson 2015). By bringing these literatures into conversation, my research reveals the tensions and possibilities between macro-institutional development discourses and micro-level politics around gender, technology and development. Put together,
these frameworks advance discussions in gender and development by looking at how
development discourse mobilizes gender for its technological agenda, and by exploring how
feminist politics, various forms of intimacy, and violence are sites of tension because of the ways
in which they challenge linear development discourses, policies, and plans.

Many feminist scholars in the field of development (Cornwall 2007, 2016; Cornwall et al.
2007; Cornwall and Rivas 2015; K. Wilson 2015), and beyond (Eisenstein 2009; Fraser 2013b;
Halley 2006), have studied the collusion of feminism with institutional power. Capitalist,
corporate, and development discourses and policies have instrumentalized and recycled feminist
social justice principles to further specific agendas. This has caused tremendous ambivalence
among activists and scholars alike (Cornwall et al. 2007). On one hand, feminist ideas and
values, as well as feminists themselves, were gaining access to crucial spaces of power and
decision-making. On the other, they were being used to advance policies that were antithetical to
transformative feminist politics and gender justice. However, many of these debates have
overlooked the encounters between macro-institutional discourses and micro-level politics,
which my dissertation explores. There is a “double-movement” (recalling Karl Polanyi) to the
politics of appropriation; it is not linear or unilateral. Recently, feminist scholars have started to
recast the “perverse alliances” between feminism and institutional power (Orloff and Shiff 2016;
Prügl 2015; Whittier 2016). My research also examines some of these “uneasy alliances.”

Literature on gender, technology and development (specifically on information and
communication technologies) offers insights into some of the socioeconomic and political
relationships between gender and technology in the global south. But many of these studies
emphasize the technical aspects of these relationships, and are atheoretical and highly descriptive
and prescriptive (Hafkin 2003; Hafkin and Huyer 2006, 2007), with notable exceptions (Gajjala
There has been a shift from a focus on access and availability of infrastructure and internet, to the importance of advancing women as producers, designers and developers of technology and content on the local level (Gajjala and Mamidipudi 1999; Parmentier and Huyer 2008). The digital “gender gap”—the gap in use, once access is equal—continues to be central in the literature (Brimacombe and Skuse 2013; Hafkin and Huyer 2006). There have been important critiques, for example, of the absence of scholarship on the political economy of technology (Daniels 2009b; Lee 2006; Noble 2016). The focus of most of this literature, though, is on finding ways to advance women in the network society, but not on theorizing the dilemmas of this politics of inclusion or the implications for gender politics.

I look specifically at how development discourse constructs a particular gendered technological subject, and how activists navigate tensions between development, feminism and technology. When I say that development discourse is gendered, I follow Joan Scott’s (1986) classical formulation to understand gender as an analytical category beyond femininities and masculinities, but rather as a “broader examination of how ideas about sex and sexual differences are used to create and justify relations of power” (Desai and Rinaldo 2016:347). Recently, feminist academics, especially in the subfield of gender and globalization, have called scholars to use a transnational gendered lens to study masculinities within different structures of power (Connell 2016; Desai and Rinaldo 2016; Salzinger 2016). This is important work, indeed. The development discourse that I analyze, though, targets women (see Chapter 4). In these reports, men and queer communities are invisible. This has implications for these groups that are beyond the scope of this research. The organizations I study also mostly work with women, although they all have worked with queer communities and men. But my research is geared towards
understanding precisely how these organizations are contesting, redefining, or not, prevalent technological discourses which target women.

**The Third World Technological Woman**

This dissertation focuses on patterns of exclusion and inequality, and also of negotiation and contestation, produced as part of the race to include “third world” women in the knowledge economy. I approach this problem by exploring how reports are constructing women in the global south as key figures to advance economies in the network society, and the forms of political agency that women craft amid development plans. I found that international development has incorporated feminist concepts and gendered tropes into reports that proclaim entrepreneurship as the ultimate solution to inequality while obscuring the historical and political trajectories that have produced many of those inequalities. This discourse reproduces neoliberal rhetoric that privileges market competitiveness, socioeconomic development, and individual empowerment, and undermines collective modes of relating to technology. These reports also extend market-oriented rationalities into intimate tangible and intangible areas of life, making technology seem indispensable to numerous forms of wellbeing and success. And women are at the center of this endeavor. Gendered qualities such as care, selflessness, intuition and creativity, are intrinsic to responsibility, discipline, rationality, and self-management. This makes for an ideal neoliberal actor.

I also found that in Sulá Batsú and APC-WRP violence and various forms of intimacy problematize linear and emancipatory discourses on technology. Solidarity, as well as violence, challenge neoliberal rationalities of responsibility, discipline, and self-management. In APC-WRP, activism against online violence opens avenues for discussing sexuality *and* pleasure
(Chapter 6), which is rare, if not absent, in development discourse (Cornwall 2007; Jolly, Cornwall, and Hawkins 2013). In Sulá Batsú, affective bonds contribute to creating collective awareness. It is important to note that these are not necessarily overt forms of contestation (Chapter 5). Activists at the coop have not devised solidarity among each other to resist neoliberal agendas. Nevertheless, they are aware that it’s intrinsic to their work. Some scholars argue that fostering solidarity among communities can contribute to the unloading of care as a responsibility of civil society instead of the state (Rose 2010). But what transpires among people who care for each other can also be a form of contestation and resistance (Cornwall 2016; Kabeer and Huq 2010). This is open to change, of course. What is clear is that activists challenge frameworks that sometimes also offer them opportunities (Alvarez 2014).

This research is important because claims of progress through digital technologies are a fundamental part of the development agenda, and gender is at the center of these plans for the future of the developing world. The development industry has also become increasingly corporatized (Chapter 4), which will lead to the integration of more individualist, marketized, technical, and entrepreneurial policies and rationalities. Interestingly, since I started fieldwork in 2015, two of the organizations under study have received funds from major technology corporations for digital and entrepreneurial training projects for women and youth: Sulá Batsú from Google, and Colnodo from Google and Facebook. The impact and influence of these relationships still remains to be seen. What is important now is to understand the ways in which women and gender are being constructed as exemplary agents in the network society, and how gendered qualities and tropes are being instrumentalized for economic development. Cooptation is about much more than words and concepts; it includes intimate connections. This is problematic. We can identify how development discourse appropriates “empowerment,”
“gender,” and “feminism,” for instance, but it is more challenging to see how intimate connections and relationships are mobilized. The power of emotions—which many feminists have claimed must be legitimized—has entered the development repertoire. It seems as if the very existence of life is impossible without technology. This presents challenges for both critical social theory and feminist and progressive politics. How can we be critical when the critical has been appropriated?

Simultaneously, activists working within these frameworks are reimagining the third world technological woman. Some of these different ways of conceptualizing and shaping the technological subject lie in the importance given to process and practice rather than outcomes. In the case of Sulá Batsú, for example, the emphasis is on the process of training entrepreneurs, not on quantifiable outcomes (Chapter 5). Of course, they must show the “evidence” and the “results” of their work to receive funding and grants, which are also part of a neoliberal rationality of measurement and discipline. Yet their process is at the core of their organizational philosophy (Beck 2017a). It is there, in that everyday practice where they forge emotional relationships that are hard to control. This is important because as feminist scholars of development we must also look at process and practice to understand that there are forms of political agency that remain under the radar of the tangible (Eschle and Maiguashca 2014). APC-WRP is more straightforward, and unapologetically feminist, so their strategies are clearer. Their work against online violence opens avenues to discuss taboo topics in development such as the pleasure of sexuality. They envision technology as a space and medium to explore pleasure and sexuality in the “third world” inclusive of gender non-conforming communities.

In sum, this dissertation has two major findings. First, that digital technologies provide yet another ground for cooptation and depolitization of feminist principles and values, as well as
of gendered tropes such as care, selflessness, intuition, and creativity. Discourses on the “liberating” and “equalizing” potential of digital technologies reproduce essentialist notions of gender and heteronormative relations. In development discourse, digital technologies provide yet another field for tactics of discipline that are gendered and explicitly target women. The technologically savvy, caring and entrepreneurial woman has replaced the trope of the dexterous women with “nimble fingers” of the maquilas of global capitalism. Second, I found that there are practices that both challenge and reproduce institutional development discourse. Numerous encounters with technology challenge the teleological narrative of development plans and rationalities. In my case studies, communities of care among technology activists, and discussions on technology and the sexual pleasure of women and queer communities present some of these challenges. Finally, the inherence of violence—in this case online—interrogates emancipatory and linear development plans.

A Note on Concepts, Names, and Language

In this dissertation, I use terms such as “third world,” “global north,” and “global south” with hesitation. All of these terms are contested and problematic. Particularly, “third world” is considered pejorative in many academic and activist circles. I decided to use “third world” because it represents the process and political history of othering and dividing the “us” vs. “them,” the developed vs. the developing (once “underdeveloped”), the “advanced” vs. the “backward,” and numerous other binaries, some of which I explore in my research. In other words, I use “third world” precisely to show how politics of inequality and power embedded in the term are still alive and well, and hidden under other guises. Global north and global south, although imperfect, help to understand and map asymmetrical global power relations.
A concept that I do not include in my critical analysis of development discourse is “empowerment.” There is an important and large body of feminist literature in gender and development that has examined, scrutinized, and criticized how development discourse and policy (including states, corporations, and NGOs) have appropriated and depoliticized “empowerment,” among other feminist terms such as “gender” and “agency” (Batliwala 2007; Chakravarti 2009; Cornwall 2016, 2016; Cornwall and Anyidoho 2010; Cornwall and Brock 2005; Cornwall and Edwards 2014; Cornwall and Rivas 2015; Kabeer 1994; Parpart, Rai, and Staudt 2003). Scholars have also thoroughly examined the dilemmas of the on-the-ground politics of empowerment (Roy 2017; Sharma 2008). This is why I focus on other forms of appropriation in the construction of the third world technological woman, such as tropes of care, selflessness, intuition, and creativity, and entrepreneurial instinct as well as of women’s “natural” connections to place and to marginal knowledges.

Finally, I decided to use pseudonyms for the members of the three main organizations under study, Sulá Batsú, APC-WRP, and Colnodo. But I use the real names of the organizations because I think it is important to recognize their work. All of the interviews with the members of Sulá Batsú and Colnodo, and some with APC-WRP activists, were conducted originally in Spanish. All translations into English are mine.

The Chapters that Follow

In the next chapter, Chapter 2, I outline my theoretical framework and contribution to the field of gender and development that brings together Foucauldian, feminist, and decolonial theoretical frameworks to understand the tactics of control and discipline, as well as of contestation, of development discourses and practices on technology. I describe how this study
contributes theoretically to the field of gender and development by 1) expanding debates on appropriation and depolitization through the study of both macro-institutional discourse and organizational micro-politics 2) examining technology as a central site of power of gender and development 3) explicitly theorizing the immanence of violence (in this case online) in development and neoliberal politics, and 4) exploring the role of intimacy in development and social justice politics.

In Chapter 3, I offer a detailed description of my methods and methodology. I explain how I collected the data used for this study through qualitative methods including semi-structured interviews, participant observation, and textual analysis. I also explain the rationale of the case selection, the ethics and process of fieldwork, and reflect on my location as a researcher. I include an account of the methodological philosophy that guides this dissertation that relies on both Michael Burawoy’s (1998) “extended case method” and George Marcus’ (1995) multi-sited ethnography.

The first empirical chapter, Chapter 4, titled Development Discourse Laid Bare: Third World Woman as Technological Subject, examines institutional development reports—mostly produced by the United Nations and the World Bank—on gender, science, and technology with a section dedicated to reports produced in and on Latin America. I also look at agendas, plans of action, consensus documents, commitments, agreed conclusions, and resolutions. In addition, I analyze key reports from the technology corporation Intel, because it’s importance was mentioned by participants. I also integrate material from interviews conducted with development officials, state actors, and corporate executives. In this chapter, the question I ask is: How does development discourse construct gender together with technology? I argue that development discourse fuses technology and intimacy by incorporating gendered tropes in the making of an
ideal *third world technological woman*. This chapter analyzes how these reports focus on entrepreneurship and market-based approaches to inequality, and appropriate feminist concepts and political claims, such as valuing the “local” production of knowledge, recognizing the importance of caring for others, and by emphasizing on integrating women as producers of technology instead of mere consumers. Technology is viewed as the ideal tool and space for women’s socioeconomic empowerment, obscuring the economic and political histories that have produced the inequalities the technological woman is supposed to overcome.

Chapter 5, *Entrepreneurial Dreams and Intimacy in the Making of the Technological Woman*, examines the intersection of gender, technology, and entrepreneurship in the women’s cooperative Sulá Batsú, in San José, Costa Rica. This chapter explores the on-the-ground fashioning of female technological entrepreneurs. Sulá Batsú is a microcosm where diverse practices around gender, feminism, technology and entrepreneurship converge, which range from focusing on market-based and individual solutions to inequality to collective forms of living, working and organizing. While development policy focuses on an entrepreneurial woman as the solution to the developing world’s problems, it overlooks the role of intimacy and affective bonds that point to collectivized ways of living and working. In this chapter, I ask: How can collective practices cohabit and coalesce with market-based strategies of economic development? I argue that fairly straightforward neoliberal practices are not necessarily in an either/or relationship with other collective, non-marketized practices. Intimacy and solidarity can both reproduce and challenge market-centered agendas. In the case of Sulá Batsú, intimacy is part of their organizational practice and process, and of relationships with and through technology; technology is localized, collectivized, and felt.
In Chapter 6, *Dreams and Nightmares: Online Violence and the Technological Woman*, I explore the Women’s Rights Programme of the Association for Progressive Communications (APC) and Colnodo’s work on violence against women online. While the *third world technological woman* is framed as a savior, and the ticket to a brave new world, she is simultaneously threatened by the tools, and in danger in the very spaces, that she is supposed to master to be empowered. I answer the following question in Chapter 6: How does violence online complicate development discourses on gender and technology? I argue that online violence challenges the linear and unproblematised narrative that technology equals progress and empowerment. Online violence is a threat to emancipatory technological development discourses and policies. A decolonial theoretical framework reveals the ways in which violence is a permanent site of tension in discourses on gender and technology. I found that APC-WRP’s activism against online misogyny leads to discussions on sexuality and pleasure.

In the Conclusion, I suggest that studying digital technologies, gender, and development is critical for both economic development and feminist and social justice politics, in times of increasing inequality and technological ubiquity. Feminist politics are playing an important part in advocacy and activism on digital technologies, and my research has demonstrated that appropriation of feminist principles and values is contested and works in multiple directions. Social justice activists reimagine their politics and practices in light of new and increasing forms of appropriation. Another important implication for both feminist politics and scholarship is to foreground violence as constitutive, and not a by-product, of the network society. This is particularly critical when examining discourses (and policies) that proclaim progress, modernization, and security. Some ideas for future research are conducting analyses on the ways...
in which state discourses, practices, and policies intervene in the making of the *third world* technological woman, as well as the effects of the increasing corporatization of development.
Chapter 2: Gender, Technology, and Development: Appropriation and Re-appropriation

Women have been at the center of development discourse and policy for decades (Kabeer 1994). Once invisible, they have become visible as the ultimate saviors of the “third world.” This visibility has not necessarily translated into change. The global circulation of capital and entrenchment of neoliberal policies in the developing world has centered women as inexhaustible workers in global assembly factories (Bank Muñoz 2008; Fernandez-Kelly 1983; Ong 1987; Plankey-Videla 2012; Salzinger 2003), and as ideal entrepreneurs in the microfinance industry (Karim 2011; Rahman 2001; Rankin 2001; Roy 2010). My research advances debates in critical sociology of development, specifically in gender and development, by looking at the way development discourse—specifically manifest in reports, briefs, declarations, papers, and other documents produced by the United Nations and the World Bank since 1995—constructs a particular technological subject. I explore the making of what I call the *third world technological woman*, created through discourses on access, dexterity, and expertise of digital technologies, as well as gender tropes of care, nurturance, intuition, and creativity. This technological woman is both rational and emotional, and an entrepreneur expected to acquire technological knowledge to become an actor in the market.

**Appropriation**

The broad framework of this dissertation is in scholarly debates in the field of gender and development on the involvement of feminism with institutional power. Capitalism, corporatism, and development have absorbed elements of feminist tenets and principles of redistribution, recognition, representation, cooperation, and equality. This has caused ambivalence among activists and scholars alike. Feminists had spent years advocating and struggling for women’s
inclusion in development discourse and policy (Cornwall et al. 2007). Yet, the inclusion of women has not led to transforming the structures and institutions that have produced inequality. This discomfort and concern has led to a large body of critical feminist scholarship on the politics of appropriation and its consequences for both feminist transformative politics and critical theory (Bergeron 2003; Chant and Sweetman 2012; Cornwall 2007, 2016; Cornwall and Anyidoho 2010; Cornwall et al. 2007; Cornwall and Rivas 2015; Roberts 2015; Roy 2012; Roy 2017; K. Wilson 2015). These critiques have mostly targeted the failures of gender mainstreaming, the privileging of individual empowerment over collective struggle and awareness, and the erasure of a structural and broader analysis of power and inequality. My research is specifically concerned with critiques regarding the complicity of feminism and feminists with economic neoliberal agendas—“the business case for gender equality” (Roberts 2015)—that further inequality and dispossession, which resonate with Janet Halley’s (2006) “governance feminism” and a broader feminist literature that examines the implications of feminism’s courtship with state and non-state institutional power (Bernstein 2010; Eisenstein 2005; Fraser 2013a; McRobbie 2012). Fraser (2013) has called the cooptation of US second wave feminist ideas, values, and interests—such as equality in the workplace—by corporate and state institutions and policies the “cunning of history.” In the context of development, Adrienne Roberts (2015) calls feminist cooptation “transnational business feminism” in her study of how the Nike-led “Girl Effect” campaign uses feminist claims and interests to boost corporate profit and competitiveness. More recently, Srila Roy (2017) uses the term “feminist governmentality” in her study of the ways in which a feminist microfinance NGO in India employs tactics of

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8 As Orloff et. al (2016) correctly explain these critiques must not be conflated with the demands of Black, women of color, LGBTQ, third world feminists, and feminists from the global south that feminist politics and scholarship integrate analyses on the intersections of race, sexuality, and disability, as well as of colonialism and empire.
discipline that attempt to govern young women’s sexuality under the guise of “empowerment.”

In line with Halley (2006), Roy argues that feminism (and feminists) is always entangled with power and the “will to empower” (citing Cruikshank 1999). These tactics of discipline and control do not negate negotiation, resistance, or what she calls “refusals.”

Feminist scholars have started to examine and contextualize some of the “perverse alliances” (Orloff, Raka, and Savci 2016) between feminism and a range of seemingly antagonistic state and non-state actors and institutions in the global south and north alike, including neoliberal politics and policies (Alvarez 2009; Beck 2017a, 2017b; Bernal and Grewal 2014a; Eschle and Maiguashca 2014; Phillips and Cole 2009; Prügl 2015; Sharma 2008; Whittier 2016). Ann Shola Orloff and Talia Schiff (2016) assert that both Halley’s (2006) and Fraser’s (2013) critiques are “broad-brushed and over-generalized narratives concerning the cooptation of feminism by neoliberalism” (127), and call for specific and contextual analyses of women’s and feminist endeavors. In their examination of Halley (2006), Fraser (2013) and McRobbie’s (2012) critiques of feminism and cooptation, Catherine Eschle and Bice Maiguashca (2014) similarly underline that “no practice should be assumed to be progressive – or not – in advance of empirical study” (648). And although they “think that progressive politics would be best served by a radical agenda […] that is, one orientated to comprehensive systemic change,” they “refuse to make the radicality of a feminist movement's agenda the barometer for feminist progressive politics, preferring to be open to the possibility that the quest for reforms within the current system can, in certain circumstances, be part and parcel of a better feminist future” (648).

Alvarez (2009), for instance, revised her earlier critique of the “NGOization” of feminism, and recognized the importance of feminist NGOs in amplifying feminist public discourse in Latin America. Bergeron and Healy (2013) draw from J.K. Gibson-Grahams’ (2006) radical theorizing
on post-capitalist and solidarity economies in arguing that the feminist critique of the “business-case” for gender reifies global capitalism and “accedes political space that might be open for cultivating economic subjects-in-becoming who are guided by motivations of care, ethical concern and collectivity” (8). Jane Jaquette (2017) has also recently lamented gender and development’s anti-neoliberal rut, which, she argues, has foreclosed productive exchanges between scholars and development practitioners. Alluding to the eternal liberal reformist vs. radical debate, she states that “resistance and protest are valued, while those who argue for reforms within liberal capitalism are seen as morally compromised” (254), and adds that “for many feminists […] neoliberalism has become the default explanation for all our current ills” (251).

Development discourse and policy have in effect skillfully appropriated elements of feminist ideas, principles, and concerns on the value of participation and representation, of care and cooperation, equality and human rights, and even of economic redistribution (through “social capital” and ideas of “collaboration”). The calculative and rational economic woman of microfinance, for instance (Rankin 2001), is also presented as an emotional woman (Roy 2010) who is nurturing and selfless and cares deeply for her family, community, and country. In other words, women, development’s ideal economic actor, is not only calculative, self-reliant, and disciplined, but also caring and loving. This is an ideal combination, indeed. These images and constructions continue to essentialize and overburden women. I agree with development scholars Ananya Roy (2012a), Julia Elyachar (2002), and Andrea Cornwall (2007) that radical and feminist politics, critical theory (including feminist theory), and even “anti-development”—meaning initiatives that oppose mainstream development approaches—have been folded into development policies and frameworks. Bergeron and Healy (2013) state that “many of those
issues once viewed as “outside” of development—such as non-capitalist production and unpaid non-market transactions—are now foregrounded as resources for fostering economic and social progress” (3). By folding into I refer to a seamless form of appropriation, that seems less aggressive (which does not mean that it is). This process of folding into is discursive, and also intimate (Escobar 1995; Rose 2010). Care, cooperation, and solidarity—traditionally associated with the “feminine” and with women—have become crucial in furthering specific socioeconomic agendas (Eisenstein 2010; Roberts 2015; Roy 2010). In her study of the affective rhetoric embedded in development discourse on short projects of “immersion” in the developing world, Carolyn Pedwell (2012) notes: “International development is also a site where the transnational politics of the ‘turn to affect’ are played out. Indeed, the idea is taking hold that creating social justice is not simply a ‘rational’ exercise but rather one that involves, and perhaps depends on, the generation of affect. In particular, compassion and empathy have been figured as central to contemporary development practice” (168). The process of folding into is a form of appropriation that transcends the cooptation of ideas, concepts, and terms, by expanding into intimate realms in ways that invoke people’s emotions, desires, dreams, and hopes.

I stand by feminist critiques of the implications of appropriation and in favor of broad systemic and structural transformation. Capitalism, neoliberal policies, colonialism, development, and corporatism, have indeed produced many of the inequalities that today sustain and maintain poverty, violence, racism, misogyny and heteronormativity. At the same time, I believe that feminism is multivalent and polymorphous and constituted by numerous, sometimes contradictory, projects. I agree with Eschle and Maiguashca (2014) on the importance of empirical study to understand the specific contexts, challenges, and possibilities for feminist and transformative politics. Thus, my research advances these important debates by looking at both
macro-institutional discourses on gender and technology, as well as the micro-level politics of activism in regard to gender and technology. I bring together Foucauldian theories of governmentality, critical development scholarship and feminist and decolonial frameworks to advance more profound understanding of politics of discipline, control, and of negotiation and resistance. I have found that violence as well as numerous forms of intimacy present sites of tension for emancipatory and teleological discourses on gender and technology. To understand this, I draw from Foucault’s (2008a) theories on governmentality as an intimate project to explore the making of the “third world” woman as technological subject within development discourse. I also pull from critical theories on development to illuminate the central role of both women and technology in contemporary development discourse (Escobar 1995; Mohanty 1988). In addition, feminist and decolonial scholarship shed light on the ways in which violence is a persistent site of tension in times of ushering “third world women” into the future (Connell 2007, 2016; Mignolo 2011; Quijano 2000). Finally, I draw from feminist theories of intimacy, emotion, and affect to understand the ways in which care, love, and solidarity offer possibilities and challenges for development prescriptions with respect to gender and technology (Anzaldúa 1987, 2015; Collins 2000; Hochschild 1983, 2011; Lorde 2012; A. Wilson 2015).

Neoliberalism, Development, and Gender

Neoliberalism has become a shorthand in the study of an arsenal of contemporary social, political, economic, historical, and cultural processes: a “master variable, and explanatory hammer that fits all nails” (Prügl 2015:616). Neoliberalism is broad and, as such, can lose analytical purchase much like globalization, capitalism, modernity, and citizenship, but “the spacious character of the concept is also an opportunity” (Prügl 2015: 616). Neoliberalism is also
a highly adaptable and malleable concept, and thus necessarily ambiguous (Connell and Dados 2014; Ferguson 2010; Peck 2010). My research focuses on neoliberalism as a cultural project directed at self-management, discipline, responsibility, and the making of subjectivities that are more legible and governable (more transparent, quantifiable, rational, economic) in tune with market rationalities. This does not mean that I discard the macroeconomic definitions and approaches of neoliberalism (see, e.g., Harvey 2005). The making of these subjectivities is embedded in and connected to larger economic, social, and political projects and processes. My dissertation explores contemporary development discourses on gender and technology to understand the technological subject that is being produced, while also looking at activism on gender and technology in Latin America. I do not see discourse and practice as being in an either/or relationship, but as interwoven in a productive exchange. I use Wendy Brown’s (2015) definition of neoliberalism as a theoretical guide to understand my findings, focusing on neoliberalism as “the conversion of every human need or desire into a profitable enterprise” (28):

“Neoliberalism is most commonly understood as enacting an ensemble of economic policies in accord with its root principle of affirming free markets. These include deregulation of industries and capital flows; radical reduction in welfare state provisions and protections for the vulnerable; privatized and outsourced public goods, ranging from education, parks, postal services, roads, and social welfare to prisons and militaries; replacement of progressive with regressive tax and tariff schemes; the end of wealth redistribution as an economic or social political policy; the conversion of every human need or desire into a profitable enterprise, from college admissions preparation to human organ transplants, from baby adoptions to pollution rights, from avoiding lines to securing legroom on an airplane; and, most recently, the financialization of everything and the increasing dominance of finance capital over productive capital in the dynamics of the economy and everyday life.” (Brown 2015:28)

The making of the gendered technological subject

Neoliberalism is an intimate project. The extension of economic and marketized rationalities into the social realm is also an intimate endeavor (Foucault 2008a; Rose 2010). It is an intimate project that is also global because it extends through local, national, transnational,
and social and economic scales (Pratt and Rosner 2012). There is substantial literature on the connections between neoliberalism and the making of subjects, inspired by Michel Foucault’s theories on neoliberalism and governmentality. Political theorists Barbara Cruikshank (1999) and Nikolas Rose (2010) have extended Foucauldian theories to understand how neoliberal rationalities of self-reliance, self-discipline, autonomy, and personal responsibilities have produced ideal subjects prepared to help and govern themselves amid the retreat of state protections and the amplification of market forces. Cruikshank (1999) examined voluntary associations, reform movements, and social service programs that deploy regulatory tactics of self-esteem and self-help as part of a “will to empower.” Rose (2010) has also theorized how a network of institutions, from state agencies, to schools, coops and associations, underscore logics of control from “welfare to activity”—from welfare states to neoliberal forms of governance—that produce “subjects are to do the work on themselves, not in the name of conformity, but to make them free” (268). The entrepreneurial self, central to Foucault’s theories, is thus an exemplary neoliberal subject that will help herself without the need to “depend” on social protections or welfare. Wendy Brown (2015) explains that “as neoliberal rationality remakes the human being as human capital, an earlier rendering of homo economicus as an interest maximizer gives way to the formulation of the subject as both a member of a firm and as itself a firm, and in both cases as appropriately conducted by the governance practices appropriate to firms” (34). The expansion of market logics to all domains of life means, according to Brown, that “all market actors are rendered as little capitals” in which human capital’s aim is to “entrepreneurialize its endeavors, appreciate its value, and increase its rating or ranking.” (36). The third world technological woman in the development discourse I examine shows the imprint of the disciplined, autonomous, self-reliant, entrepreneurial subject. In addition, her creative,
intuitive, and nurturing “natural” qualities, as well as her “natural” attachment to place and ancestral knowledges become ideal sites for making profit.

Foucault defines governmentality, or the “art of government,” as “the conduct of conducts,” a distributed, diffuse, pervasive, and most importantly, productive, set of rules, procedures and mechanisms of governing and managing populations. Governmentality has been used in development studies to understand a wide set of developmental interventions and their implications on populations in the global south (Escobar 1995; Karim 2011; Murray Li 2007). Governmentality provides a lens for understanding not only what certain policies, regulations, procedures, and rules foreclose, but actually what they produce and create. Scholars have linked neoliberal forms of governmentality—such as development—to the objective of producing subjects that are rational, economic, and calculative (Elyachar 2005; Karim 2011; Radhakrishnan 2015; Roy 2010; von Schnitzler 2008). The developmental policy agenda, which has become increasingly corporatized (Arutyunova and Clark 2013; Cornwall and Rivas 2015; Miller, Arutyunova, and Clark 2013; Moussié 2016; Roberts 2015), reproduces politics based on self-efficiency, self-discipline, and individual responsibility. And the figure overwhelmingly produced is that of an entrepreneurial woman. In policies specifically focused on technology, a technologically savvy entrepreneurial woman.

Entrepreneurship is an exemplary project of neoliberalism, and entrepreneurs serve as the ideal neoliberal subjects. “Today it is entrepreneurship at all levels that occupies the space of hope” (Freeman 2014:213), and this hope rests on a woman entrepreneur, more specifically a “third world” woman. While this entrepreneurial woman has been touted as the cure of the developing world’s problems, numerous scholars have criticized the shortcomings and contradictions of this approach, particularly in the literature on microfinance. Scholars have
pointed out the dilemmas and harms of the emphasis on microfinance and entrepreneurship as solutions to inequality (Elyachar 2002; Karim 2011; Rankin 2001; Roy 2010, 2012a). For example, Roy (2012) describes the microfinance woman as “the techno-social subject of millennial modernity” (140), and Rankin (2001) as the “rational economic woman.” This literature addresses how the focus on entrepreneurship emphasizes risk and individual responsibility to overcome poverty and inequality, and puts the onus on the caring, self-sacrificing, hard-working woman. It has also found how development projects of entrepreneurship undermine the social fabric of communities through collective policing and using the community to guarantee the payment of debt. The focus on the free market and entrepreneurship—in which numerous actors participate, such as development institutions, NGOs, and the private sector—therefore “dispossesses” people (Elyachar 2005; Keating, Rasmussen, and Rishi 2010), reinforces gender hierarchies and undermines communal ties (Karim 2011; Rankin 2002), and leaves women and their families in debt and at risk (Moodie 2013; Roy 2012a). This literature reveals how entrepreneurship is a failure not only as a mechanism of economic development, but also how it has affected collective relationships.

The emerging technological woman is also a potential heroine, who will contribute to the economy and to social transformation once she has the skills to make a computer, a mobile, and the internet work for specific purposes. She is also embedded within powerful affective language and imagery as a “timeless image of aspiration” (Roy 2012a:140) in many of the reports examined for this study. Similar to Martin’s (2002) concept of financialization of everyday life, “a proposal for how to get ahead, but also a medium for the expansive movements of body and soul” (3), technical mastery, skill, and knowledge of technologies aims to create specific forms of being and feeling and advancing in the world. Although comparable to the microfinance
strategy (Kabeer 2005; Karim 2011; Radhakrishnan 2015; Rankin 2001; Roy 2010), the technological intervention is more diffuse and pernicious in its ability to permeate everyday life. The technological intervention, mostly digital information and communication technologies (hardware, software, mobiles, internet), does not, as of yet, rely on formal financial institutional patronage, nor is it prominent in the corridors of financial power, nor does it rely on forms of collective policing (Karim 2011; Roy 2012a). It relies mostly on training, workshops, and capacity building in line with what Bernal and Grewal (2014a) contend: “[the] goals of development have shifted to empowerment and capacity building, involving the production of new subjects” (14). It is funded by traditional developmental actors (governments and multilateral agencies) and increasingly by so-called new actors (corporations, private foundations, philanthropic foundations). If we consider the increasing textual production as a sign (reports, briefs, fact sheets, working papers) from UN agencies (UN Women, ITU, UNESCO, etc.), the World Bank, corporations (Intel, Google, ExxonMobile, Dell), and philanthropic foundations (Cherie Blair Foundation, Omyidar, Bill and Melinda Gates Foundation), it is becoming prominent in the development agenda. Funding for technical training and capacity building has been steadily increasing (Arutyunova and Clark 2013; Miller et al. 2013), and gender and technology is becoming a central locus of development policy as part of the “gender equality smart economics” mantra.

The paradoxes

The World Bank’s “gender as smart economics” policy agenda centers women as prime “untapped resources” that require immediate “investment,” and skillfully makes use of tropes of the caring and nurturing woman (Calkin 2015b; Chant and Sweetman 2012; Roberts and Soederberg 2012). The woman who emerges is a “third world” heroine who will pull herself, her family, and perhaps even the entire community, out of poverty because of her capacity as a savvy
entrepreneur who “always pays back,” and who is naturally sensitive, giving, and self-sacrificing. Development scholars have pointed to the ways in which these policies not only create “calculative agencies” (von Schnitzler 2008)—through financialization, loans, technical devices, infrastructure, etc.—but also how they use gendered qualities such as care and nurturing in their discourses. Ananya Roy (2012), for example, argues that “microfinance’s productivity is enabled through the gendered intimacy of the joint liability peer group” (144) that counts on women as “selfless altruists” (140). She adds that “poverty capital can be understood as the capitalization of altruistic burdens, carried disproportionately by poor women” (144).

How can care and nurturing lie together with “calculative agencies”? Foucault argues that the “return to the enterprise,” a “policy of the economization of the entire social field,” is “at the same time a policy which presents itself or seeks to be a kind of Vitalpolitik with the function of compensating for what is cold, impassive, calculating, rational, and mechanical in the strictly economic game of competition” (242). This Vitalpolitik, or “politics of life” (148) is an appeal to “warm” “moral” and “cultural” values that are antithetical to competition, and diffused and multiplied to offer the “basic units” of the social body the “form of the enterprise.” These basic units, according to Foucault (citing Rüstow), are private property, the household, and neighborhood communities, among others. In the development agenda, this “politics of life” extends, for example, to realms of knowledge and technology, which are arguably basic units of the network society. Knowledge and technology also become “enterprised.” But what is exposed if we apply a gender perspective to understand this Vitalpolitik, which Foucault argues is inherent to neoliberalism? This politics of life acquires gendered qualities: emotions, care, nurturing, love, self-sacrifice, the local, the connection to the earth, to the family, the community, all become intrinsic to the disciplined, rational, calculative, responsible subject.
These qualities compensate for the “cold, impassive, calculating, rational, and mechanical” nature of the competitive market society. This woman is thus an ideal neoliberal subject, containing the perfect combination: the rational economic and emotional woman. I argue, then, that neoliberal development actually needs women to be able to function.

My research advances scholarly debates in gender and development by using governmentality as a theoretical lens to understand how development discourse produces a third world technological woman. Development discourse (see Chapter 4) appropriates feminist claims to center women as capable in technology, as well as gendered tropes of care, cooperation, intuition and creativity, as a means to cultivate the third world technological woman. Appropriation in the development discourse on technology I examined is also an intimate endeavor: digital technologies seem to fulfill communities’ and families’, and particularly women’s, needs, desires, and dreams of achieving better economic conditions and fuller, happier lives. Appropriation is thus about much more than words. In this context, cooptation touches upon intimate spaces and relationships with family, health, knowledge, place, and tradition. I argue that this technological subject is responsible, self-disciplined, and entrepreneurial, as well as selfless, caring, and loving. Yet while the third world technological woman must comply with specific requirements to advance and be successful in the network society, she is simultaneously exposed to increasing forms of violence and surveillance within those very spaces. In the next section, I analyze the connections between violence, gender, and development in the making of the third world technological woman.

**Violence, Development, and Gender**
Development has been violent in its materiality, and in its symbolism (Escobar 1995). Violent and productive. Escobar’s Foucauldian analysis of development discourse since its inception after World War II shows how development has produced streams of funding, experts, technicians, institutions, and reports to tend to the “needs” of “third world” populations; needs that were created to satisfy the political and economic demands of this new development industry. Development has thus been inherently violent, both in how it has discursively constructed “third world” populations as fragile, needy, and childlike victims, and concretely through a series of policies and practices that have furthered inequality, poverty, and disenfranchisement in the developing world. This does not mean that development is monolithic or an “evil monster.” There have certainly been important initiatives and genuine attempts to eradicate inequality. The critique is not of individual policies or practices, but of development as an institution. I extend Escobar’s critical framework to argue that development has also created a very particular subject—the third world technological woman—as an ideal and necessary figure in the network society. This technological woman is also the product of a violent process directed at satisfying particular developmental agendas in the network society. The making of this subject is embedded within numerous processes and spaces, and some of them are not emancipatory at all. The technological subject is at risk of facing violence in some of the very spaces where she is supposed to excel, such as the internet. Online violence includes bullying, trolling, stalking, doxing (to reveal private information on the internet), as well as numerous forms of individual, state, and corporate surveillance.

The connections between structural and interpersonal forms of gendered violence has not been adequately addressed in gender and development studies, with few exceptions (Fregoso and Bejarano 2009; Morales and Bejarano 2009; also see Sierra 2013). Violence is empirically
pervasive, yet not theorized. The gender and migration literature has uncovered, at least implicitly, the connections between economic policies with violence through the feminization of transnational migration, global chains of care, mail-ordered marriages, and transnational surrogacy (Constable 2014, 2016; Deomampo 2016; Ehrenreich and Hochschild 2003; Hondagneu-Sotelo 2001; Lan 2006; Pei-Chia Lan 2016; Rudrappa 2016). Similarly, a burgeoning feminist literature on transnational sex work and trafficking has studied gendered violence in connection with larger political economic structures, in which violence against women, women’s agency, criminalization and over-regulation of sex work are at the center of many of the debates. An important strand of this literature contests oversimplified narratives of violence against women in trafficking, and instead explores the ways in which women negotiate sexuality, intimacy, and migration within broader structures of power (Agustín 2007; Cheng 2010; Doezema 2013; Hoang 2015; Parreñas 2011). Scholarship on the maquiladoras in Mexico and other global sites of labor exploitation has exposed the violent effects of economic policies on women, yet has mostly failed to connect the intimate with the structural. Salzinger’s now classic 2003 ethnography of the maquiladoras in Northern Mexico, for example, is disturbingly silent on the murders of women in the zone. In perhaps one of the few essays that makes those linkages explicit, Ananya Roy (2012) explores the dilemma financial microcredit institutions confronted when female microfinance participants in South India started committing suicide because they could not repay their loans. This presented an impossible dilemma for creditors: how could such an “empowering” project be causing women to kill themselves? The dilemma is also theoretical, because it lays bare the connection between neoliberal policies and intimate violence. The exemplary neoliberal subject, the entrepreneur, is embedded in what Roy (2012) calls “riskscapes” that are both financial and intimate.
In science, technology and internet studies, the relationship between development and violence has been most explicit in research on the political economy of the production of electronics and technological infrastructure, beyond issues of representation and discourse. Media scholar Safija Noble (2016), for example, uses Black feminist thought and intersectional theory to argue that the violent conditions in which computers and other technological infrastructures are made in the global south make emancipatory discourses on technology impossible: “Intersectional analysis allows for needed linkages between the labor and resources involved in the web and other global communications infrastructure projects that both facilitate, and are a source of, globalized extractive capitalism” (Noble 2016). These kinds of analyses continue to be rare in both science and technology and in development studies, and much less those that theorize issues of race, gender, and class. Analysis on gender, race, and representation on the internet and online dynamics of inequality are more prevalent (Daniels 2009b, 2009a; Nakamura 2008), as well as scholarship on violence within virtual communities (Dibbell 1994), but the focus is mostly on the global north.

Activism and popular media have led the conversation on violence against women online and online abuse in general (Jeong 2015; Penny 2013). Academic literature on the topic is just starting to emerge, and slowly (Henry and Powell 2016). There is scholarship on women’s online objectification and pornography (Nussbaum 2010), on the need for new legal frameworks to combat online violence and debates on online speech versus freedom of expression (Citron 2014; Henry and Powell 2015a; Marwick and Miller 2014), and on online violence as part of a continuum between online/offline violence (Henry and Powell 2015b). There is also scholarship on the relationships between human and sex trafficking and technology (Musto and Boyd 2014;
Thakor and boyd 2013). Much of the scholarship on online violence and abuse, specifically against women, has been in the field of media and communication studies (Eckert 2017; Herring et al. 2002; Jane 2014; Lane 2015; Lumsden and Morgan 2017; Mantilla 2013). Mostly, these studies do not analyze online misogyny in the global south or make connections to broader institutions. There is, though, a rich emerging body of feminist scholarship in surveillance studies that specifically theorizes the intersections of gender, race, sexuality, and ability, neoliberalism, colonialism, racism, and heternormativity with various forms of individual, state and corporate surveillance. In their introduction to the fantastic anthology “Feminist Surveillance Studies,” Rachel E. Dubrofsky and Shoshana Amielle Magnet (2015) contend that “a feminist approach to surveillance highlights the ways that surveillance is integral to many of our foundational structural systems, ones that breed disenfranchisement, and that continue to be institutionalized” (7). These are the theoretical connections that need to be made.

A decolonial framework reveals the ways in which violence constitutes broader structural and historical processes, such as colonialism and modernity (Lugones 2007; Mignolo 2000; Quijano 2000). Quijano (2000, 2007) theorized how modernity was built upon colonialism and racial hierarchies, triggering a large body of critical literature (mostly in Latin America) that explores the continuum and persistence of colonialism, or the “coloniality of power.” María Lugones (2007, 2010) extended Quijano’s framework to theorize the ways in which gender hierarchies were intrinsic to modernity/coloniality and defined this as the “coloniality of gender.” In her recent work on “hegemonic masculinity,” Connell (2016) argues that “in Northern research on gender-based violence, violence is usually understood as a consequence of gender arrangements, i.e., as a dependent variable” but that in “postcolonial analyses […] violence is constitutive for gender relations” (306). Heeding Connell’s call to “decolonize scholarship,” and
expanding Escobar’s and numerous Latin American decolonial critical frameworks (Mignolo 2000, 2011; Quijano 2000), I argue that violence is also constitutive of development politics on technology and of the network society. The decolonial framework thus broadens feminist critiques of the preeminence of male normativity and heteronormativity in the design and uses of technologies (Cockburn and Ormrod 1993; Faulkner 2001; Marwick 2013; Wajcman 1991) because it explicitly theorizes violence as constitutive, and not a consequence, of the design and uses of technologies across various geographies of inequality and power. It should not be surprising then that online violence is disproportionately directed at women, LGBTQ communities, and people of color (Citron 2014; Marwick and Miller 2014). Analyzed through the decolonial lens, online violence reveals the limits of the emancipatory discourses on technology and the third world technological woman. The use of critical development and decolonial frameworks to study online violence advances scholarship on the links between development, technology, and gendered violence. Online violence and surveillance are constitutive of the network society, and in quite cruel and visceral ways (see Chapter 6).

The decolonial framework enables a more profound analysis of online violence and surveillance, and avoids vacuous representations of violence against women in the “third world”. Many feminists scholars in the global south and women of color in academia in the global north have been engaging in complex examinations of violence against women for decades (Connell 2014, 2015; Crenshaw 1989; Roberts and Connell 2016)—mostly under the rubric of postcolonial studies—yet the radical political strength of these analyses has been lost in mainstream global discourse on violence against women. Scholarship on online violence is yet to follow these more complex analyses, but activism has been at the forefront of unearthing the connections between colonialism, neoliberalism, and online violence, gender and sexuality. I
suspect, though, that the radical force of activism against online violence in the global south will also be coopted and depoliticized in development discourse and policies, as activists interviewed for this study have already warned (as I discuss in Chapter 6). It could also create a new field of intervention with legions of experts, technocrats, reports, policies, and briefs, and more and new forms of criminalization and regulation. It could come to occupy another box to check along with campaigns against poverty, domestic violence, human trafficking, and ecological devastation, among others.

Intimacy

The study of intimacy, emotion, and affect have a long history in feminist scholarship (Pedwell and Whitehead 2012; Pratt and Rosner 2012). For decades, feminists have theorized intimacy as a political space; the famous “the personal is political” is but one example. In the United States, Black, Chicana, and other “third world” feminists have used intimacy—eroticism, anger, spirituality, love, consciousness—to theorize gender, race, class, and sexual politics, and advance social justice (Anzaldúa 1987; Lorde 2012). Intimacy has been for “third world,” women of color, Black, and indigenous feminists a space of political resistance, for creating new forms of being and knowing, and building coalitions across differences (Anzaldúa 1987, 2015; Collins 2000; Davis 2016; Lorde 2012; Lugones 2007, 2010; Sandoval 2000). To foreground emotions as a site of politics interrogates the modern/rationality paradigm, and legitimizes other forms of being and knowing (Collins 2000). As Audre Lorde says: “Our feelings are our most genuine paths to knowledge. They are chaotic, sometimes painful, sometimes contradictory, but they come from deep within us. And we must key into those feelings, and begin to extrapolate from them, examine them for new ways of understanding our experiences […] This is how new visions begin” (Hall 2004:91).
It's difficult to explain intimacy theoretically. I prefer the term “intimacy” instead of “emotion” or “affect” because I find that intimacy is explicitly relational: it happens with someone or something. Intimacy is about emotional relationships. Various definitions of intimacy inform my research: intimacy as constituted by “relationships that are—or give the impression of being—physically and/or emotionally close, personal, sexually intimate, private, caring or loving” (Constable 2009:50), yet do “not reside solely in the private sphere: it is infused with worldliness” (Pratt and Rosner 2012:3). I expand this definition to include other relations that usually lie beyond the purview of the “intimate,” such as relationships with knowledge, with place/locality, with the earth—the land, water and air—and with technologies, among others. I define intimacy as close emotional relationships that are connected to global processes and power relations. The ways in which I use “intimacy” are more in line with Black and women of color scholarship on the importance of emotions—be erotic, of anger, love, care, or fear—as sites of political possibilities, and sometimes of resistance and defiance (Anzaldúa 1987, 2015; Lorde 2012). Yet my definition of intimacy is also entangled with a lineage of feminist theories and bodies of literature that analyze affect as more sensorial and corporeal relationships (the “new materialism” or “bringing the body back into theory”), and that remit to affect as pre-subjective and outside of social signification (Massumi 2007), and as performative (Butler 2006, 2016). My use of intimacy is also related to an important body of feminist and critical research that has examined the use of emotions in the circulation and production of capital, as well as a tactic of control, embodied in Arlie Hochshild’s groundbreaking concept of “emotional labor” (1983), Michael Hardt’s “affective” and “immaterial labor” (1999), and Nikolas Rose’s “governing through community” (Rose 2010). This literature theorizes the links between emotions and broader structures of power and inequality; in other words, emotions in
relationship with social, economic, and political histories and institutions. So, at the crux of many of the debates in these literatures on affect and emotion is the following question: Are emotions sites of domination or resistance? Can they be “outside” of the social? Can emotions change structural inequalities? In a special issue of the feminist journal *Feminist Theory*, Carolyn Pedwell and Anne Whitehead (2012) argue that “rather than privileging ‘the personal’ or ‘the emotional’ above and beyond ‘the structural’, recent feminist approaches have analysed their complex imbrication” (121). They add that although contributors to the issue share feminist theorist of affect Lauren Berlant’s (2011, 2012) “view that ‘shifts in the affective atmosphere are not equal to a changing world’, like her, they also remain committed to thinking about how emotion and affect might be related to the ways in which radical rupture, change and transformation emerge (2010: 116). I agree that emotions may do nothing to change broader institutions of power, such as development, yet I am also committed to thinking that intimacy is capable of transforming people, relationships, and spaces in significant ways.

My definition of intimacy, close emotional relationships that are connected to global processes and power relations, stems from three main sites of fieldwork and analysis: United Nations and World Bank development reports on gender and technology (Chapter 4), the cooperative Sulá Batsú in Costa Rica (Chapter 5), and the transnational network APC-WRP. In my textual analysis, I found that the reports on gender and technology mobilize emotions by making connections between technologies, the family and community, place/locality, tradition, and knowledge, and tropes of women’s “natural” caring, selfless, creative and intuitive qualities. This is, of course, beyond appropriating feminist concepts of “empowerment” and “agency,” etc. (Cornwall 2007; Cornwall and Brock 2005; Cornwall and Rivas 2015; Eade and Cornwall 2010; Sachs 1992). In Sulá Batsú, I found that intimacy was an intrinsic part of their organizational
process. I had started fieldwork at the coop thinking that it was impossible to justify entrepreneurship as a strategy against inequality and injustice. I was imposing my definitions of “neoliberalism” and “entrepreneurship.” I found instead that these activists were fostering a community of entrepreneurs that was feminist, defiant, and collectivist to its core. The cooperative’s administrative structure, their principles of sharing knowledge, participatory action research, public art, and use of open source software are all important pieces of their collective politics. But none of this would work if it not facilitated by a commitment to love, trust, solidarity, and honesty. Yet they also reproduce dominant frameworks because entrepreneurship is a market-based approach to inequality. In other words, intimacy is mobilized in different and complex ways. I also found that APC-WRP’s activism against online violence enabled some of their important projects on sexuality and pleasure. These projects emphasize positive intimate relationships with digital technologies.

Intimacy can be complicit in techniques of governmentality, as well as having become a precious commodity. It can be both “progressive and regressive” and “mobilized in complex ways” (Wright 2012:1117). Rose (2010) argues that “emotional relationships” (172) can be “mobilized, enrolled, deployed in novel programmes and techniques which encourage and harness active practices of self-management and identity construction, of personal ethics and collective allegiances,” or what he calls “governing through community” (176). Intimacy is thus not an innocent, unblemished space. Sociologists have long interrogated the pristine place conferred to intimacy vis-à-vis the “cold” market, and have discarded the view of intimacy as something that lies outside of economic and marketized relations (Illouz 2007; Zelizer 2007). Immaterial and emotional labor in the service sector and the knowledge economy have also been the subject of inquiry (Hardt and Negri 2001, 2004, Hochschild 1983, 2011). Certainly, in the
case of the cooperative Sulá Batsú (Chapter 5), intimacy in the form of affective bonds between
the staff and with the communities they work with is also mobilized for economic self-reliance.
Entrepreneurship is thus linked to autonomy, empowerment, self-esteem, happiness, and with
sharing, loving, and solidarity. In this sense, emotions become part of techniques of self-
management, self-discipline, and personal responsibility, all of which are linked to marketized
rationalities (Cruikshank 1999). This is part of the biopolitics of development discourse on
technology: the colonization of the intimate by market rationalities. Development discourse
adeptly mobilizes the intimate for specific economic objectives. Intimacy as a “politics of life”
that offers warmth and closeness can be a conduit for other objectives, mobilized both by
institutional discourses and organizations for diverse reasons. In this context, development
discourse mobilizes numerous forms of intimacy to advance a particular entrepreneurial logic,
thus commodifying gendered qualities such as care, love, and selflessness, as well as
relationships with knowledge, place/locality, the earth, and technologies.

Emotions, social connection, and intimacy, have indeed been theorized in different forms
since Marx, Durkheim and Weber (Hochschild 2002; Illouz 2007). Sociological theories of
social capital also have, for decades, attempted to explain the power within social networks and
ties, the relationship of sociability and networks with economic dimensions of capital (Bourdieu
1986), and the power of belonging to a group as an antidote to rampant individualism (Bellah
1985; Coleman 1988; Putnam 2000). In development scholarship, Elyachar (2005) foregrounded
how development policy has incorporated the concept of social capital to financialize the social
practices of the poor; Harriss (2002) revealed how “social capital” has obscured power and
inequality in international development, and Murray Li (2007) explains how the World Bank
governed “through community” using “social capital” to manage an Indonesian village. Far from
Putnam’s (1994) definition of social capital: “the features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions,” the intimacy I found has nothing to do with efficiency. In understanding intimacy as social capital, intimacy has an instrumental value, and therefore it should come as no surprise that international development institutions have incorporated it (González de la Rocha 2007). Close emotional relationships are not always mere instruments to advance or be more efficient in society, nor are they necessarily a convertible form of capital that reproduces and furthers inequality a la Bourdieu. Literature on social movements also offers a framework for understanding the role of emotions in activism (Gould 2009; Jasper 2011; Juris 2008; Polletta, Jasper, and Goodwin 2001). Deborah Gould’s 2009 study of how the anti-AIDS organization ACT-UP politicized rage and grief theorizes emotions not as a strategic tool, but as a motor of activism and the glue that holds movements together. Gould (2009) is critical of how social movement theorists have instrumentalized feelings as merely tactical, and argues:

A view of feelings as strategic deployments strips them of all their bodily, non-cognitive, non-instrumental attributes, thereby depleting them of some of their most interesting characteristics and diminishing much of their conceptual force. If we stick to an instrumentalist rendering, we will lose sight of the sensuous experience of feelings and thus of their power or force in stimulating and blocking activism. (2009:223)

It is time for the literature on development to engage with intimacy: “Hope, despair, confidence, angst, acceptance, defiance; it is time to take on the intractable silence of and about emotions in development” (Wright 2012:1114). Intimate relationships with knowledge, technology, pleasure, among co-workers, lovers, and friends contest development paradigms that traffic with numerous forms of intimacy as prized commodities. Intimacy—close emotional relationships—produces something that helps us move beyond a rigid domination vs resistance framework, and examine both in more complicated ways (A. Wilson 2015). Emotions can be
both complicit with domination and deeply transformative. In my study of Sulá Batsú, specifically, intimacy leads to an *ethics of being in the world*. An ethics, built on love, trust, and solidarity; feelings that are also relational to and working within neoliberal arrangements and development paradigms. Scholars have mostly studied broad trends and ignored process beyond outcomes and content (Beck 2017a). It is the “intimate mediations”—to borrow a phrase from Ananya Roy (2012)—that opens spaces for reimagining neoliberal rationalities not only from the *outside*, but also *within* and *with*. Thus, intimacy is also entangled in relations of power, inequality, and violence.

Intimacy, as a theoretical concept, reveals various processes in my study. Development discourse mobilizes numerous forms of intimacy as commodities in an ever-expanding market that *needs* women. The commodification of a “politics of life” is gendered not only because women are the main targets, but because of how it uses gendered tropes and qualities that “soothe” neoliberal politics. Various forms of intimacy also mediate the relationships of activists with each other, the communities they work with, with digital technologies, and with how they engage and work within broader social, political and economic institutions, programs, and plans.

**Conclusion**

My dissertation contributes to theoretical debates in the field of gender and development by using theories on governmentality, decolonial thought, and feminist theories on intimacy to understand how gender is conceptualized and mobilized in technological discourses and practices. Put together, these frameworks advance discussions in gender and development on appropriation and cooptation by looking at how development discourse mobilizes gendered tropes for its agenda, as well as exploring how forms of intimacy and violence are sites of
tension because of the ways in which they complicate linear development discourses, policies, and plans. My research explores both the macro-politics of institutional development discourse and the micro-politics of activism thus offering a more rounded analysis on the dilemmas of appropriation. On one hand, development discourse on technology appropriates feminist concepts and gender tropes in the making of the third world technological woman. This appropriation also touches upon intimate relationships with family, community, locality, and knowledge. On the other hand, encounters between development plans and activism on gender and technology reveal that violence and intimacy problematize emancipatory plans for the entrepreneurial technological woman.

In the next section, I describe the methods and methodology of my dissertation.
Chapter 3: Methods

*Dreaming the Future: The Gendered Technopolitics of Development* is a comparative case study that employs multiple qualitative methods including semi-structured interviews, participant observation, and textual analysis. Qualitative methods are the best suited for this project because they capture processes of framing and activists’ and their meaning making, which are vital for understanding the relationships between gender, technology, and development. Interviews provided key insights into the practices, strategies, and objectives of the activists and organizations working on gender and technology projects, while textual analysis of institutional reports offered the broader discursive context that shapes, and is shaped by, these practices. In this chapter, I describe the research design of my study, the details of the data collection, and the advantages, challenges and limitations of the methods I selected. Technology is defined as the tools and spaces related to digital information and communication technologies (computers/hardware, software, internet, social media, mobiles).

This study follows various methodological approaches. First, it is deeply committed to feminist methodologies, and not because it is qualitative or about gender politics. My study follows a feminist methodological approach because it is critical, attentive to inequality and power both substantively and methodologically, because it maintains participants at the center of the research, and it is committed to social transformation. My research contributes not only to scholarly literature, but also to feminist social movements and gender and technology activists as they move forward in the global information society. It is also feminist because it centers emotions and feelings as valid theoretical and methodological approaches (Collins 2000). Second, my research employs insights from both Michael Burawoy’s (1998) “extended case method” and George Marcus’ (1995) multi-sited ethnography. Both frameworks situate research
within globalization and an understanding of a world in which economies, politics, cultures, relationships, and things are interconnected.

My research offers analytic insights on issues of technology, gender politics, and development, maps relationships to technology from the daily lives of activists to prevailing discourses, and builds mostly on critical development and feminist theories. I use Burawoy’s model of the “extended case method” to “extract the general from the unique, to move from the ‘micro’ to the ‘macro,’ and to connect the present to the past in anticipation of the future, all by building on preexisting theory” (5). The extended case method applies what Burawoy calls “reflexive science to ethnography,” and reflexive science is defined as “a model of science that embraces not detachment but engagement as the road to knowledge” (5). I also use Marcus’ “multi-sited” approach as I travelled both literally and figuratively over countries and documents to understand a dimension of how gender is being understood in the network society: “Multi-sited research is designed around chains, paths, threads, conjunctions, or juxtapositions of locations in which the ethnographer establishes some form of literal, physical presence, with an explicit, posited logic of association or connection among sites that in fact defines the argument of the ethnography” (Marcus 1995:105). Specifically, I borrow Marcus’ “follow the metaphor” approach to understand the multi-sited construction of the third world technological woman. I traced the making and unmaking of this figure from United Nations and World Bank documents, to Sulá Batsú (Costa Rica), Colnodo (Colombia), and APC-WRP. Textual analysis thus became another research site. Although Burawoy’s and Marcus’s models are ethnographic, my research could not be considered an ethnography. I engaged in limited periods of participant observation, and was briefly embedded in the organizations under study. Nonetheless, both methodologies provide useful frameworks for my qualitative study.
Finally, Mohanty (1988) and Gordon (1997) offer indispensable methodological insights on how to study “others.” Mohanty’s 1988 essay helps me contextualize the communities under study within broader structures, without losing sight of people’s everyday lives and struggles. Gordon (1997) provides a roadmap to centering what she calls the “complex personhood” of our subjects of analysis: “At the very least, complex personhood is about conferring the respect on others that comes from presuming that life and people's lives are simultaneously straightforward and full of enormously subtle meaning” (5). Gordon reminded me that in these activist’s lives and work, entrepreneurship, development, technology, and even neoliberalism, can have multiple and contradictory meanings and consequences.

Case Selection

The three organizations I selected, the Women’s Rights Programme of the Association of Progressive Communications (APC-WRP), Sulá Batsú and Colnodo, provided ideal sites to explore the contested arena of digital information technologies and gender. The organizations selected offer “opportunities to learn” (Stake 2006) because they engage in multiple and different (sometimes overlapping) areas of work: developing women as skilled users of digital technologies, fostering entrepreneurship in the area of technology, participating in local, regional and transnational advocacy efforts on gender and information technologies. I also chose these organizations as my sample because of other variations between them: APC-WRP identifies as a feminist organization, and is a transnational network that develops global campaigns on gender and technology, while also providing on the ground training across the global south from Asia to Africa and Latin America, while Sulá Batsú and Colnodo do not openly identify as feminist organizations and engage in more grassroots local training and capacity building with marginalized communities that generally are either “disconnected” or barely entering the digital
networked society, in Costa Rica and Colombia, as well as in technology advocacy across Latin America. Sulá Batsú is also focused on entrepreneurship and the formation of women scientists. Sulá Batsú is a cooperative, Colnodo an NGO, and APC-WRP a network. The activists and experts who I interviewed informally, as part of my preliminary and background interviews leading to my dissertation proposal, consistently mentioned these three organizations as regional key players in the area of gender and technology.

APC, founded in 1990 and with consultative status to the United Nations, is both a transnational network and nongovernmental organization that works on Internet rights advocacy and policy on the state and suprastate levels as well as with grassroots organizations around the world. As of November 2015, APC had 47 organizational members in 34 countries and 24 individual members in 22 countries, the majority from the global south. APC is a decentralized global virtual network with a small staff that uses the Internet to work and communicate. APCs Women’s Rights Programme has been critical in promoting a “feminist internet” and internet gender rights in the global south. APC has spearheaded the important global campaigns “Take Back the Tech” since 2006, which raises awareness on gender violence on the Internet, the “EroTICs” project that unites scholars and activists working at the intersection of sexual rights and Internet rights, and the Feminist Tech Exchange (FTX), which offers activists workshops and training on information technologies from a feminist perspective. APC provides key insights into the transnational context of the intersection of gender, feminism and technology.

Two key APC partners in Latin America are the organizations Sulá Batsú, in Costa Rica, and Colnodo, in Colombia, which have strong advocacy and training programs on women and technology. The connection between APC, Sulá Batsú and Colnodo provides a unique terrain to map the flow of ideas and practices on gender and technology, from the global to the local. Sulá
Batsú is a cooperative founded in 2005 dedicated to advocacy, research, and training on technology and development in Central America. Their project “TIC-as,” which uses the slogan “Science needs us,” focuses on supporting young rural women in the fields of science and technology with the goal of reducing the “gender gap.” Colnodo, in Bogotá, Colombia, and founded in 1994, is one of the first internet service providers in Latin America for grassroots organizations. Its mission is to “facilitate the exchange of information locally, nationally and internationally through low cost electronic networks” (Colnodo website). “Gender” is one of the crosscutting themes—along with sustainable development and free software—that runs through their four strategic programs: e-government; information and communication technology appropriation; information and communication technology policy; and knowledge production. In 2015, Colnodo partnered with Google Latin America for the project JuvenTIC that has already trained thousands of youth how to appropriate information technologies for employment and economic advancement. Sulá Batsú and Colnodo engage in grassroots work and mobilization around issues of women and technology in marginalized communities, as well as advocacy work at the local, national and transnational scales.

These organizations are embedded either through funding, advocacy work, or networks with development institutions. All three organizations—APC-WRP mostly—maintain ties to development institutions through networking and advocacy at local, regional, and global United Nation events such as the annual United Nations Committee on the Status of Women (CSW) and ECLAC’s bi-annual regional conferences on women, among many other meetings and events. In addition, in recent years, both Sulá Batsú and Colnodo have received funding from technological corporations, such as Facebook and Google, for projects with youth and women and girls.
Fieldwork and Interviews

*Fieldwork*

In March 2015, I conducted one week of fieldwork at the UN Women’s 59th Commission on the Status of Women (CSW) meeting in New York City focused on the 20th anniversary of Beijing’s Platform for Action. I attended the side events (which are organized by a country and an NGO) and parallel events (organized only by NGOs) on issues of gender and digital information and communication technologies. During the event, I also interviewed three APC activists and the director of the UN’s Empowerwomen.org program. The UN Women’s 59th CSW meeting was relevant to my research because it was a review of the 1995 Beijing Platform for Action, which is considered the watershed moment for feminist global advocacy on media, communication, and technology (among many other issues). It was also an ideal space to meet gender and technology activists, and speak with APC staff who were participating at the event.

I conducted fieldwork in Costa Rica and Colombia during 2015 and 2016: in 2015, I conducted six weeks of fieldwork in Costa Rica and Colombia, and I returned to Costa Rica for five weeks in the summer of 2016. During these research trips, I was embedded both in the organizations and the lives of the members. I spent every weekday at their offices, conducting interviews, doing voluntary work—mostly advising on internet and social media strategies and helping with translations from Spanish to English—talking informally with activists and staff, and participating in their meetings and events. I tried as much as possible to become a part of Sulá Batsú and Colnodo while I was there. In Sulá Batsú, we shared lunches, coffee hours, and dinners. In the summer of 2015, I attended one of the staff meetings, and a workshop they offered for young rural women scientists in the northern zone of Costa Rica. On my first day, they designated a desk for me at their beautiful yet simple office in Casa Batsú, the community
space *la coope* (the name given affectionately to the cooperative) manages in the Barrio Escalante and where Sulá Batsú is housed. I rented a room at the house of one of the cooperative’s members during half of my stay, and the rest of the time I lived at the house of the *coope’s* coordinator. This also helped me gain a better understanding of their lives. I spent three intense weeks at Sulá Batsú and forged long lasting relationships with the staff. They surprised me with gifts my last day at the office. In Bogotá, I rented an apartment through Airbnb in the Barrio Soledad, at walking distance from Colnodo’s office. They also assigned me a desk where I worked and chatted with my officemates. My main contact at Colnodo would sometimes walk with me to the office in the mornings. I almost always had lunch alone or with the coordinator of the women’s and digital rights project. I went once for drinks with one of my key participants, before leaving the country, and Colnodo’s founder and president invited some of the core staff for lunch at a restaurant in Bogotá to bid me farewell. Between the summers of 2015-2016, I held periodic online conversations, via email, Skype and whatsapp, with two key participants from Colnodo and Sulá Batsú, to stay in touch and keep up with their projects. I communicated frequently with the coop’s staff via a whatsapp channel that one of the members titled “Firu y Sulá Batsú” (Firu and Sulá Batsú). We have used this channel mostly for more personal communications. This helped me remain close to the coop and their work.

In July 2016, I returned to San José and spent five weeks. The activists received me with a trip to stay overnight at a beach on the Pacific coast; they had been planning this since I told them in Spring 2016 that I would return for follow-up fieldwork. This time, I rented a room at a house in San José, a place that KC had found for me through an intern at *la coope*. During my five weeks there, I fully participated in the coop’s everyday life: staff meetings, lunches, coffee breaks, after hour get-togethers, and events. During that month, Sulá Batsú was the official host
of various important regional and transnational events: the regional APC members meeting, the XI Ibero-American Conference on Gender, Technology and Science, and the IX Latin American Internet Governance Forum (LAC-IGF). I participated in the APC meeting as a friend of the coop—this meeting was private for the members—and as the master of ceremony of the LAC-IGF forum. The coop’s coordinator and another participant, who was in charge of organizing the LAC-IGF in San José, asked me to be the master of ceremony because they felt I knew the coop well. The organizing body of the LAC-IGF paid me for three full days of work as the master of ceremony. The LAC-IGF is the regional preparatory meeting of the Internet Governance Forum (IGF), a multi-stakeholder event that debates internet governance issues. This was a great experience for networking and meeting technology activists from the region, and learning about internet governance issues.

Participant observation permitted me to observe the inner workings of these organizations and make my own analysis beyond interviews with participants. I maintained detailed field notes during fieldwork in Costa Rica and Colombia and at the events I observed.

*Interviews*

Interviewing was the most suitable method to inform my research queries and themes given my interest in understanding how key organizational actors make sense of and engage with technologies and development frameworks. In feminist research, interviews have been also traditionally used for unveiling “subjugated knowledges” of marginalized communities and people (Hesse-Biber 2014; Hesse-Biber and Leavy 2011). Interviews with UN officials, corporative executives, and other experts and high-profile advocates provided insights on the official visions, missions, strategies, and objectives of these agencies and organizations. This information was also important for my project in order to map discourses on gender,
technologies and development through transnational and local scales. Many of these agencies and organizations, such as UN Women, UNESCO, ITU, Intel, are also key sources of funding for projects on gender and technology in the global south, and more specifically for some of the organizations I studied. Thus, in my research, interviews contribute to understanding the “cracks between discourses and practices” (Thayer 2010)—specifically, how the technological future being constructed for women is actually being practiced. Interviews are also key to understanding why certain discourses emerge and are sustained, and how they are negotiated. All translations of interviews held in Spanish are mine.

Between 2015-2016, I conducted 62 semi-structured interviews. Interviews had a duration of approximately 1-3 hours each, and although I followed a questionnaire (see Appendix A) with sections that varied depending on the participant, I also improvised and expanded upon the questionnaire. Interviews from my three main case studies are divided as follows: 11 activists of the Women’s Rights Programme of the transnational network Association of Progressive Communications (APC-WRP); 14 from the cooperative Sula Batsú, and 10 from the non-governmental organization Colnodo. In San José, I interviewed the head of the state agency the National Institute of Women (INAMU), the director of the Office of Gender Equality of the Tecnológico de Costa Rica (Technological Institute of Costa Rica: the prime national institute of higher education in science and technology), and five participants of Sulá Batsú’s TIC-as project, dedicated to empowering young rural women in science and technology.

In Bogotá, I interviewed one of the main assessors of the Ministry of Technology, Information and Communication, five participants of their project on women, ICTs and empowerment in poor urban zones in the capital, two technology activists and staff of the Colombia-based Fundación Karisma, and NGO that works on issues of privacy, surveillance,
internet policy, and online violence, and three feminist and technology activists from the grassroots open source software collective FOSSChix Colombia. From major technology corporations or foundations, I interviewed Corporate affairs director for Latin America and the Director of Social Innovation Corporate Affairs Group of Intel, a program officer at the Bill and Melinda Gates Foundation, and an investment partner at the Omidyar Network. I interviewed two United Nations officials, the head of the project Empowerwomen.org and an official from the International Telecommunications Union (ITU). I also interviewed the director of the Cátedra UNESCO, considered one of the epicenters of knowledge and advocacy of gender and technology issues in Latin America. I made multiple attempts to interview people from Google and Facebook, and United Nations gender and technology experts, without results. Finally, I interviewed the director of strategic partnerships of the US-based NGO World Pulse—dedicated to women’s empowerment through media and communications—the executive director of the NGO Alliance for an Affordable Internet, and a longtime feminist activist considered one of the pioneers in feminist media and digital technologies in Latin America. Seventeen interviews were via Skype—eight of the 11 APC interviews were conducted via Skype because this is a virtual organization with no physical headquarters—and the interview with the two Intel executives was via email.

To recruit participants, I relied on purposive and snowball sampling, primarily through feminist activists I know from my 10 years as a reporter in Puerto Rico covering the women’s movement, my work as the Spanish Language Editor for the online publication Global Voices, and contacts previously made when completing my Master’s thesis on the digital strategies of a feminist coalition in Puerto Rico. Preliminary and informal interviews with a dozen feminist and technology activists and experts from the region also offered vital contacts for this research.
All interviews were audio recorded and transcribed. I transcribed three interviews, and the rest were transcribed by a feminist activist I hired and who signed a confidentiality agreement. I translated all of the excerpts and quotes of interviews in Spanish to English. I coded all interviews using the software NVivo. Coding was inductive and I did not have a previous set of codes. Codes flowed inductively from the transcriptions as I began to identify patterns and interesting concepts based on fieldwork and knowledge of relevant theoretical frameworks.

**Brief profile of participants**

I asked most participants to fill out a basic demographic questionnaire (see Appendix B) to gather information on gender, class status, racial/ethnic identification, and level of education. Yet, I did not require responses to race or class of all participants because in some cases it was inappropriate or irrelevant (mostly with UN and technology corporation executives, and activists and experts not from my three main case studies). I achieved a spectrum of variation of participants in terms of positions in the organizations: board members, administrative staff, activists and trainers, graphic artists, communication and social media editors, web developers, projects assistants, and founders and directors. This was important to understand different aspects of these organizations. I also interviewed state actors, development agency officials, and staff and consultants at technology corporations to understand the institutional discourses in my analysis from other perspectives. Finally, I interviewed both key gender and technology experts from the region and from the United States, and non-affiliated feminist and technology activists to acquire a broader understanding of the current state and historical trajectories of gender and technology activism in the Latin American region.

Participants mostly came from Costa Rica and Colombia, but also from the Argentina, Lebanon, Malaysia, South Africa, Sweden and the United States. The organization with most
diversity in terms of nationality is APC, because of its nature as a transnational network not based in any particular country. In sum, participants’ ages (n=49) ranged from 21–64 years-old, with the majority being between 35–40, and 87% of participants who were asked identified as a woman, 9% as men, and 4% as queer (n=53). Sixty two percent of participants asked (n=47) identified as middle-class, 9% as middle-upper class, 9% as working class (6% declined to answer the question, 11% preferred not to identify with any social class, and 3% said “none”). I left the question on race/ethnicity open, because of the complexity of these categories in Latin America: of the 40 participants who responded, 35% declined to identify a race or ethnicity. Participants were in general highly educated: 81% (n=47) have at least a BA, and 45% have a graduate degree.9 Organizational profiles and details of fieldwork are presented in Table 1.

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9 The sample sizes vary because I did not ask all participants (n=61) for demographic information.
<table>
<thead>
<tr>
<th><strong>Organization Name</strong></th>
<th>Association for Progressive Communications-Women's Rights Program (APC-WRP)</th>
<th>Sulá Batsú</th>
<th>Colnodo</th>
<th>Other Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organization Mission Statement</strong>&lt;sup&gt;10&lt;/sup&gt;</td>
<td>The Women’s Rights Programme (WRP) is both a programme within APC and a network of women throughout the world committed to using technology for women’s empowerment. We promote gender equality in the design, implementation, access and use of information and communication technologies (ICTs) and in the policy decisions and frameworks that regulate them.</td>
<td>A leading organization based on a solidary social economic model that strengthens local development through open and inclusive exchange of knowledge and lived experiences.</td>
<td>Colnodo's main objective is to facilitate communications, exchange of information and experiences among Colombian organizations at local, national and international levels through low-cost electronic networks.</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>n/a</td>
<td>San José, Costa Rica</td>
<td>Bogotá, Colombia</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Year Founded</strong></td>
<td>1993</td>
<td>2005</td>
<td>1994</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Number of participants interviewed</strong></td>
<td>11</td>
<td>17</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td><strong>% Female interviewees</strong></td>
<td>81.8%</td>
<td>88.2%</td>
<td>87.5%</td>
<td>94.4%</td>
</tr>
<tr>
<td><strong>Age Range of Interviewees</strong></td>
<td>33-64</td>
<td>21-52</td>
<td>28-53</td>
<td>34-46</td>
</tr>
<tr>
<td><strong>Nationalities of Interviewees</strong></td>
<td>– South Africa – Argentinian – Canada – USA – Malaysia – Lebanon</td>
<td>– Costa Rica – Panama</td>
<td>– Colombia</td>
<td>– Sweden – Angola – Costa Rica – USA – Colombia</td>
</tr>
<tr>
<td><strong>% of Interviewees with a BA</strong></td>
<td>81.8%</td>
<td>76.5%</td>
<td>62.5%</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>% of Interviewees with an MA</strong></td>
<td>36.4%</td>
<td>17.6%</td>
<td>56.3%</td>
<td>n/a</td>
</tr>
</tbody>
</table>

<sup>10</sup> Translated from Spanish by the author where necessary.
Textual Analysis

My research employs textual analysis to study documents produced by the United Nations, the World Bank, governments, and technology corporations in order to analyze how institutions frame gender, technology, and development. The reports were mostly produced in the past 20 years since the UN Conference on Women in Beijing in 1995, largely considered the watershed moment for the movement on issues around women, information and communication technologies, and science. For the purpose of this research, I use Philips and Hardy’s (2002) definition of discourse as “an interrelated set of texts, and the practices of their production, dissemination and reception that brings an object into being” (3). In this context, textual analysis is both a method and a methodology that is social constructivist and for which “social reality is produced and made real through discourses, and social interactions cannot be fully understood without reference to the discourses that give them meaning” (Phillips and Hardy 2002:3). I use a critical lens attentive to power, specifically regarding how texts are challenging or reproducing tropes, concepts, and ideologies on women/gender and technology (Fairclough 2003). Using Marcus’ framework of “follow the metaphor,” I mapped and followed the making and unmaking of what I have called the third world technological woman through development institutional documents and organizational practices. The textual analysis focuses on relevant reports from the United Nations and World Bank on gender, technology and development in the global south, from state entities within both countries under study, supplemented by APC, Colnodo, and Sulá Batsú organizational literature, which includes reports, research, pamphlets, presentations, flyers, and online material from their websites.

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11 I did not conduct what is formally known in the field as “discourse analysis,” which follows a specific procedure. I analyzed reports through a qualitative inductive process.
The relevance of the United Nations and the World Bank—as among other international development institutions—as authorities of development discourse and policies has been increasingly questioned (Bedford 2009). Nevertheless, these organizations continue to be important arbiters of knowledge on development (see Bedford 2009 for her analysis on textual analysis of World Bank documents). In Latin America, the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) has an undeniable importance in areas of both policy and the production of knowledge. Feminist activists attend the ECLAC sponsored bi-annual regional conferences on women, and many of the activists I interviewed were also involved in the ECLAC’s meetings regarding technology and science policies in the region. At least three of the activists I interviewed were also authors or co-authors of ECLAC reports on gender and technology. Authors of some of the most important United Nations and World Bank reports, such as Nancy Hafkin and Sophia Huyer, are also well known scholars in the literature on gender, technology and development, an emerging subfield in development studies—with books and publications in peer-reviewed journals—and also activists. The implications of this “inbreeding” are surely interesting, yet beyond the scope of my research.

I analyzed and coded 49 full reports specifically on gender and technology. Of these, 32 are from the following United Nations agencies and organizations (see Appendix C for a list of acronyms): UN Women, UNESCO, United Nations Division of the Advancement of Women (DAW), UNDP, USAID, UNCTAD, ITU, ILO, United Nations Broadband Commission, and the Gender Working Group and Gender Advisory Board of the UN Commission on Science and Technology for Development (UNCSTD). Twelve were produced by the ECLAC, and six by the World Bank. I chose reports produced since the UN’s Fourth World Conference on Women in Beijing in 1995 (and until December 31st, 2016), since it is widely considered a watershed
moment in the area of gender, science, technology, and development. I also coded the pre-
Beijing foundational report *Missing Links: Gender Equity in Science and Technology for Development* produced by the important Gender Working Group of the UNCSTD, and which is considered a pioneer report on the matter. From Latin America, I also included the 1990 ECLAC report *Women and New Technologies* from the series Women and Development.

Besides full reports, I consulted dozens of briefs, presentations, declarations, and other documents related to these issues. One of these that I coded because of its relevance is ITU’s Resolution 70 titled *Gender Mainstreaming in ITU and Promotion of Gender Equality and the Empowerment of Women Through Information and Communication Technologies*.

For a better understanding of the broader context of discourses on technology, science and development in general, I consulted 29 United Nations and World Bank reports, declarations, and resolutions (1993-2016) related to these areas. I coded six of these 29 documents: the Doha Declaration on Financing for Development, which is the outcome document of the Follow-up International Conference on Financing for Development (2008); the outcome document of the Third International Conference on Financing for Development, the Addis Ababa Action Agenda, and the civil society declaration (2015); the UN DAW’s 2009 World Survey on the Role of Women in Development; the World Bank 2014 *Voice and Agency* report; and the 2016 flagship World Bank Development report dedicated titled *Digital Dividends*. I also consulted reports from universities, NGO’s, and foundations such as the 2009 BRIDGE report *Gender and ICT’s* from the Institute of Development Studies (IDS) in the United Kingdom; the 2014 and 2015 reports Alliance for an Affordable Internet affordability reports; the 2014-15 Web Index Report produced by the World Wide Web foundation; the World Wide Web foundations’ 2015 report *Women’s Rights Online: Translating Access into Empowerment*;
reports on women, development, and digital technologies from the Cherie Blair and the Clinton foundations; and guides from the Global Fund for Women (a US based funding agency) of their “Ignite” project on women, science, and technology. I consulted two Intel reports on women and technology: the 2014 Women and the Web report and the 2014 MakeHers: Engaging Girls and Women in Technology Through Making, Creating, and Inventing. See Appendix D for list of texts coded.

Finally, I consulted over 100 reports, briefs, white papers, studies, flyers, blog posts, presentations, guides, and briefs from APC and APC’s WRP, Sulá Batsú, and Colnodo. The majority of these documents and online material are by APC’s Women’s Rights Programme, which produces a high volume of material and research on gender and technology. I also consulted official websites of the ministries of both women and information technologies of Costa Rica and Colombia to understand the contexts of my case studies.

I coded all reports using the software NVivo. Coding of reports was also inductive, although I had previously identified some concepts that I would be looking for such as “access,” “participation,” “entrepreneurship,” “poverty,” “efficiency,” and “women as producers.” But most codes emerged from the textual analysis as I identified different patterns, concepts, and ideas.

**Reflexivity and location**

“We need to know how you are going to give back.” The request startled me. I had spent two days at the cooperative Sulá Batsú in San José, Costa Rica, when the coordinator asked me how I was planning to give back to the organization. The cooperative’s members felt that my arrival was abrupt and foreign to their collaborative working model, even though I had been
planning the trip closely with la coope’s coordinator during months. It is true that when I arrived I immediately started scheduling individual interviews with the staff. I understood in the following weeks that this is not the way they work or live. They work collaboratively, they share tasks and expertise, income and space, knowledge and solidarity. Their research projects with communities are always participatory: they are built on collective knowledges, methods, and objectives. I was a Puerto Rican woman studying a PhD at a university in the United States who suddenly arrived to conduct one-on-one interviews in their meeting space. It seemed quite violent to them. As the days passed, I realized that to be able to study Sulá Batsú, I needed much more than interviews: I had to become a friend, una compañera. I had to give back, and let my research be moved by emotion. This also later turned out to be one of the most important theoretical and methodological insights of my study.

Emotions played out in two major ways in my research: on one hand, my emotions as a researcher in the field, and, on the other, emotions as an object of study. Feminist scholars have for long studied the importance of centering and validating emotions in the research process (Collins 2000; Hesse-Biber 2014; Naples 2003; Reinharz and Davidman 1992). Feminist research should not require “the absence of emotions from the research process” (Collins 2000:255), as positivist methodology does. I was and continue to be committed to this throughout the numerous stages of research: fieldwork, analysis of data, and writing. On the other hand, how do we study emotions? This is something I only asked myself when I was analyzing my data and writing my dissertation. Feelings and intimacy were also findings of my research. Once again, I turned to feminist scholarship to theorize emotion, as well as understand its theoretical contribution to the field of gender and development (Anzaldúa 2015; Collins 2000; Lorde 2012; Sandoval 2000).
My methodology is built upon both a rigorous academic investigation as well as emotions and solidarity. Becoming a compañera does not mean I have been uncritical of Sulá Batsú: the activists themselves are the harshest critics of the cooperative. I will admit, though, that at first I found it difficult to be critical of the coop in my writing, and in time I realized that critique confers complexity to my arguments while also making a contribution to the organization. In this process of realizing the complex and contradictory nature of the coop’s work, I maintained a profound respect and cariño for both the organization and the activists. I foreground Sulá Batsú because, even though it is only one of three cases I studied, it became clear throughout my research process that it would have a primary role. This is where I spent the most time, and the people with whom I developed the deepest relationships. Colnodo is a more traditional non-governmental organization, and relationships were more formal although the staff was always helpful and nice. APC-WRP is a transnational network with no physical headquarters, therefore communication and interviews were mostly via Skype and email. Online communication had its advantages, for instance it connected me with APC activists who live in Malaysia and South Africa. But it also makes it challenging to be able to form closer relationships with participants. This does not mean that people cannot have close relationships through online communication, but in the particular context of my research, which uses interviews as a main source, online conversations were mostly targeted and to the point.

A note on generalizability and limitations

The ability to generalize research findings continues to be important in sociology, even after decades of critical scholarship on positivist methodologies. Although generalizability is expected as a result of quantitative research, it has also followed qualitative research in an attempt to legitimize qualitative methods as valid ways of understanding the world (Becker
I believe in the importance of generalizability not as a requirement to validate findings, but as a way to offer understandings or explanations that surpass the limited purview of individual research. My study offers a “slice” of the possibilities and challenges around issues of gender politics, technology, and development in the network society, focused on Latin America, and thus is not empirically generalizable. Nonetheless, my investigation offers analytic insights on the relationships between development, gender politics, technology, and activism that contribute to and build feminist theories of gender, development and technology that can be “analytically generalizable” (Hesse-Biber and Leavy 2011:53).

I sought variation on multiple areas of my study: in terms of organizations (local/transnational, NGOs/cooperatives/networks, focused on entrepreneurship/capacity building/advocacy, and identifying openly as feminist or not), and in terms of participants’ positions in the organizations and non-affiliated gender and technology activists and experts. Methodologically, I also achieved variation by using interviews, participant observation, and textual analysis, which helped balance (never completely) some inherent biases in each method. Textual analysis provided a rigorous examination of reports on gender and technology, but further research could do a systematical comparison of these with general science and technology development reports. There exists, of course, tremendous variation within Latin America, and the global south, on activism around issues of gender and technology that is ungraspable in its totality. My research has no pretenses of proving causality either, but is rather exploratory. As part of my feminist methodological approach, I also shared drafts of my chapters with participants from the organizations under study.

One of the limitations of my study is that I could not conduct more interviews with United Nations or World Bank officials or executives at technology corporations. It was
extremely challenging to gain access to them, and my emails and calls were not answered even when I had been recommended through other contacts. More interviews with development officials and corporate executives would have enriched the data and analysis. Another limitation of my research is that at the final stages of writing in 2017, technology corporations such as Google and Facebook, granted funding to two of the organizations under study for projects on women, technology, and entrepreneurship. It would have been interesting and relevant to understand the consequences of these streams of funding on the organizations under study. The increasing corporate intervention in both development institutions and grassroots and social justice organizations (Arutyunova and Clark 2013; Miller et al. 2013; Moussié 2016) is an area of research that I will be expanding upon in the future. Finally, my research would have benefited from more time and immersion in the field. This was not possible due to personal and financial reasons. My ongoing contact with activists and participants via online platforms has partially subsided this limitation.

Conclusion
My research methodology and ethical principles are nourished by decades of feminist research practice (Collins 2000; Hesse-Biber 2014; Reinharz and Davidman 1992). As a researcher, I remained attentive to issues of power regarding the researcher/participant relationship, and although the asymmetries could not be fully bridged I engaged in constant reflection during all stages of my research. I also learned great lessons from the participants of this study: lessons of true, every day, feminist practices built on solidarity, honesty, and humanity. Throughout my research I realized that my status as an insider/outsider (Naples 2003) was fluid and ever changing. The experience at Sulá Batsú, specially, made me realize that being a Caribbean woman did not automatically make me a compañera. Gaining the trust of these
activists has been a hard, emotional, and rewarding process that continues to this day. I hope that my research contributes to their wonderful work.

In the next chapter, the first of the three substantive chapters of my dissertation, I analyze the institutional development reports on gender, technology, and science to understanding the prevailing discourses and the construction of the *third world technological woman*. 
Chapter 4: Development Discourse Laid Bare: Third World Woman as Technological Subject

*When action grows unprofitable, gather information; when information grows unprofitable, sleep.*  
-Ursula K. Le Guin (1969)

In the past 20 years, there has been a race to include women in the knowledge economy. The importance of integrating women as users, producers, consumers, designers and developers of technologies has become a mantra against inequality. Prominent strategies include capacity building and training in digital information and communication technologies, and a diverse array of strategies to foster the participation and retention of women in science and technology fields in education and the workforce. But this exciting future being constructed, in which women are considered key figures full of potentiality, contains in its fold subtle, and not so subtle, forms of exclusion.

In this chapter, the question I seek to answer is: How does development discourse construct gender together with technology? I argue that development discourse—specifically produced by the United Nations, the World Bank, and various technology corporations—fuses technology and life by incorporating gendered tropes in the making of an ideal *third world technological woman*. By “life” I mean a “politics of life” (Foucault 2008a:148): of care, nurturance, cooperation, selflessness, and self-sacrifice that is family-oriented. This also includes a focus on marginal knowledges, locality and place, and on empowering women as producers and designers of technology. This “politics of life” connects development to webs of intimacy, many of which are traditionally associated to women and ideally facilitated by digital technologies. In this context, digital technologies are also technologies of intimacy. This shapes what I have called the *third world technological woman*. Digital technologies (hardware, software, the internet) can be connected to numerous areas of life and work, such as family, community, agriculture, health, education, as well as to political and social rights such as
participation and civic engagement. Technology also facilitates multiple temporalities: it is vital in the present as well as in the future. All of this makes technology particularly suited for advancing various political and socioeconomic agendas and interventions. Numerous areas of life and work can be made into sites of potential profit, connected to finance and market-based approaches to inequality, or what Julia Elyachar (2005) calls the “financialization of indigenous social practices” (27). These discourses often obscure the historical and contemporary political and economic structures that have produced the inequalities this technological subject is supposed to overcome.

There is a long tradition in development and globalization studies of analyzing language and discourse (Ferguson 1997; Mohanty 1988; Sachs 1992). Arturo Escobar’s groundbreaking “Encountering Development” (1995) is a Foucauldian discursive analysis of development and the subjects it has produced to justify a series of interventions. Feminist scholars have also produced countless analyses on the gendered language of development, and debated issues of cooptation and depolitization (Beck 2017b; Calkin 2015a; Chant and Sweetman 2012; Cornwall and Edwards 2014; Cornwall, Gideon, and Wilson 2008b; Cornwall and Rivas 2015; Eade and Cornwall 2010; Kabeer 1994; K. Wilson 2015). This literature foregrounds the appropriation of

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12 The reports I have analyzed are mostly focused on technology and development, although there are mentions of how technologies facilitate women’s civil and political rights. Other United Nations reports focus on the potential of digital technologies to enable civil and political rights such as freedom of expression and political participation (see especially the work of the Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression: http://www.ohchr.org/EN/Issues/FreedomOpinion/Pages/OpinionIndex.aspx). In June 2012, the UN Human Rights Council adopted the first resolution on the promotion, protection and enjoyment of human rights on the Internet, and in 2016 the third resolution specifically included online violence as a threat to freedom of expression: http://www.ohchr.org/EN/HRBodies/HRC/RegularSessions/Session32/Pages/ResDecStat.aspx. The Association for Progressive Communications (APC) 2016 Global Information Society Watch report includes excellent critiques on the absence of analyses of digital technologies and the internet as economic, social, and cultural human rights (Association for Progressive Communications and Humanist Institute for Cooperation with Developing Countries (Hivos) 2016). In the reports I studied, economic development is framed in terms of financialization and mostly an entrepreneurial, market-based strategy; not as a human right.
terms and concepts originally formulated within politically radical movements and organizations, such as empowerment—which is particularly salient—agency, gender, voice, and even feminism. Feminist scholarship broadly—beyond the field of development—has also studied the dilemmas of appropriating feminist principles of social justice to mobilize specific neoliberal politics (Eisenstein 2005, 2009; Fraser 2013b). Janet Halley (2006) defined “governance feminism” as the “installation of feminists and feminist ideas in actual legal-institutional power” as well as in other organizations such as NGOs. The appropriation of once radical ideas has made it difficult to disentangle social justice commitment from conservative politics in times when even “critical theory” and “anti-development” have been incorporated into mainstream development circles (Elyachar 2002; Roy 2012a). Institutional development discourse and policy frequently speak the language of radical politics, including the language of feminist radical politics. Yet appropriation is more complex than simple absorption, or complicity, as feminist scholars are increasingly arguing while calling for more empirical and contextual analyses (Alvarez 2009; Beck 2017a, 2017b; Bernal and Grewal 2014a; Eschle and Maiguasha 2014; Phillips and Cole 2009; Prügl 2015; Sharma 2008; Whittier 2016). For women in the developing world, for example, there have been gains, losses, and contradictions. In their historical overview of the field of “women and development” and the conflation of neoliberalism with democracy and choice in Latin America, Lourdes Benería, Günseli Berik and María S. Floro (2016) argue that “within the mainstream framework of neoliberalism, a number of feminist goals around women’s autonomy, participation, and representation have been partially fulfilled” yet “the goals of gender equality have been promoted but without supporting agendas to reduce other forms of inequality such as class” (25).
Many actors conceptualize international development reports, including state actors, development officials, members of the private sector, and activists. My analysis is not a critique of individual authors, but of the broader implications of supporting a *third world technological woman* who is supposed to succeed amid persistent conditions of inequality that are not addressed. These discourses cannot be rigidly separated from the claims of women’s and other social movements, since they are also the product of negotiations that take place through a series of global and local meetings and conferences (Desai 2008; Falcón 2016). These reports are not the sole product of technocrats locked away in offices. There are feminists in the “UN-orbit”—embedded in these institutions—and some of those same feminists have been involved in grassroots movements and organizations (Phillips and Cole 2009). The UN Women’s Decade (1975-1985), for instance, opened important “programmatic and discursive” (Alvarez 2014:212) spaces for women’s movements (see also Beneria, Berik, and Floro 2016). This means that there have been crucial gains for women and feminist movements worldwide at both the United Nations as well as at the World Bank, among other institutions. That said, there continues to be exclusion along lines of race and class, along other divides. Many of the most marginal and non-elite activists do not participate in these negotiations or global events (Phillips and Cole 2009). In Latin America, for example, there have been decade long tensions and debates between women’s activism in the United Nations conferences and the more grassroots, decentralized regional *Encuentros* (Alvarez 2000). Some feminist scholars and activists have also questioned the relevance of the United Nations for feminists (Vargas 2009). In addition, it is important to note that corporate involvement in the United Nations has steadily increased in the past years:

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“Chronic underfunding of the UN and its dependence on a limited number of donors has led it to look towards transnational corporations and philanthropic foundations for funding” (Moussié 2016:26). And as Cornwall and Rivas (2015) state: “Women’s virtues form part of the narrative that presents women and girls as a good investment for development and increasingly for the plethora of corporate actors whose arrival in the development marketplace has had such a significant impact in recent years” (399). The United Nation’s 2015-2030 Sustainable Development Goals Agenda, for instance, has a specific “target” on the importance of fostering public private partnerships, in contrast to the 2000-2015 Millennium Development Goals that defined global partnerships as between states. The implications for gender politics, and social movement politics in general, of the corporatization of development must be further explored.

My analysis expands scholarship on the politics of appropriation by examining the framing of gender and technology in specific United Nations, World Bank and corporate reports. Beyond appropriating ideas and concepts that have had radical political roots, these reports extend appropriation into realms of life and intimacy such as the importance of family, connections to place and the local, and to the production and legitimization of knowledge. Technology will empower women, mostly as entrepreneurs, and channel her “natural” nurturing qualities to help her family, community, and country. The onus is on her to be the savior. In other words, although technology is supposed to contribute to women’s wellbeing, these reports essentialize women in ways that overburden them with more work and responsibilities without analyzing the broader issues and structures that will continue to create the inequalities they face (e.g. racism, misogyny, heteronormativity, state/corporate violence, lack of access to childcare,

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14 The United Nations website section on “Business” states that “The relationship of the UN and the international business community has been transformed. Business entities embracing corporate responsibility now work side by side with the Organization to make the world a better place.” Taken from: http://www.un.org/en/sections/resources/business/
housing, education, land, and the persistent threat of ecological devastation, among others). As Benería, Berik and Floro (2016) state: “Poor women’s work burdens are on the rise as they are asked to bear more responsibilities with minimal or no public support” (27). The World Bank says, for example, that “ICTs have tremendous potential for promoting and achieving sustainable development that is also gender-equal,” yet equality is overwhelmingly seen as a “goal to be pursued within the existing social structure and international economic order” (Beneria et al. 2016:25) that precisely has contributed to produce and sustain those very inequalities. In the reports under analysis, there is also an interesting shift: the emphasis is now on making women *producers* of technology. On one hand, feminists and technology activists and scholars have been advocating for policy to focus on women as producers (designers, developers, programmers) of technology beyond being targeted as consumers (Layne et al. 2010; Ramilo 2006). Women could thus participate in conceiving technologies that would (hopefully) center women’s needs and desires, as well as integrate race, sexuality, disability, and environment awareness into design. This is certainly a victory for feminist technology activists, yet we also need to be careful about the objectives of including women in what appears in these reports as an “add and stir” strategy. On the other hand, “adding and stirring” can also have unexpected results as I discuss in chapters 5 and 6.

In this chapter, I draw from two primary sources: documents and interviews. I examine institutional development reports (mostly by the United Nations and the World Bank) on gender, technology and science, some of which are specifically on Latin America. In the reports,

15 From the World Bank’s “Engendering ICT Toolkit: Challenges and Opportunities for Gender-Equitable Development”:
technology and science\textsuperscript{16} are framed as predominantly tools of economic and financial advancement. I have also looked at agendas, plans of action, commitments, agreed conclusions, and resolutions on the topic. I included some relevant reports that, although not specifically on women, technology and science, have important information on gender and technology (i.e. from the UN Conference on Financing for Development, the UN World Summit on the Information Society, the 2016 World Bank Development Report on “Digital Dividends”). I also include some key reports from technology corporations, most notably Intel. Finally, I integrate material from interviews I conducted with various official development actors and administrators at technology companies.

\textbf{Origins \& Trajectories}

Technology and scientific advancement have been traditionally considered markers of progress and development. The Western centric paradigm of scientific production and technology transferal imposed in the global south has also long been criticized in the literature on development (Cueto, Marques, and Medina 2014; Escobar 1995; Schumacher 1973). Mentions of technology and science are scattered across numerous important development documents, yet I am concerned with the explicit connections of technology, science and gender. What is interesting is how women have become ideal technological and scientific subjects in development discourse. By women I mean here a very specific construction of “woman”: the heteronormative, biological definition of women. In these reports, women are occasionally

\textsuperscript{16} In these reports, technology is mostly defined as digital information and communication technologies (ICTs, including hardware, software, internet, mobiles), and sometimes as agricultural, environmental or other types of technologies. Technology and scientific inquiry and production, meaning education and employment in technological and scientific fields, often appear together, and are conflated, in the same reports. Radio and television are sometimes included as part of technology.
differentiated as indigenous, disabled, or rural. The reports mostly target “poor” women.

Sexuality and race are also practically absent. In these reports women are mostly presumed to be a homogeneous group of poor mothers. The importance of women in technological development discourse is evident, for instance, in general technology and science reports (not uniquely focused on gender, science, and technology) such as the most recent World Bank’s flagship “World Development Report” titled “Digital Dividends” (2016) in which women are prominent:

“...women with small children or persons with disabilities have sometimes been unable to engage in work outside the home, but can now engage in telework. Many poor or disadvantaged populations will now receive public services because governments can use digital IDs to verify their eligibility. And skilled workers and small firms in poor countries can trade their services in global markets, where they can earn higher returns. These are all examples where the internet, by overcoming information problems, contributes to greater inclusion.

Digital finance can increase women’s economic participation. In part, this is because digital payments can more easily be concealed by the recipient than cash, at least temporarily, which helps shift economic decision making in favor of women. Access to savings instruments also increases female empowerment and the consumption and productive investment of female entrepreneurs. There is a significantly positive relationship between female labor force participation and female bank account ownership. (96)

Digital technologies also impact women’s voice and agency. Increased access to information can affect gender norms and affect aspirations, often faster than expected. Social media is an additional outlet for women to participate in public discussions and voice their opinions. (134)

These excerpts from the 2016 World Development Report connect digital technologies to financialization through banking, access to the formal labor market, telework—which appeals to connections between mothers and children—autonomy, political participation, and entrepreneurial development. Digital technologies will let women work from home, while they take care of the children, access to financial capital and banking through digital payments, as

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17 In this report, “disabled” people are also prominent.
well as enhance her “voice and agency.” Digital technologies also facilitate the biometrical inclusion of poor women, as well as men, through the digital registration of their vital documents and financial transactions: “Lack of identity is an impediment for poor people to exercise their basic democratic and human rights” (World Bank 2016: 17). Digital technologies, therefore, are linked to forging official and “verifiable” (158) identities, which can be “transformational for those excluded from jobs and services” (28), and in this context “identity should be a public good” (194). The report does mention the dangers of “government surveillance, violation of privacy, and data integrity” (159) as possible consequences of the digitization of identity, yet fails to address the ways in which surveillance, counting and measuring have been a part of development policies and practices all along (Escobar 1995). Surveillance also impacts these communities in different ways along intersections of gender, sexuality, race, ability, citizenship and migration status, among others. Biometrical inclusion might indeed offer opportunities for marginalized communities, but it is also critical to explore the dilemmas embedded in these forms of “inclusion.”

The connection between women and digital technologies is also explicit in the United Nations’ 2015-2030 Sustainable Development Goals (SDGs)—which replaced the 2000-2015 Millennium Development Goals (MDGs)—considered the UN’s institutional agenda and international development plan of action. The 2030 Agenda for Sustainable Development has 17 SDGs and 169 targets. The 17 goals include aiming to end poverty and hunger, reduce inequalities, ensure quality education, promote climate action, improve healthcare, end gender inequality, promote peace, and foster decent work and economic growth, among others. The SDGs do not include a specific goal for information and digital technologies and the internet. Yet it is telling that, although not prominent in any of the 169 targets, they are mentioned under goal
5 of gender equality (also under the goals of education; industry, innovation, and infrastructure; and partnerships for the goals): “Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women” (United Nations General Assembly 2015). Other targets under goal 5 include eliminating discrimination and violence, recognizing domestic and unpaid work, and ensuring universal access to sexual and reproductive health. The MDGs, less ambitious than the post-2015 SDGs, included eight goals such as promoting gender equality and empowering women, reducing child mortality, combat HIV/AIDS, and improving maternal health, and 18 targets. The only mention of information technologies in the MDGs is under target 18: “In co-operation with the private sector, make available the benefits of new technologies, especially information and communications.” (United Nations General Assembly 2000). In other words, the link between women and information technology has been made explicit in the current United Nations agenda towards the 2030.

Beijing
The discursive production on women and technology (mostly defined as digital information and communication technologies, including radio and television), and women and science, has steadily increased since the United Nations Fourth World Conference on Women in 1995 (Beijing). The inclusion of women in media, science, and technology was incorporated in the Beijing Declaration and Platform for Action: “The Fourth World Conference on Women (Beijing, 1995) was the major watershed in realizing the power of information technology as a tool women could use for mobilization, information exchange, and empowerment” (Hafkin and Taggart 2001). Prior to Beijing, the 1985 “Nairobi Forward-Looking Strategies for the
Advancement of Women,” which concluded the United Nations Decade for Women 1976-1985, had mentioned the importance of increasing women in science and technology.

The now famous Section J “Women and the Media” in the 1995 Platform for Action is mostly centered on the relationship between women and media and communications, a topic that is not prominent in subsequent reports. Section J of the 1995 Platform for Action was a product of global women’s organizing around information and media issues, and it still is a node around which activists mobilize as I witnessed at the 59th CSW in New York in 2015. Point 237 of Section J states that:

Women should be empowered by enhancing their skills, knowledge and access to information technology. This will strengthen their ability to combat negative portrayals of women internationally and to challenge instances of abuse of the power of an increasingly important industry. Self-regulatory mechanisms for the media need to be created and strengthened and approaches developed to eliminate gender-biased programming. Most women, especially in developing countries, are not able to access effectively the expanding electronic information highways and therefore cannot establish networks that will provide them with alternative sources of information. (UN Women 2014: 149-150)

This point centers the issue of women and representation in the media and access, a pivotal claim of global women’s activism leading to Beijing. In the early 1990s, feminist activists were concerned with women’s representation in the media—both as producers, writers, directors, etc., as well as their presence in content as sources and experts (Gurumurthy 2004). In my textual analysis of reports that focus on gender and technology post-Beijing, this concern faded. Technology is mostly connected to economic development—entrepreneurship is central—as well as issues of access, use, and political participation. Media representation can also be found under different sections of the Platform for Action, such as “Women and Poverty,” “Education and Training of Women,” “Women and the Economy,” and “Women and the Environment,” among others. Although sometimes separate, both information and communication technologies (meaning digital tools and spaces) and women’s inclusion in science and technology fields (in
education and the labor force) are often conflated. Technology is also sometimes linked to agricultural technologies that are said to improve women’s life conditions. Under the “Education” section, the Platform mentions the “essential” importance of women’s participation in science and technology for national development:

[...] Advanced study in science and technology prepares women to take an active role in the technological and industrial development of their countries, thus necessitating a diverse approach to vocational and technical training. Technology is rapidly changing the world and has also affected the developing countries. It is essential that women not only benefit from technology, but also participate in the process from the design to the application, monitoring and evaluation stages. (UN Women 2014: 45-46)

The need for preparing women as producers and designers of technology continues to be a central claim of feminist technology activists, as evident in my fieldwork and interviews. Activists are well aware that technologies are not “neutral,” and that specific politics and perspectives—often masculine and heteronormative—are embedded in their design, which does not foreclose the possibility for creative appropriation. But the Platform for Action does not address exactly what are the possible benefits for women in becoming designers and producers of technology. The emphasis is on providing and fostering women’s “access” to technological fields and careers. How will this benefit women? How can science and technologies transform women’s lives? In what ways can women transform technologies and science? The Platform for Action is considered a major achievement of feminist transnational activism, and it positioned women and technology on the global map. One of the problems is that making women visible also had unexpected outcomes that dovetailed into rationalities of women as “good investments”: “From Beijing onwards, gender equality and the empowerment of women became increasingly adopted as a goal which made simple economic sense (Chant and Sweetman 2012:518)” Digital technologies also make economic sense; and if its women using them, better yet.
There were also important meetings, commissions, and documents that led to Beijing. In anticipation of Beijing, the United Nations Commission on Science and Technology for Development (UNCSTD) established the Gender Working Group in 1993 (changed to the Gender Advisory Group in 1995), which produced the foundational report *Missing Links: Gender Equity in Science and Technology for Development* (Gender Working Group of the United Nations Commission on Science and Technology for Development 1995). This report includes seven “transformative action areas”: “1) Gender equity in science and technology education; 2) Removing obstacles to women in scientific and technological careers; 3) Making science responsive to the needs of society: the gender dimension; 4) Making the science and technology decision-making process more “gender aware”; 5) Relating better with “local knowledge systems”; 6) Addressing ethical issues in science and technology: the gender dimension; and 7) Improving the collection of gender disaggregated data for policy makers” (Huyer 2006a, 2006b). These seven transformative action areas—another was added in 2006, which will be discussed further in the chapter—have laid the groundwork of much subsequent policy recommendations on women, science and technology. The UNCSTD advocated in favor of these issues at Beijing, and they were later adopted by the Economic and Social Council of the United Nations (ECOSOC). The Gender Advisory Board (GAB) was created as a monitoring, technical assistance and implementation body, with the primary mandate to monitor and assist with the implementation of ECOSOC’s recommendations on gender and science and technology. The GAB has been critical in producing a wealth of information on gender and technology in the developing world.
Post-Beijing

Since Beijing, the importance of women, technology, and science has been both central to specific women’s agencies and bodies (UNIFEM, now UN Women, the Commission on the Status of Women-CSW), and mainstreamed across various United Nations agencies (UNDP, FAO, ITU, UNCTAD) in gender task forces, units, caucuses, commissions, and expert groups. There are also hundreds of reports, working papers, briefings, resolutions, fact sheets, and repositories of information (the UN Gender Watch website). The 47th session of Commission on the Status of Women (CSW) in 2003 was the first time that the Commission was dedicated to information technologies and women. ITU’s Telecommunication Development Sector has a task force on gender issues since 1998, and a permanent Working Group was established in 2002. A gender caucus was also formed for World Summit on the Information Society (WSIS-2003 Geneva and 2005 Tunis), and gender was integrated into their agendas and declarations (see Anita Gurumurthy et. al for excellent critiques on the instrumentalization of gender in WSIS: Asia-Pacific Development Information Programme (APDIP); United Nations Development Program (UNDP) 2006). UNESCO has been including women since their 1996 flagship World Science Report, and has consistently produced material on women and science and technology and women and media.

The United Nations has declared two “international days” to celebrate different areas of women, technology and science, and has created awards to recognize and promote women in technology and science. Since 2011, ITU celebrates the “Girls in ICT Day” (the fourth Thursday of April every year) with the “aim to create a global environment that empowers and encourages girls and young women to consider careers in the growing field of information and

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18 See Appendix C for full list of abbreviations and acronyms.
19 The series was launched in 1993 and publishes every five years: http://www.unesco.org/new/en/natural-sciences/science-technology/prospective-studies/unesco-science-report/unesco-science-reports
communication technologies (ICTs).”

In December of 2015, the United Nations General Assembly declared February 11 the “International Day of Women and Girls in Science.” According to the website: “Science and gender equality are both vital for the achievement of the internationally agreed development goals, including the 2030 Agenda for Sustainable Development.”

Awards include the ITU and UN Women “GEM-TECH Awards,” launched in 2014 to celebrate individual and institutional achievements that “harness ICTs for women’s empowerment” and their “tremendous power to transform the lives of women everywhere.”

Since 1998, L’Oreal in partnership with UNESCO offers awards and fellowships for women scientists.

There was a shift post-Beijing from connecting technologies to media and communication to more economic-oriented issues. Although the World Summit on the Information Society (WSIS), organized in Geneva (2003) and Tunisia (2005), represented potential opportunities for transformative feminist technological politics, activists have been critical of the scarce participation of women from the global south, as well as the ways in which women were instrumentalized as actors in a network society without an analysis of how that society had to change (Asia-Pacific Development Information Programme (APDIP); United Nations Development Program (UNDP) 2006; Gurumurthy 2004). The Geneva 2003 Declaration of Principles is heavily focused on the intersection of digital technologies with economic development (investment, employment, public-private partnerships) and poverty-

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20 According to the Girls in ICT website, since 2011 the “Girls in ICTs Day” has taken place in 160 countries “with the participation of over 200,000 girls and young women.” http://girlsinitc.org/
22 Taken from: http://www.itu.int/en/action/women/gem/Pages/default.aspx
23 Taken from: http://www.fwis.fr/en/home
24 WSIS, organized by the United Nations and the International Telecommunication Union (ITU), was the first major multi-stakeholder platform for ICT issues that brought together actors from the state, civil society and private sector. ITU is the United Nations specialized agency for information and communication technologies.
reduction. ICT’s specific role to help the poor succeed by their own means is specifically stated: “We are resolute to empower the poor, particularly those living in remote, rural and marginalized urban areas, to access information and to use ICTs as a tool to support their efforts to lift themselves out of poverty.”25 The 2005 Tunis Commitment is more expansive in the ways it covers ICTs, social and cultural development.26 Various scholars and experts in development, gender, and technology, such as Sophia Huyer and Nancy Hafkin—who are prominent in scholarship, advocacy, and policy—had argued in the early 2000s that information technologies should also be considered tools for economic empowerment for women, and not only for communication and networking (Hafkin and Taggart 2001; Huyer and Carr 2002). It is in the Beijing +5 Declaration (2000) that information technologies start to make a stronger appearance in the context of economic progress, business and entrepreneurship, and poverty reduction: “The resolutions undertaken in the Beijing +5 summit urged UN agencies to go beyond the task of assisting the use of ICT for networking and media to that of exploring the potential of the technology for economic empowerment of women in poorer countries”(Mitter 2003). Follow-up meetings Beijing+10 and Beijing+20 have restated the importance of both digital technologies as tools of economic empowerment, as well as the inclusion of women in science and technology.

The World Bank—founded in 1944 to provide financial and technical assistance to developing countries—has also produced specific reports and documentation on information technologies and gender. One of their projects is the “Engendering ICT toolkit” that contains checklists, evaluation tools, examples of good practices, and resources that can be used to mainstream gender into ICT development projects. It focuses on education, entrepreneurship, and labor force participation, and states that ICT’s are “a valuable resource for women in

25 Taken from: https://www.itu.int/net/wsis/docs/geneva/official/dop.html
26 Taken from: https://www.itu.int/net/wsis/docs2/tunis/off/7.html
developing countries who often suffer from limited availability of time, social isolation, and lack of access to knowledge and productive resources.” The website explains that the rationale for gender equality in ICT projects is based on a human rights and a good business approach, the “desire to eliminate poverty,” and in accordance with UN Millennium Development Goal 3 of gender equality. The website also states that women and men need ICTs for the same reasons, for more information on their “productive, reproductive, and community roles,” for business, to get work in the ICT industry; to find resources for the family and community, and “to have a voice.” The “business case for gender” is evidently the main objective of the toolkit: “In summary, they [women] need ICTs to compete in a digital world.” The idea is that ICT’s will draw women into the light, extract them from misery and backwardness, and make them competitive. Yet, the project also explicitly includes men in their “productive and reproductive” roles (my emphasis), for instance, which is rarely seen in other reports or projects. As a toolkit—a rational/technical device that is common in development discourse and policy—this World Bank resource is geared towards quantification, measurement, assessment, evaluation, and impact of the implementation gender quality within ICT projects.

In the United States
Development discourse in the United States provides another example of the connections between gender, technology, and financialization. In the United States, women, technology, and development has also been on the table. Hillary Clinton has been one of the most well-known and vocal champions of promoting digital technologies for women’s empowerment and integrating women and girls in science, technology, and engineering careers. In her 2013 keynote

address at the 4th Women in the World Summit, she emphasized the importance of new technologies in helping women and girls around the world while citing violence against women in Pakistan, Afghanistan and Egypt: “there is a powerful new current of grassroots activism stirring, galvanized by events too outrageous to ignore and enabled by new technologies that give women and girls voices like never before” (Clinton 2013). The 2015 report No Ceilings: The Full Participation Report, by the Clinton Foundation and the Bill and Melinda Gates Foundation, is an assessment of women’s rights in the developing world 20 years after the United Nations (UN) Fourth World Conference on Women in Beijing in 1995. The report makes the business case for women’s progress: “We now know that when the status of women and girls is advanced, economies grow and nations prosper (Clinton Foundation and Bill & Melinda Gates Foundation 2015:39). The report centers on the opportunities and challenges for women to “accelerate progress” in three major areas: “unlocking” women’s potential with respect to human rights, health and education; “ensuring security” in regard to violence against women and the gendered effects of environmental devastation; and “creating opportunity” covering political participation and economic empowerment with a special focus on technology and media. Technology is considered an “important pathway to opportunity” (Clinton Foundation and Bill & Melinda Gates Foundation 2015:33) and central “to broaden access to vital services and enhance advocacy efforts” (39). In this context, mobile phones are an “essential tool for work, safety, and independence” for women in the developing world (34).

In January 2013, the U.S. Department of State's Office of Global Women's Issues and UN Women co-hosted the “International Working Forum on Women, Information and Communication Technologies, and Development” at the Institute for International Education
(IIE) in Washington DC. More than 75 “thought leaders” from 20 countries attended the two-day forum: members of governments, the private sector, academia, and development agencies. Representatives from the Grameen Foundation, the World Bank, UN Women, International Telecommunications Union (ITU) and GSMA (a multinational conglomerate of mobile operators) participated in the opening plenary, where Intel launched their “Women in the Web” report. In her opening statement, then US Ambassador-at-Large for Global Women's Issues, Melanne Verveer, stated that “technology is the great equalizer for women.” I want to specifically note some of Verveer’s additional remarks during the opening plenary on the importance of women, technology, and development:

   Women–and I have seen this firsthand–who are entrepreneurs at that lowest level of economic activity, are using this simple technology, even illiterate women, to learn, for example, what the weather’s going to be, which will highly influence their crop work on a given day. Or it will tell them where the market is, so they’re not walking five miles in vain only to find out there was no market. They are using it as a tool for literacy teaching, literacy learning, using it for vital health information. I know there are people here very active in the health field and what ICT represents – the difference between life and death often is that kind of vital information that might not otherwise be available, but for that simple cell phone. It is also a tool to protect women from violence, an alert system.

The connection of digital technologies to agriculture, literacy, health, and protection (from violence, in this case) becomes “vital,” part of life itself, and information can make the difference between “life and death.” Of course, this may well be true, if we believe in the slogan “information is power.” Yet Verveer’s words also appeal to some very intimate fears and issues for which technology becomes as a magical fix. Technology, according to Verveer, is good for producing more food, improving health, making money, and protecting women from violence. Women, particularly, are the ones getting food on the table, in charge of improving their and

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28 Taken from the following US Department of State link in 2016 (the link has since been disabled): https://goo.gl/sn8043. Also see: https://www.iie.org/Learn/Blog/2013-January-WICTAD-Forum, and https://techwomenblog.wordpress.com/2013/01/10/ambassador-verveer-convenes-forum-on-women-in-ict/.
their family’s health, making more money (because they are financially disciplined and hardworking), and they are overwhelmingly the victims of intimate partner violence. But the lack of food, health, money and the presence of violence are all intrinsically connected to systems of inequalities—economic, social, political, historical—that continue to persist and produce the many challenges that these technological women encounter and are supposed to overcome.

Digital technologies are thus disconnected from context and history. The major problems are framed as women’s isolation and lack of mobility, their lack of time, language barriers, poor infrastructure, high costs, and lack of education. The solutions are stronger policies, more corporate involvement, and more training and capacity building.

Verveer also notes that ICTs offer opportunities for economic growth that are “mindboggling,” and recalls how microcredit has turned out to be “transformative” and good for the family:

Imagine if through this technology the poor of the world, who are still mostly unbanked, become banked, and you can safely, if you’re poor, make financial transactions to keep your savings safe, move money from an urban job to the village where your family is, wherever it is, the prospect of this money now being available in ways that can have an extraordinary impact. I don't think we’ve even scratched the surface of the possibilities. And that’s just mobile technology.29

The “poor of the world”—who are mostly women—can become “banked,” and technology is a primary motor of this process of financialization. This illustrates a dimension of the making of the *third world technological woman*: the association of digital technologies with access to financial capital.

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29 [http://www.state.gov/s/gwi/rls/rem/202722.htm](http://www.state.gov/s/gwi/rls/rem/202722.htm)
The Incorporation of Marginal Knowledges

Marginal knowledges—knowledges produced by historically marginalized societies, or what Foucault called “subjugated knowledges” (Foucault et al. 2003)\(^{30}\) have also become sites for profit in development policy (Shiva et al. 1997). The conflation of life and technology relies on women’s, “local” and “indigenous” knowledges, and women’s creativity and intuition to improve life, reduce poverty, and improve economies: “Engendering information and communication technology involves identifying and eliminating gender disparities in access to and use of such technology. It also involves adapting technology to women’s needs by taking advantage of their special knowledge and strong informal networks and support systems” (The World Bank 2004). In many of these reports, there are mentions of the importance of preserving and incorporating women’s traditional and indigenous knowledges in the route towards technological development, including the important WSIS 2003 Geneva Declaration of Principles and the 2005 Tunis Commitment. In other words, women’s wisdom and ancestral knowledges have also become part of the development technology discourse.

Knowledge and the production of knowledge—who produces knowledge, how is it produced, and with what objectives—have for long been at the center of feminist inquiry (Harding 2003). The legitimization of women’s knowledges—along with other “local” and “indigenous” knowledges—has been a central claim of feminist activists and scholars. Postcolonial science and technology studies (Anderson 2009; Harding 2008, 2009), including recent work by Latin American science and technology scholars (Cueto

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\(^{30}\) Foucault defines the second meaning of “subjugated knowledges”: “when I say 'subjugated knowledges' I am also referring to a whole series of knowledges that have been disqualified as...insufficiently elaborated knowledges: naive knowledges, hierarchically inferior knowledges, knowledges that are below the required level of erudition or scientificity” (Foucault et al. 2003:7).
et al. 2014), critically addresses inequalities in the production of scientific knowledge from the “West to the rest,” and centralizes the local while acknowledging the transnational flow of knowledge. The value of indigenous knowledges is a central theme in the 1995 foundational United Nations report *Missing Links* and one of the seven transformative action areas recommended. This report makes links between technology, social and gender justice, and structural transformation explicit. While the authors advocate for the incorporation of women and of indigenous knowledges in science and technology, many also interrogate development colonial histories and technology frameworks, industries, and institutions. In one of the chapters, feminist philosopher of science, Sandra Harding, for instance, questions the “add and stir” strategy in science and technology. Prolific scholar and expert on gender and technology, Swasti Miller, states that she although she recognizes the devastating ecological, economic, and social effects of technologies on the developing world, she is “against an uncritical rejection of knowledge systems that could, with vision and tenacity, be made compatible with the values and needs of different interest groups in human societies” (220). This critical examination of the challenges and opportunities of technologies for women and other communities has been mostly lost in subsequent reports. In another chapter, titled “Claiming and Using Indigenous Knowledge,” feminist and postcolonial science and technology scholars Helen Appleton, María E. Fernández, and Consuelo Quiroz are critical of the ways in which modern/Western science has devalued local knowledges:

The view that modern science is capable of providing the solution to “underdevelopment” is also responsible for the depreciative view of indigenous and local knowledge systems. Furthermore, the focus on objectivity, rigor, control, and testing has helped to develop the perception that S&T are value-free, and that they operate outside of the societies in which they are based. Unfortunately, given the tremendous influence of S&T, this attitude has undermined the capacity of local knowledge systems to innovate and has lowered the
The general framework advanced by UNESCO—the UN agency with the mandate of furthering science—in their *Declaration of Science and the Use of Scientific Knowledge: Science Agenda, Framework for Action* (UNESCO 2000) states that the knowledges of “traditional societies…relating to such diverse domains as astronomy, meteorology, geology, ecology, botany, agriculture, physiology, psychology and health… represent an enormous wealth” and that “special action must be taken to conserve and cultivate this fragile and diverse world heritage in the face of globalization and the growing dominance of a single view of the natural world as espoused by science.” In the most recent flagship *UNESCO Science Report* (2015), under “Perspectives and Emerging Issues” there is a section titled “Local and Indigenous Knowledge at the Science-Policy Interface.” The author—the head of UNESCO’s Local and Indigenous Knowledge Systems Programme—states that “the emergence of local and indigenous knowledge at the global science–policy interface suggests that a long period of separation between science and local and indigenous knowledge systems is coming to an end” (UNESCO 2015:16). The author clarifies that “recognition” of local knowledges has shifted to “how” these knowledges will be used—in conjunction with these communities—to avert climate and natural disasters, for example. He recognizes that what is “new” about “local and indigenous knowledge” is its “growing recognition by scientists and policy-makers around the world, on all scales and in a rapidly growing number of domains” (UNESCO 2015: 15), and specifies women’s particular knowledge on reproductive health.

It is certainly an achievement that women’s and other marginal knowledges—generally defined as traditional medicinal, environmental, and nutritional knowledges—are incorporated, respected, and protected in development. I argue, though, that the inclusion of those “marginal
knowledges” could also lead to another form of appropriation. The incorporation of these once illegible knowledges outside of “Western” scientific paradigms is a form of appropriation that could have the effect of decimating these knowledges through financialization already analyzed in Vandana Shiva’s work (Mies and Shiva 2014; Shiva 1988). The “business case for gender” in many of these reports, which has been criticized by gender and development scholars, combines with a “business case for indigenous knowledges.” How will indigenous knowledges be measured, assessed and considered “successful”? These requirements are part of the rational/positivist scientific paradigm that guides development policy and rationale (Harding 1998, 2008). These marginal knowledges would have to go through processes of refinement, measurement, and categorization to be able to fit into mainstream developmental logics. In this context, and under logics of profit, marginal knowledges serve state, corporate, and international development institutions interests. The cooptation of what had been illegible also intervenes in the intimate relationships these communities—mostly women, poor, indigenous—have with knowledge. In addition, centering women as the ultimate holders and transmitters of indigenous/local knowledges seems an appropriation of some ecofeminist perspectives on women/nature yet emptied from its critiques of patriarchy, development, capitalism, and colonialism31.

Marginal knowledges as commodities

The 2007 UNESCO Science, Technology, and Gender: An International Report reinforces many of the traditional developmental discourses on women in the global south. The emphasis is on socioeconomic development (food, water, energy), and the importance for women to partake in the knowledge economy as agents of the market in order to improve their

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31 Feminist scholars have been engaging for decades in debates on ecofeminism and formulated critiques of its essentialist underpinnings (see for example Molyneux and Steinberg 1995).
lives and the wellbeing of their families, communities, and countries. The report is focused on the positive effects that introducing women in the global south into Science, Technology, Engineering and Mathematics (STEM) as users, producers, and consumers to cure the maladies of the developing world. Microfinance is hailed as a key strategy for socioeconomic empowerment, as is the importance of using “women’s” and “local knowledges” as tools for economic development. “Private” or “informal” domains such as women’s healing knowledges become potential market products. What were once viewed as threats to the western project of development, now are potential market products that can “increase productivity levels and improve monitoring and managing of our ecosystems in these areas, thereby adding value to their economic activities” (UNESCO 2007:21–22).

In a great number of communities around the world, women play a vital role in the incubation and transfer of critical local knowledge on which survival strategies are based… Not only can modern science validate this local or traditional knowledge and the skills arising from women’s roles – food production, energy provision, traditional healing practices and the management of natural resources – but technology has considerable potential to reduce the labour of such work and increase the marketable skills and productivity of women working. (UNESCO 2007:21–22)

Women’s and local and indigenous knowledges have thus become another site of intervention that should be “validated” by modern science. It seems that nothing escapes development discourse. In some reports, the very definition of science and technology has changed to accommodate these knowledges: “It is also important to recognize that the definition of science can include indigenous science and traditional knowledge systems. The concept of technology is, likewise, socially and culturally diverse, referring to hand-made tools as well as complex products and processes, for instance information technology (IT) systems. This report uses these definitions” (DAW, UNESCO 2010:7). Women are the “primary holders” of these knowledges, they have the “know-how” of the land, and their “knowledge often underpins family survival strategies in periods of stress” (Huyer and Westholm 2007:24). Marginal
knowledges become “resources” and “pools” that must be “tapped” into, and “local” development strategies that integrate the communities input and respond to their needs are prioritized:

It suggested that ICT policies could be designed with the concerns of women and marginalized people in mind, and that “if national ICT policy-makers were to gear deliberations towards what people in these areas need each morning when they rise, cook, want medical attention, seek crop prices, need weather forecasts, and seek education and jobs for their children, their ICT strategies would be more balanced” and therefore more successful in promoting national development goals. (Huyer and Mitter 2003: 3-4)

Technology to the rescue!
Technologies are also framed as the ultimate saviors of marginal knowledges and women, and ideal tools for socioeconomic productivity. They “can validate, protect and improve local knowledge, innovations and skills in food production, and in energy, water, nutrition, transport and natural resource management,” alleviate “women’s workload,” and “increase the value of women’s productive activities by improving quality and efficiency, thereby increasing income and improving their health and quality of life” (UNCTAD 2011). Information and communication technologies can “help” women “in many aspects of their lives, by supporting economic empowerment, livelihoods, and access to education,” they can a “become socially and politically active,” and “ICTs can also improve governance and access to government services, disseminate traditional knowledge, and improve and update traditional products and skills” (DAW, UNESCO 2010). This discourse obscures the economic and political conjunctures that produced these inequalities, the historical trajectories of colonialism, capitalism, and neoliberalism, and thus elides a more profound analysis of structural gender inequality. In many of these reports there is a conflation of life, technology, and entrepreneurship; technology is about being human, and being human is about being productive. The following quote is telling in
the way it connects digital technologies with entrepreneurship, identity, agriculture, education and environmental management:

ICT enable the production of different experiences of being human, and consequently new and different knowledge about ourselves and the nature of gender. They expand the possibilities of human identity from generating employment to providing opportunities for investment to entrepreneurs, in particular small and medium-sized enterprises; from improved agricultural and manufacturing productivity to the empowerment of all sections of society; from long-distance education to telemedicine, from environmental management and monitoring to prevention and management of disasters. (DAW, ITU, UN ICT Task Force Secretariat 2002:17–18) (my emphasis)

Digital technologies are ideal because they can be connected to numerous areas of life and work, from identity-making and helping understand the “nature of gender” to poverty reduction and sustainable development.

The Caring/Economic Woman

The third world technological woman embodies life and technology: she is the ultimate technological actor. The rational economic woman is also the emotional, intuitive, and creative woman. Women as bearers of life, women as bearers of technology, of life and technology. Technology—particularly information and communication technologies, and the fields of technological and scientific production and inquiry—is framed in many of these reports as essential to caring for others: of women caring for others, their families, and even their countries. This is not a frame of arid economic empowerment; it is full of emotion. The image of the woman entrepreneur is that of a modern warrior, connected to digital technologies, both as a consumer and a producer. This is the spectacular “third world” woman, the woman from the future, who is also anchored in the present. The technological future is not an empty category (Rosenberg and Harding 2009), it is a gendered category, and the message is that women who have been at the margins can overcome barriers through technology, which is framed as an intimate necessity. This is part of how development policy has mutated over the past decades
from aggressive market fundamentalism, into what has been called the age of partnerships, and a “warm and fuzzy” tone and language that is “pro-poor,” “multicultural,” focused on “participation,” “empowerment,” “co-responsibility,” and “social capital” (Alvarez 2014; Bedford 2009; Cornwall and Brock 2005; Molyneux 2006; Roy 2010). But although this been studied, there are still issues cloaked by emancipatory language that beg to be taken apart and scrutinized. In the following subsections, I provide empirical examples of the affective discursive framings of the technological subject.

*Production/Reproduction*

The 2003 UNESCO report *Gender Issues in the Information Society* states that “women, because of their biological and social roles, are generally more rooted than men in their communities. Hence women are often more aware than men of the social, economic and environmental needs of their own communities” (Primo 2003:37). The United Nations Broadband Commission report—focused on internet access in the developing world—argues that “women are often committed agents of family and community welfare. Studies show that women invest a large proportion of their income back in their families and communities, which can help reduce poverty, and improve health and education… Expanding women’s access to ICT can enhance the reach of policy-makers to a far broader population base, as women are more likely to take time to inform others and reflect such knowledge in family and community planning” (United Nations Broadband Commission 2013). This report continues to say that “female entrepreneurship has been a key focus for some institutions in particular, on the basis that women invest significantly in their families and communities, so encouraging female entrepreneurship can help raise communities’ standard of living” (34). Women care about their families and are committed to their communities.
Women in many parts of the world are generally the primary caretakers in their families and communities; this is not new or disputed. But in these reports technology is mostly framed as assisting women in their caretaking responsibilities, not as transforming the contexts in which women are overly burdened with caring for others: “Women spend a large amount of time performing labour-intensive tasks. Technology can support them in their multiple roles in production, community management, domestic and care responsibilities, such as the provision of care to children, the sick and the elderly” (DAW, UNESCO 2010:18). Actually, technology, and its many benefits including information, will support women in their “triple roles” of production, reproduction, and as community organizers:

Increased access by women to the information and knowledge resources which are important to development will by extension benefit their families and communities. The triple role of women, consisting of productive (SMEs, food production and trading), reproductive (child care, subsistence agriculture, health care and education) and community (community infrastructure, water and sanitation and natural resource management) responsibilities put them at the center of national development. (Huyer and Mitter 2003)

Technology will make women’s work and family life easier: “Technology inherently makes possible flexibility in time and place that offers great possibilities for women in view of their multiple role (DAW, ITU, UN ICT Task Force Secretariat 2002:28). And the World Bank lays out a clear plan for women and technology: “Women can use such technology to: obtain information that enhances their productive, reproductive, and community roles; run businesses and work in the information technology industry; secure resources for themselves, their families, their careers, and their communities; have a voice in their lives, communities, and governments; gain the skills required for equal participation in the knowledge economy” (The World Bank 2004:1). There is a typology of sorts: women will have access to technology—as users,
consumers, developers, producers, scientists—and will save themselves, their families, communities, and countries. This is the making of the technological woman in all her glory.

The multiplier effect

The “multiplier effect” was also mentioned numerous times in an email interview I conducted with two women who work at Intel. Intel plays an important role in the gender and technology conversation, with a series of reports including the 2013 *Women and the Web: Bridging the Internet Gap and Creating New Global Opportunities in Low and Middle-income Countries*—cited across United Nations reports and by activists alike. Their “Girls and Women’s Initiative” focuses on empowering “millions of girls and women around the world by closing the gender gap in education access; inspiring more girls and women to become creators of technology; connecting them to opportunity through technology access.” This initiative includes programs to give women and girls access to the internet, to support girls and women in STEM so they can build the “technology of the future,” and a partnership with the *Girls Rising* film to increase funds for education for women and girls. The interviewees expressed:

> Women interact with technology for different reasons and in different ways. With greater use of technology, women conquer the power to transform their life, their family, their community and the environment around them. Girls and women are called masters of the multiplier effect. When they are mothers, their children are more likely to complete their studies and have a better quality of life and health, as they will be incentive and inspire knowledge and good daily practices. (Personal communication)

The interviewees—who answered my questions as a team, not individually—mentioned a couple of stories of women’s experiences with technology through their program “Intel Learn.” For example, the story of the Peruvian entrepreneur Dany Valles Cárdenas, who “before the program, did not know how to turn on a PC” and “now uses the Internet to look for better options for her business,” or the story of the Colombian Ana Bridges, who worked 10 years at “the

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center of waste collection in Cali and could not appropriately manage the money received from
the sale of recycled materials.” They explained that when the center closed, Ana had no income,
and she learned how to write, read, add and subtract after taking a computer course that applied
the “Intel Learn\textsuperscript{33} methodology.” She also learned Excel, and to systematize the reports of an
organization which she now directs: “By using technology, she has achieved greater economic
stability and has changed not only her life but also her family and many women who worked and
work with her.”

Humanity itself relies on the merging of life and technology through this caring, loving,
selfless, subject:

Women, the traditional educators and transmitters of cultural values, must be in the
vanguard of the integration of science and culture, of science education, of research and
development policy making, and in the creation of a vision for the twenty-first century in
which human needs will form the focus for scientific and technological development
endeavors. (UNESCO 1999)

From Consumption to Production
There has been a shift from an emphasis on access, to production, design, and
development of technologies (Gurumurthy 2004).\textsuperscript{34} I believe that this shift has also entailed a
change from an instrumental view of technology to a social perspective of technology.
Technology is still instrumentalized as a tool for economic development, but understandings of
technology have seeped into other aspects of life and sociality. This shift has occurred across the
board, from the grassroots level to development circles. This does not mean that access has
ceased to be important, but rather that making women producers of technology—through

\textsuperscript{33} According to the Intel website, Intel Learn’s “digital literacy program provides simple, practical, and relevant
instruction in basic technology skills that enhance an individual’s opportunities for social engagement and economic
self-sufficiency.” Intel also has an Intel Learn program for children and youth in developing countries.

\textsuperscript{34} It is in this context that technology is conflated most with science, because the objective is to enter scientific fields
to become designers and producers of technology.
scientific and technological education and careers—has acquired prominence in development discourse and on the ground alike. There are thus two levels of appropriation happening here: one depoliticizes and the other re-politicizes. One, is the appropriation of concepts and ideas with roots in activism—and I have argued that the expansive uses of technology extends appropriation into intimate realms of life. On the other hand, activists interviewed for this study frequently used the term *appropriation* to describe the process of gaining “ownership” of technology, to use and produce technology for the benefit of individuals and communities. Activists from APC, Sulá Batsú and Colnodo mentioned this in interviews, and this use is also in the development reports I analyzed\(^35\). In 2006, the Gender Advisory Group of the United Nations Commission on Science and Technology for Development (UNCSTD) added an eighth transformative action area to the seven they had identified in 1995: The “Equal opportunity for entry and advancement into larger-scale science, technology, engineering, and mathematics (STEM) and innovation systems,” which

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\ldots\text{recognizes that encouraging women to undertake design and control of development, production, marketing, and distribution will create jobs, generate wealth and contribute to national economic growth. Steps should be taken to encourage women’s participation in innovation systems through their own enterprises as well as through their active engagement in innovative industries (including information and communications technologies (ICTs) and advanced networks) at senior levels. (UNCTAD 2011:17)}
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**STEM and development**  
The emphasis on supporting women in technological and scientific careers is similar in some ways to the women and STEM movement in the United States and Europe—which has gained prominence in mainstream media, with some notable cases such as Ellen Pao’s gender discrimination lawsuit against the Silicon Valley venture Kleiner Perkins Caufield & Byers.\(^36\)

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\(^35\) In development studies, this meanings of technological appropriation dates back to Schumacher’s (1973) work on the importance of communities in the developing world to create their own “appropriate” technologies.


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Some overlapping themes are the importance of eradicating stereotypes of women and girls in science and technology, making education “gender sensitive,” integrating women as role models, adopting measures to retain women and avoid the “leaky pipeline” from education to higher education and employment, and integrating women in decision-making positions across educational, public, and private spheres. Yet, in the developing world the usual targets are “poor and low income” women living in “isolation,” K12 education is prioritized over higher education, training and capacity building are also highlighted, and language barriers and the lack of adequate infrastructure are noted problems (UNESCO, UN Women, ITU, Microsoft 2014), with some exceptions. The “woman as producer” discourse in the developing world is connected to including women’s knowledges in the production of technologies and the fields of science (mostly as entrepreneurs, designers, developers, and employees in high tech corporations) and taking advantage of women’s nurturing, selfless, and hardworking qualities as ideal economic actors.

The Girls in STEM and ICT Careers: The Path toward Gender Equality (2014) report, by UNESCO, UN Women, ITU, and Microsoft, says that “as the world changes, and as science and technology and media continue to converge, women are increasingly viewed as the potential linchpin in a global economy built upon ICTs” (UNESCO, UN Women, ITU, Microsoft 2014:3). Women are the potential linchpin in this new global economy driven by technology and science, which are also framed as motors of social and political change through “realizing knowledge societies based on freedom of expression, respect for cultural diversity and access to information. Women and girls in STEM and ICT careers will be empowered to drive change in scientific, social, economic and political sphere (10).” This reports states that “women’s access is much

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37 Based on preliminary findings of research conducted by Kathrin Zippel and Myra Marx Ferree.
more complicated,” measured by whether women understand the power of ICTs and know how
to use them “not just for meeting basic needs, but also as a tool for improving their quality of
life, participation in all aspects of society, or giving them access to quality education, formal or
non-formal, technical or vocational” (3):

Moreover, it is also about women’s ability to actively participate in the production and
direction of ICTs (e.g. content, applications, devices, etc.). So, while to a degree the
above factors may be met through increased digital and information literacy initiatives,
women’s increased and active participation as producers of ICTs is also a critical
component. Access and relevance of ICTs also depends on priorities and investments
within government and the private sector, and this is where women are notably absent.
We get women into these positions through proper development of ICT skills, including
via improved approaches to STEM. (UNESCO, UN Women, ITU, Microsoft 2014:3)

The “basic needs” approach thus expands into other ambits that need attention, including
achieving a better “quality of life.” Life is ever-present in these economic discourses. This
expansion into other realms of life and work is ideally facilitated both by digital technologies
(and the dexterous and skilled use of these technologies) and, in this case, by improving the
insertion of women into STEM. Women must also become producers and decision-makers. This
goal, of course, is not a bad thing; it is precisely what many activists and feminist scholars of
science and technology have been advocating for. Nevertheless, these approaches of inclusion
are fundamentally driven by an impulse that is market-oriented. Poverty, exclusion, inequality—
including gender inequality—will be eradicated through these technological, market-based
approaches. Therefore, although it seems like “third world” women are being considered as
much more complex human beings—beyond subjects with basic needs—the economic,
marketized objective remains intact. This time what has changed is the approach, through
various and increasing interventions.
The marginal and the local, again

The shift from “consumption to production” and from “access to skills” stresses the importance of integrating the “local information needs” (Primo 2003:44) of women. Women will produce content—or designs, programs, courses, tech policies, etc.—that is more relevant for women’s and other marginalized people’s needs. The 2003 UNESCO report *Gender Issues in the Information Society*, by Natasha Primo, states:

> There should [...] be greater attention paid to recognizing women and the poor as information producers, and providing relevant training in collecting, packaging and disseminating local knowledge, based on an understanding of local information needs, and that of women specifically. Such information may well be more useful for local communities in meeting their everyday challenges than “foreign” information available on the Internet. (Primo 2003:44)

The focus on producing content that is more relevant for marginalized groups—locally produced and with women as the ideal producers—could also potentially provincialize information. Why can’t content that is locally produced also be global? Why can’t these women and their “knowledges” be both local and global? While the women and STEM discourse in the USA and Europe addresses a more sophisticated technological woman—one who is capable of achieving doctoral degrees, of becoming successful scholars and researchers, and high-level corporate employees and leaders—women in the developing world are viewed as simpler subjects, and as victims or heroes, or both. There are contradictions, though. These women may lead simple lives, yes, but they are also needed as refined economic actors. The discourse therefore accommodates and constructs various tropes simultaneously: the hero and the victim, the pragmatic and the creative. A 2009 World Bank report addresses both the developed and developing world under the section “Development and Design”—listed as one of the areas in which women in poor countries face constraints —yet how women in the developing world are framed is quite telling:
There is a growing commercial market, yet significantly underserved in the developing world, to be supplied by women entrepreneurs and employees who can both capture women’s knowledge for the marketplace and develop knowledge and resources to serve women, their families and communities in ways in which the male dominated field has not yet considered. This content by women for women will provide an excellent economic opportunity through the development of niche markets currently underserved. Concurrently, women can help fill the large demand for skilled labor demanded for growth by major multinationals, as well as national and local workforce needs. (Melhem and Tandon 2009:7)

“Third world” women should become designers and producers to “supply” their labor and knowledge to growing national and corporate needs. It is clear in this excerpt the way in which women’s knowledge and labor become what feminist political theorist Wendy Brown (2015) describes as “little capitals” (36). Yet, at the same time, this woman must be educated, knowledgeable, and sophisticated.

The 2011 UNCTAD report Applying a Gender Lens to Science, Technology, and Innovation states that women’s technological innovations—in agriculture, water, and energy—are becoming more recognized, and that their innovations take “new approaches and management styles” that “contribute to greater resilience at the community level” (UNCTAD 2011:17). The report states: “Solutions are developed from women’s knowledge, experience and understanding of the locality, soil and planting conditions, environmental and climate patterns, and animal behaviour. When refined and replicated, they can resolve a range of problems sustainably and affordably, while also serving as a means of increasing income generation” (17, my emphasis). Raw forms of knowledge, design, and development, can be refined to serve individually driven solutions to inequality. The 2013 UN Broadband Commission Report—focused on the internet—argues that the production of relevant “female content” is an urgent matter that can deeply influence gender politics:

Women may be choosing not to go online, or be prevented from going online, because there is a perceived lack of relevant content or a belief that women and girls cannot disseminate content they generate and are willing to share. The availability of content online reflects – and shapes – social and cultural issues, including girls’ aspirations and
future career choices, male and female expectations of gender role models, leadership traits, cyber-bullying and online sexual violence. (United Nations Broadband Commission 2013:7).

Not surprisingly, this report also states that producing relevant internet content for women—by women themselves or by corporate actors, entrepreneurs, etc.—is fundamental for triggering demand. In other words, produce relevant content and women will consume. Targeting women as ideal consumers has a long history, and numerous fields and disciplines have studied this phenomenon (sociology, anthropology, business). But I have found that in development discourse on technology, women have seemingly “stepped-up” from being targeted as consumers to being shaped as producers. This is what feminist activists have been advocating for during years. But as feminists we must question the interventions facilitated by this transformation in discourse (and potentially, in policy). Women will become producers of technology for what purposes? Women are to become producers for very particular socioeconomic agendas, evident in these reports. They will not only consume to move economies, but also produce to move markets. The best of both worlds. This is yet another level of appropriation, of folding into, and vacating feminist struggles from their political transformative principles.

Creativity and intuition

Women’s “creativity” and “intuition” are particularly useful. The ITU 2012 report A Bright Future in ICTs Opportunities for a New Generation of Women mentions the grand possibilities of the “hybridity” that technology enables: the combination of technologies with “every imaginable field” (iii). The tone of this report is of excitement about integrating women in the technological industry, and it is one of only a few reports that focuses on women in the developing world as capable of being high-level professionals. There is a continuum between the use of women’s “talents”—from the nimble fingers of the maquiladoras (Bank Muñoz 2008;
Plankey-Videla 2012; Salzinger 2003), to the creative, intuitive, minds of the knowledge economy (as entrepreneurs, developers, designers, creators, leaders). The report explains:

The expectation is that young women will show more interest in opportunities that use their creativity and intuition, in for example software application design. Their future is particularly promising in bioengineering, power grid informatics, digital media, and social and mobile applications; these are interesting, fun and creative jobs that combine ICT with business of every imaginable field. ICT employment opportunities for women in the post 2008 global economic era include high-speed internet, cloud computing, green ICT goods and services and their “smart” applications as these are presently heavily promoted by governments as a strategic response to the economic crisis. (ITU 2012: vii–viii)

The intertwining of technologies, science, entrepreneurship and production, and life is evident in an interview I conducted with an ITU official, who mentioned that women need to be “fed” into the “pipeline,” and added that:

[…] digital literacy for example is increasingly a prerequisite for employment and for entrepreneurship opportunities, meaning that girls and women who are not comfortable with ICTs or who don't know how to use ICTs will miss out on employment and entrepreneurship opportunities, not only in the ICT sector itself, but increasingly in practically every kind of job or every kind of sector. And in addition, because ICTs are shaping our societies, we want to make sure that women and girls become creators of ICTs and not simply consumers. We want women and girls to have access to ICTs, we want them to be digitally literate, but we also want them to be creators, developing the technologies that are so profoundly impacting all of our lives.

The View in Latin America

In Latin America, as in other regions and countries around the world, the UN Conference on Women in Beijing in 1995 is also considered a watershed moment in the women and technology (information and communication technologies) movement. That said, Latin America has a long and robust history of alternative, local, independent, community-based media—mostly radio, guerilla TV, print—produced by marginalized communities, including women, afro descendants, and indigenous peoples (Downing et al. 2003; Riaño Alcalá 1994; Rodríguez 2001). The Zapatista rebellion in 1994 is also widely considered the prime example of the use of
digital technologies for social justice (Cleaver 1998). The Beijing’s Platform for Action—and the intense women’s online networking previous to the conference in Beijing—represents nonetheless an important moment for awareness, advocacy and grassroots mobilization around women and digital information technologies (Burch 1999).

There have been a series of important regional meetings and declarations on gender, technology, and science. The first time the Regional Conference on Women in Latin America and the Caribbean—convened by ECLAC every three years or so since 1977—addressed information technologies was in 2004 in the *Mexico City Consensus*, which calls to “Promote all women’s access to information and communication technologies as a means of eradicating poverty and fostering development” (Camacho 2013; ECLAC 2004, 2014). The 2010 *Brasilia Consensus* tackled the issue under agreement 5 titled “Facilitate women’s access to new technologies and promote egalitarian, democratic and non-discriminatory practices by the media, which includes mentions of the importance of technologies for networking, advocacy, and for “economic activities,” as well as the call “To promote women’s access to science, technology and innovation, encouraging the interest of girls and young women in scientific and technological fields” (ECLAC 2010). A critical moment was in 2013 when the 12th Regional Conference on Women in Latin America and the Caribbean in Santo Domingo, Dominican Republic, focused on “gender equality, women’s empowerment and information and communications technologies.”

The region has been officially involved in supporting policies on technology and development since at least the year 2000. The international process of the World Summit on the Information Society—held in two phases in Geneva 2003 and Tunis 2005— and the 2000 UN MDGs led to the creation of the regional Plan of Action for the Information and Knowledge
Society in Latin America and the Caribbean (eLAC) that has already produced four important action plans (eLAC 2007, eLAC 2010, eLAC 2015, and eLAC 2018). Women activists and official delegates have been lobbying in favor of the inclusion of gender as a transversal axis (mainstreaming) in the plans of action since 2005. But it is in 2008 when the Working Group on Gender and ICT was created within eLAC with “the main objective of contributing to strengthening and enhancing a gender perspective in the programs, projects, and existing ICT networks in the Latin America and Caribbean region” (Camacho 2013:5). To date, gender still has not been mainstreamed in the eLAC plans of action, and there is still a long way to go for implementing a gender perspective in national policies throughout the region. In a report for ECLAC, Camacho (2013) found that all 10 countries under study—Peru, Mexico, Chile, Costa Rica, Ecuador, Paraguay, Argentina, Uruguay, Brazil, Colombia—plus the English-speaking Caribbean, mention gender equality, but only Mexico and Ecuador have specific policies that incorporate gender.

Similarities and differences

The regional reports have similarities and differences with the global reports on gender and technology. Entrepreneurship is also prominent, as well as the focus on supporting women as producers, and skills over access. The incorporation of women’s, local, and indigenous knowledges is not as pervasive than in the global reports (the UNESCO 1998 report produced by Latin American experts after UNESCO’s regional forum on science does emphasize protecting women's and other marginalized knowledges).

Gloria Bonder is one of the most prominent scholars and advocates of gender and technology in the region. She is the director of the Cátedra Regional UNESCO in Buenos Aires, Argentina—one of the epicenters of knowledge production on gender and information and communication technologies in Latin America. She has authored numerous reports, papers, briefs, on gender and technology. As a feminist scholar herself, she integrates theory in her reports, and is also highly critical and political. Bonder’s writings reproduce some of the more mainstream development notions on gender, technology, and science, but she also offers different political perspectives. In the ECLAC 2002 report *New Information Technologies and Women: Important Reflections*—focused on the internet and more of a literature review of science and technology studies—Bonder is critical of excessive optimism about the internet’s liberatory potential and the fetishization of the computer. Bonder makes the usual recommendations on increasing access and training for women, data collection and research, promoting women to decision-making positions and supporting them as producers, and incorporating gender in technology policies. Yet she ends the report stressing the importance of technology for play and pleasure outside of modes of productivity. This is an unusual, and quite radical, political point in development discourse:

Finally, I think that even in adverse situations like in Latin America, it is possible and desirable to recreate the creative and playful capacity of women in their relationship with the Internet.

We need to create other narratives and metaphors, think about that bond outside the logic of productivity or citizenship, or at least not only in those terms. This is about giving women the opportunity to articulate their own imaginary and play to invent and reinvent themselves. (Bonder 2002b:50) (my translation)

Again, in the paper she presented at the 58th CSW in March 2014 at the panel “Access and participation of women and girls in education, training, science and technology”—focused on
women, girls, and “STEM”—Bonder calls for a transformation of technological and scientific education to stress the role of courage, curiosity, and imagination:

[...] Critical and reflexive thinking about knowledge and instituted values, the ability to identify new problems and dare to solve them, record the subjective involvement in learning, value vital experiences, sensitivity to injustice and discrimination, the courage to leave comfort zones, curiosity, imagination, and also a sense of personal responsibility and respect for the role of science and technology in today’s and future world. (Bonder 2014) (my translation)

In her 2002 report From Access to Appropriation: Women and ICT Policies in Latin America and the Caribbean—prepared for the United Nations—she is critical of the economic devastation that development policies have caused in the region. She is intent on contextualizing the so-called technological revolution:

Another important consideration regarding the possibilities of Latin American countries to be integrated in the Information Society is to remember that this “global” tendency has taken place along with one of the most critical historical stages in the economic and social scenarios since the 70s. The scandalous growth of poverty and of the levels of social inequity, together with the weakness of the national states and the lack of public investment in strategic sectors for human development, such as education or health; together with other alarming signs such as the lack of transparency of the state administration of budgets for social programs and purchase of technological infrastructure, the concentration of multimedia in the hands of transnational corporations, and the absence of regulations regarding the rates of telecommunication services, do not allow us to be very optimistic, at least in the short term. (Bonder 2002a:4) (my translation)

And in the 2011 UNESCO report Why Is it so Important that Women Fully Participate in the Information/Knowledge Society, Bonder goes through the “usual suspects” of gender and technology in the developing world, such as the high costs of infrastructure, the importance of considering use and content over access, and the central role of mobile phones. But she also links the low number of women in technological-related degrees and professions to content that is violent and exploitative of women. The nexus of technology and violence against women is mentioned in some of the global reports under study, but the global south has certainly been a
pioneer in this area especially through the work of APC (violence online will be analyzed in Chapter 6). The author mentions e-government, e-health, telework, e-learning, increasing small and medium enterprise, and also cyberactivism and cultural production as benefits of the network society. Interestingly, Bonder calls for policies that follow the networked internet logic, instead of being piece-meal initiatives (Bonder 2011:30). This idea of collective-based initiatives is another interesting aspect of her work.

In my interview with Bonder, she stressed that women in science and technology should not reproduce the status quo, but aim to transform power relations and gender politics:

“It’s not that I disagree that women should be in decision-making positions, what I wonder is what are they there for? To adapt to the world or to change it?” And she adds:

We live in a capitalist world. Capitalism is a stage of enormous expansion and of enormous brutality. By the way, technology is part of that economic order and therefore reproduces a particular order. Then we have to analyze technologies, why these and not others? Make a critical analysis, a deconstruction, understand the values, the messages that they emit... the power relations embedded in technologies. (my translation)

The centrality of the ECLAC

The Economic Commission for Latin America and the Caribbean (ECLAC)—the Spanish acronym is CEPAL—was founded in 1948 to contribute to the economic development of Latin America. Headquartered in Santiago, Chile, it is one of the five regional commissions of the United Nations. “Gender Affairs” is one of the divisions, along with “Economic Development,” “Social Development,” “Statistics,” and “International Trade and Integration,” among others. The ECLAC sponsors the regional conferences on women since 1977, and has produced countless documents on gender in the region. During 15 years, the Bolivian feminist activist and sociologist Sonia Montaño was the head of the Division of Gender Affairs. Upon her retirement in 2015, she said that among her achievements, along with legitimizing abortion on ECLACs agenda, and linking gender to population issues and to the chain of production, had been:
To work a lot with the issue of ICTs, it has been a very interesting link because before, technology, innovation and productive development were for development experts, there was not the slightest gender perspective. Now, the division of production and business development has made a major change, and especially regarding ICTs. (Maldonado 2015) (my translation)

The ECLAC has produced a series of important reports on women, technology, and science in Latin America and the Caribbean. Autonomy is a term that appears once and again in the ECLAC reports; autonomy connected to economic, social, political, and personal self-sufficiency in the context of the technological networked society. The report prepared for presentation at the 12th session of the Regional Conference on Women in Latin America and the Caribbean in Santo Domingo in 2013 Women in the Digital Economy: Breaking through the Equality Threshold, and its 2014 follow-up The New Productive and Technological Paradigm: The Need for Policies for Women’s Economic Autonomy focus on women in science and the use of technologies in the contexts economic self-sufficiency and work. The 2013 report examines access and what is called the “second digital divide”—the disparities in terms of use and skill once access is equal between men and women—women in STEM employment, technologies for economic, social and political gender equality (with numerous examples of political and social mobilization through technology), and the digital national agendas of the region. In the section of women in the digital economy, the case studies are electronic manufacturing in Brazil—which leads, together with Mexico, the electronics industry in the region—the call centers in Panama, and entrepreneurship in Peru. Both the Brazil and Panama cases were selected as challenges, since women continue to occupy the lower echelons of labor in the information and technology industries. Both industries also exploit traditional gendered tropes such as women’s “nimble fingers,” and women’s “friendliness.” In contrast, small and medium entrepreneurship facilitated by technology—embodied in the Peruvian case study of a group of women who traveled to Korea for training—is presented as an “opportunity”:
Identifying the process whereby female-led micro- and small enterprises have incorporated ICTs makes it possible to analyse the opportunities generated by strategic use of and specific training in ICTs, thereby enabling a leap from precariousness to stable enterprises with promising prospects. (ECLAC 2013:42)

The report, though, also includes caveats such as job segregation, unpaid work, and leaving technological progress “to market forces alone since the hegemonic gender system will tend to maintain the gender segregation that works for it” (ECLAC 2013:55). It concludes that:

ICTs can be a powerful tool for women, because they open an array of possibilities for negotiating, marketing and delivering their products. But this tool is not enough without the support of policies on access to credit, allocation of assets and training for business distributed equitably between men and women. (ECLAC 2013:55)

The 2014 ECLAC report *The software and information technology services industry An opportunity for the economic autonomy of women in Latin America* is particularly fascinating in its content and framing. This report focuses on women who work in firms and as self-employed entrepreneurs in the software industry (both proprietary and open-source software). It includes statistical background and in-depth interviews with women in high-level positions at multinational software-development companies; founders or managers of small and medium software enterprises; human resource managers; and informants with knowledge of the industry’s history. Not surprisingly, the report finds that women are underrepresented in the software industry (both proprietary and open-source), and makes policy recommendations. It is also quite radical in its framing of women and technology. It focuses on “high-level” professionals instead of low-income women working in the technology industry, and criticizes the economic discourse. It emphasizes labor rights and collective bargaining as strategies in transforming working conditions for women (an aspect absent from all the other reports examined for this research), and highlights the subjective experiences of women. Contrary to the vacuous reproduction of terms and concepts in many of the global reports analyzed, this report
problematizes issues related to power, gender relations, labor, and even feminism, although it also places much of the responsibility on women. Here are some examples:

The majority of the interviews mentioned passion as the driver or purpose of their work…This symbolic valuation of work is critical for understanding why and how these women adapt to the existing work conditions, what satisfaction it brings them, what frustrations or anguish they bury and silence and how all that plays into the negotiation of their labour demands. They also emphasized that working in technology, especially in programming, gives them an exceptional and highly valued opportunity to create “something new” that broadens the horizon and generates concrete change. (ECLAC 2014:23)

The lack of union organizations and instruments such as collective bargaining agreements has implications for women’s self-awareness and work performance. The executives interviewed for this study do not identify as workers protected by rights and public labour regulations. The business and corporate environments in which they work or create or direct are their only spheres for negotiating their working conditions. (ECLAC 2014:68)

While this may seem a utopia, given the current conditions of capitalism, the erosion of basic labour rights and the persistence of informality and precariousness, it is critical that the definition of and proposals for the economic autonomy of women incorporate the exercise of labour citizenship. (ECLAC 2014:71)

Contrary to these “high-level” professionals, software entrepreneurs have much more knowledge about their rights, and are presented as courageous:

These women entrepreneurs combine the pleasure of working in technology with the satisfaction of taking the risk of following their own path and achieving success independently. They see their business as their own creation, which needs attention and care (especially in the beginning), but which brings great satisfaction and the opportunity to grow —not only for themselves, but for their partners— which would be hard to find in other work environments. This leads them to invest long hours, even though it means sacrificing other activities associated with their personal lives. They are proud to have taken the risk, as women, of following that road in a sector that is not a common choice for their gender. (ECLAC 2014:37)

Conclusion
Scholars (Cruikshank 1999; Foucault 2008a; Martin 2002; Rose 2010) have theorized how neoliberalism is also an intimate project; a project that entwines market-centered logics with numerous dimensions of everyday life. In this chapter, I argue that development discourse fuses technology and life by incorporating tropes of gender and intimate qualities in the making of an
ideal third world technological subject. The making of the “third world woman” as technological subject entails, among other aspects, incorporating women’s, local—marginal—knowledges in the technological and scientific realms, centering an image of a caring, selfless, and loving woman who can also be a remarkable entrepreneur, and supporting women as producers and designers. Digital technologies are particularly suited for this endeavor as they can be connected to numerous areas of life and work: family, community, agriculture, health, education, and entrepreneurship. In development discourse, these intimate relationships, enabled by digital technologies, are linked to the economy and the market. Intangible dimensions of life—knowledge, information, and care—become potential sites of profit financialized through digital technologies. Technological appropriation thus becomes a highly gendered and intimate socioeconomic project. It is much more than about tools.

These development discourses on gender and technology obscure the historical and contemporary political and economic structures that have produced the inequalities this technological woman is supposed to overcome, such as colonialism, neoliberal policies, and the very project of development. The rolling back of state social protections, deregulation, trade liberalization, militarization and criminalization, environmental devastation, and the increasing corporatization of development, among others, are already obstacles to the economic justice that these reports claim to be striving for. These discourses also obscure the violence inherent in the making of this technological woman (analyzed in Chapter 6). The technological woman is also a product of inequality. The reports certainly make women visible, which is important for activists and policy-making. They can also sometimes be contradictory and uneven in their content.

The Latin American discourse provides some refreshing differences. Even when highlighting entrepreneurship, many of the texts are much more critical. They contextualize
technology’s history within the region, and problematize the economic discourse in ways that call for a more profound rethinking of the gendered possibilities of the network society. Women are also seen as more complex subjects, with more complex lives. The discourse is not so much focused on essentializing women, but on transformation. The ECLAC has been known for its more “universalist” and structural approach to inequality (Molyneux 2006). I will also venture to argue that their critical approach to gender and technology is also because some of the authors and consultants of these reports as well as important officials at ECLAC are long-time feminist activists aware of the need of broader approaches and understandings of inequality.

In the next chapter, I study other forms of intimacy in the making of the third world technological woman. The work of the activists of Sulá Batsú, a women’s cooperative focused on entrepreneurship, technology, and science, both reproduces and contests many of the ideas put forth in this chapter. Specifically, the next chapter explores the combinations of organizational practices and intimacy in the making of the technological woman.
Chapter 5: Entrepreneurial Dreams and Intimacy in the Making of the Technological Woman

No hay mayor acto de rebeldía que conservar la alegría.  
(There is no greater act of rebellion than to conserve happiness)
-Berta Cáceres

Julieta laughs when she tells me that in family reunions her parents, brothers, and sisters have lamented that no one in the family has had luck with business (suerte con los negocios), and she has responded: “But I have!” And they reply, “nah, you’re not an entrepreneur!” Her family doesn’t see her as someone who has been successful in the world of business, “because my idea of entrepreneurship is not about making money, it’s about creating relationships.” Julieta is the general coordinator of the cooperative Sulá Batsú, where feminist principles of horizontality, collaboration, and redistributions together with love, care, solidarity, and honesty are central to their relationships and work. The coop both reproduces and challenges development scripts regarding the third world technological woman (analyzed in Chapter 4).

In this chapter, I analyze the intersection of technology and entrepreneurship in the cooperative Sulá Batsú, in San José, Costa Rica. In Sulá Batsú, diverse discourses and practices surrounding gender, technology and entrepreneurship converge, ranging from market-based and individual responses to inequality to collective forms of living, working and organizing. In this chapter, I ask: How can collective practices cohabitate and coalesce with market-based strategies of economic development? I argue that fairly straightforward neoliberal practices are not necessarily in an either/or relationship with respect to other collective, non-marketized practices. I do not want to imply that the literature has categorized these two practices as always antagonistic, but rather that their association can be considered an “uneasy” or “perverse

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39 Sulá Batsú does not identify as a “feminist” organization. Many members do identify as feminists, and describe their work as “feminist” (interviews, fieldwork).
alliance” (Orloff et al. 2016). My research aims to contextualize the alliance between feminist and collective practices and entrepreneurship, considered an individualist, market-oriented practice. Examining organizational process and practices—beyond content or outcomes—reveals that these boundaries are porous. In their analysis of what they consider oversimplified critiques of feminism, depolitization and appropriation, Catherine Eschle and Bice Maiguashca (2014) insist that “a movement cannot earn the title of progressive if its agents and agenda are worthy, but its practices unjustifiable” (647), and propose a very useful framework “that could serve as a starting point for this normative task” (648). The three principles or “conceptual candidates” (648) they propose are: inclusivity, reflexivity and prefiguration. They define inclusivity as “an open, engaged and generous attitude towards others,” that “encourages interaction, dialogue and mutual respect,” while reflexivity “is an ongoing process of critical scrutiny on the part of participants in a political struggle with respect to their factual claims, their normative aspirations and their strategies,” and, finally, citing feminist sociologist Wini Breines (1989), prefiguration “entails a commitment to ensuring that the ‘political means deployed by a movement are consonant with the aims of the movement’” (648). I found aspects of all three in Sulá Batsú’s organizational practices. They practice inclusivity in their “generous attitude towards others,” as well as through a series of projects, such as anacaonas.net, that aim to build local and regional alliances with other women. They reflect reflexivity critically on their relationships with each other and others, as well as on their work with funders and the communities they serve. Finally, they practice prefiguration through non-hierarchical and collective structure, their honest and loving relationships with each other, their action/participatory methodological framework, and their communal spatial arrangement. These dimensions of practice should not be considered perfect of free of conflict (as I will discuss further in this chapter).
Inclusivity, reflexivity and prefiguration require an important element, though, that Eschle and Maiguashca (2014) do not specify (as such): intimacy, be in the form of respect, honesty, love, solidarity, or care. Intimacy is part of the cooperatives’ organizational process and practice: in the ways they organize, conceptualize their work, and relate to each other and the communities they serve. Intimacy does not act alone, but is rather an important part of their technopolitical praxis. In Sulá Batsú, relationships with and through technology also open affective possibilities; technology is localized, collectivized, and felt. These affective relationships cannot be disconnected from broader discourses, policies, and institutions: “the personal is political” and the political is personal (Pedwell and Whitehead 2012). Therefore, intimacy is entangled with numerous forms of power, and can both challenge and reproduce inequality and injustice. Intimacy has been defined as: “relationships that are—or give the impression of being—physically and/or emotionally close, personal, sexually intimate, private, caring or loving” (Constable 2009:50), as well as a domain of the “microphysics of power in modern societies” (Oswin and Olund 2010:62). I, thus, define intimacy as close emotional relationships that are connected to global processes and power relations.

Intimate and close relationships, one on hand, have been skillfully mobilized by international development institutions to further market-based approaches to inequality that unload state responsibilities unto civil society (Pedwell 2012). Social capital—“local forms of association that express trust and norms of reciprocity” (Rankin 2002:1)—in development policy has been operationalized to advance particular economic agendas that cast off the state as guarantor of socioeconomic policies and protections. The logic is that through networks, close ties, cooperation, and solidarity, marginalized communities will be able to solve their own problems to succeed. This seems like an ideal model for development planners and neoliberal
politics: people will not need state protections or intervention to prosper, and, at the same time, these relationships provide a fertile terrain for potential markets. Intimacy, in this case in the form of social capital, is instrumentalized to advance market-based economic agendas as it gives economic development a human face. Feminist theorists of intimacy have for long debated whether intimacy changes structural power or if it is another instrument of domination, or both (Hemmings 2005, 2012; Pedwell and Whitehead 2012). Political theorists have also been critical of how “intimacy” can serve biopolitical techniques of governmentality (Cruikshank 1999; Hardt and Negri 2011; Rose 2010). In sociology, a body of scholarship studies how social capital forms part of conflictive economic practices and power (Bourdieu 1986), the commodification of intimacy to serve capitalist objectives (Hochschild 1983, 2011; Illouz 2007; Zelizer 2000), and how intimacy is exchangeable in transnational circuits of migration, capital, and sex (Agustín 2007; Cheng 2010; Constable 2016; Hoang 2015; Lan 2006; Parreñas 2011; Parreñas, Hung Cam Thai, and Silvey 2016). In “third world” women and black feminist scholarship, intimacy has been theorized as site of political possibilities and resistance (Anzaldúa 1987, 2015; Collins 2000; Davis 2016; Hooks 2000; Lorde 2012; Sandoval 2000). And Latin American decolonial thought (Cabnal 2010; Gargallo 2014; Lugones 2007; Maldonado-Torres 2007) conceives intimacy as having been colonized through brutal socioeconomic and political processes. These critical frameworks reveal that intimacy is both instrumentalized and potentially transformative.

In my study of Sulá Batsú, intimacy presents a dilemma of sorts. In the cooperative, their everyday praxis built on solidarity and collectivization both furthers a market-based economic agenda and opens avenues for collective organizing and awareness. They view technology as a tool of economic advancement that will help women become self-employed entrepreneurs who will program and design technologies to foster local, community-based and collective projects.
Through their trainings and workshops, they support women, and other marginalized communities, to design, develop and program to become financially independent as well as committed to local community development and growth. They believe that the creation of digital technologies with a feminist perspective will also lead to independence from *machista* cultural norms, abusive relationships, and corporate exploitation of women’s knowledge and skills.

Perhaps because their vision of entrepreneurship is so entwined with social justice, collectivization, feminist principles of horizontality, economic redistribution, and environmental justice, they are difficult to categorize. Their commitment to *solidaridad* (solidarity), love, and affection further complicates linear narratives of entrepreneurship equals neoliberalism equals anti-feminism. Sulá Batsú may be a unique case where all these pieces come together, but they can also inspire other organizations. Intimacy in Sulá Batsú forms part of their *ethics of being in the world*. An ethics built on love, trust, and solidarity; feelings that are also relational to and working through neoliberal paradigms. Thus, intimacy is also entangled in relations of power and inequality. But intimacy and close, loving, relationships are not always, and only, subject to control.

**Sulá Batsú: Creative Spirit**

Sulá Batsú, which means “creative spirit” in the indigenous Costa Rican language Bribri, is a cooperative founded in 2005. It has 20 associates and members, and a core daily working staff of eight people. It is mostly constituted by women, but there are three men in the board and one is part of the staff. Sulá Batsú’s main focus is supporting women’s incorporation in science and technology fields as self-employed entrepreneurs, through trainings, workshops, and advocacy at the local, national and transnational levels. They work in low-income and rural
communities, and also with universities, chambers of commerce, technology corporations, local and national government agencies. In addition, they participate in numerous international conferences on technology. They have projects on basic digital use and skills, technological entrepreneurship, programming and design of technologies, digital privacy and surveillance workshops with female environmental leaders, on electronic waste, and a digital archive that includes hundreds of resources for feminist activists of the region. As trained qualitative and quantitative methodologists, they also conduct participatory action research in the communities they serve. Sulá Batsú is also a member of the transnational network Association for Progressive Communications (APC), which gives them certain visibility at the global level. Julieta, Marcela, Rosana, Marina, Caterina, Lila, Isadora, and Samuel currently form part of la coope’s—the way they affectionately call the coop—core staff. Their ages range between 25 and 52 years-old. They are all educated with undergraduate or graduate degrees in Anthropology, Library Studies, Business, Accountability, Engineering, Sociology, and Communications mostly from national public universities, and they identify as middle-class professionals (although some come from low-income origins). Some are from the city and others from the countryside, and some of them commute 1-2 hours to la coope from rural areas.

In the early 2000s, a group of activists and academics—five women and one man—were working together in the investigation unit of a large nonprofit on projects related to technology and access in Costa Rica. Under the leadership of Julieta, they decided to launch their own project focused on empowering marginalized communities through technology. They began working in the living room of the house where three of them lived together as roommates. Little by little, and with scarce resources and space, they started doing consulting and trainings and getting grants through proposals. The organization began to grow. After two years, they
formalized and moved the offices into a new space. The members were all skilled in digital technologies and social justice activism, they were software engineers, anthropologists, LGBT and feminist activists, and free software activists. This combination led to prioritize gender and technology and technological “appropriation”—which they define as the capacity of using technology in ways that suit people’s needs and desires—as the main part of their work.

As the collective grew in those first years of 2000, the founding members began to think about the structure of the organization. They decided to look into the cooperative model, specifically the self-managed cooperative model (*cooperativa autogestionaria*). In the self-managed cooperative, workers both own and work in the organization: they “control and own the means of production as owners and workers of the business” (Instituto Nacional de Fomento Cooperativo 2004). They began to “reflect profoundly” on how they would their structure would correspond with their principles, as Gabriel, one of the founders, told me. Gabriel, an anthropologist who is the participant who most talked about *la coope’s* origins, said this was part of their ethic of *gestión de conocimiento* (knowledge production), which they define as ways to generate, support, and share diverse and different forms of knowledge. Gabriel explained the points that factored in their decision to adopt a self-managed cooperative model:

> We said, ‘we really want an instance where workers make the decisions because they are the ones who are there every day.’ The second thing we thought about was that we did not want to move to the sway of international cooperation. When you’re NGO world, international cooperation has too much impact on your agenda […] We said, we do not want our agenda, our work, to be determined uniquely by funding […] The third thing we said is that we really do have a very high level of capacities, [so] why don’t we put them to compete in the market? We are not afraid to do that, to compete in the market and offer our capacities. The fourth reflection was that we did not want to become an ordinary consultancy agency.

The cooperative was thus formally founded in 2005 with three core objectives: create and sustain collective relationships in community; be financially independent, and participate as actors in the market. These aspects are intertwined in interesting ways. Sulá Batsú, in contrast to
most cooperatives, does not sell a concrete product or service, but rather they sell their
knowledge. In Sulá Batsú, income is collectivized. Each member sells their skills, be that project
evaluation, qualitative and quantitative research skills, grant writing, or technological training,
among others, to other organizations, universities, government agencies, corporations, and
individuals. The income generated from these projects is collectivized: the person who gets the
contract receives a higher percentage of the cut but the salary is distributed among all of the
workers. The members also participate in different phases of the project. This means that all of
them are in one way or another included in the projects, even when their individual skills and
expertise might be stronger in one specific area. Expertise is also collectivized. One of the
longtime associates, Alejandra, explained the exciting and sometimes frustrating dynamics at la
coope:

Imagine that there is a pot and we'll do the roast together, the soup together. You put the
water, I put the potatoes, someone else the meat. We all eat the soup. In the end, although
the water is the cheapest ingredient of the soup, you had to go get the water, and the soup
cannot be cooked without water. Then you'll eat a bowl of soup just like mine, and I was
the one who brought the meat. In that sense everything is shared equally. Some people
have not understood this model and leave. They say “puchica, I bring this big project,
huge, which brings in so many thousands of dollars, and my wages did not increase, and
everyone is eating my money.” Well, that is the way it is, someday you're not going to be
bringing in the money, and someone else will work so you can eat. So when people do
not understand this model, they tend to leave. They leave fast.

Sulá Batsú is funded through two main sources: their projects, which they get through
proposal and grant writing, and the venta de servicios (selling of services). The venta de
servicios consists mostly of consultancy jobs with state agencies, corporations, and other
organizations. They offer trainings and workshops on how to conduct participatory action
research, methodological approaches, online privacy and surveillance, and building cooperatives
with a gender perspective. They have received funding for most of their grassroots projects
through international development agencies and institutes of higher education such as Hivos
the Canadian International Development Research Center (IDRC), UN Women, the universities of Sussex and Toronto, and recently also from Google. One of their most important projects is “TIC-as,” a three-year proposal initially funded by UN Women (2013-2016) and renewed for another two years by Google in 2017, to train, guide, and support young rural women and girls in the fields of science and technology. They have offered digital workshops to hundreds of girls, partnering with municipal governments in Costa Rica. Some of these workshops consist of training in basic internet skills and use, disassembling and reassembling computers, programming with open source code, bringing leaders in the science and technology fields for talks, conversations on stereotypes and gendered cultural norms, and trainings on online security. Since 2015, in a partnership with the private telecom foundation (Fundación Telefónica Costa Rica), Sulá Batsú has offered digital trainings to 600 rural youth per year as part of their project Generación 3.0 (Generation 3.0). In these trainings children have learned, for example, basics of audiovisual production, community management, video game design, application and web design. They have also conducted digital trainings with sex workers and domestic workers, and led digital storytelling projects throughout Central America using photography, video, and graffiti. Another of their projects, funded by the University of Toronto’s Citizenlab, is to assess the online dangers female environmental activists in Costa Rica confront in their struggle against corporate contamination and the expansion of monocultures. They offered these activists support in learning how to manage their data privacy and security online.

Julieta is the heart of la coope. She is a 50 something woman with an overwhelming energy and a fierce work ethic. She is relentless. Her high-pitched voice can crack a mirror, and that, combined with her magnetic presence, makes it difficult not to notice her. She interviewed me before I interviewed her, and she was very clear from the beginning about my role as a
researcher at *la coope*: “We also expect you to give back.” We grew close during my fieldwork, and have created a friendship that has been sustained through email, whatsapp, telegram, and skype, since my return to Boston. Julieta’s vision, passion, and doubts are a vital part of the organization. She is in a constant process of self-reflection; she does not take anything for granted. *La coope* carries this feeling of urgency, of wonder, and of doubting if their “experiment” is going to work today, tomorrow: as Julieta said “*la coope* is a permanent experiment.”

The four pillars of Sulá Batsú are: culture (“art for transformation”), solidarity economy (*economía solidaria*), ICTs and society, and knowledge production. They integrate art in most of their projects—graffiti, photography, arts and crafts, painting, music, storytelling. Their model of a solidarity economy is based on cooperation, equity, and sustainability. Technology is envisioned as a tool for improving community relationships and exchanging knowledges. Sulá Batsú started using open source software since their beginnings, and a founding member, Laura, wrote one of the earliest books on the open source movement in Latin America (2006). Openness and freedom of information are at the center of Sulá Batsú’s philosophical mission, as well as their practical work. The members are certainly not the free software hackers and geeks the literature has studied (Castells 1996), but rather a group of professionals committed to an expansive production of knowledge. Their reports, briefs, blog posts, research papers are licensed under Creative Commons licenses to ensure distribution. The members use, as much as they can and whenever possible, free and open software. Currently, one of their most important projects is the website anacaonas.net—funded by the University of Sussex in the United Kingdom. Anacaonas is a repository of information on gender and science and technology, environment, governance, inequality, care work, social movements, masculinities, and food
sovereignty, for activists across the region. Gabriel explains *la coope’s* philosophy of information and knowledge:

Cooperatives are for-profit entities. They have to protect their information, and that was not the logic of our work. Much of what interested us about the CC [Creative Common] licenses was that we had to protect our intellectual creation, but we wanted people to be able to continue to use the information. That’s when the collectivization of information process begins [in the organization]. This is our concept of appropriation and our vision of information. Because we think of information not as data, but of information as knowledge. So our interest was that information became knowledge that everyone could use.

This exemplifies a dimension of the coop’s hybridity. They identify as actors in the market, and they also believe in the open exchange of information and knowledge. This is evident in their use of open-source software and open licensing of their reports, briefs, posts, etc., as well as in how they approach communities through their participatory-action methodological framework. Their workshops and trainings are never unilaterally organized. Even though they are offering a service and their expertise, they approach their workshops first as listeners. Their goal is to guide communities to be able to take the reins of their projects. Their “vision” of the open exchange of knowledge goes hand in hand with the structure of their organization.

**Feminist Entrepreneurship**

Sulá Batsú activists believe in entrepreneurship for the good of the community, built upon horizontal relationships, in forging networks of women, in feminist principles of design, in busting stereotypes and subverting *machista* norms in communities, and in the use of free and open software. They also stress that “women must not be afraid of the market” (Julieta, interview) and prioritize women’s entrepreneurship as an ideal form of success. It seems like both a paradox and an unfortunate unintended consequence when feminist struggles and tenets dovetail neatly into certain neoliberal rationalities (Fraser 2013b). And yet the landscape is much more complex. As Bernal and Grewal (2014) contend: “Neoliberalism may…create a
recognizably homogenous framework for contemporary NGOs working on women’s issues, but it does not control all the practices and agendas of these organizations.” The “intimate mediations”—to borrow a phrase from Ananya Roy (2012)—between entrepreneurial strategies, feminist values, and technology, opens spaces for discovering not only what lies vis-à-vis certain practices and rationalities, but within and with. Sulá Batsú provides a map for imagining alternative feminist politics, if we dare to embrace “notions of multiplicity and contestation” (Orloff and Shiff 2016:14) and move beyond strict categories of resistance vs domination.

**Hybridity**

In Sulá Batsú, entrepreneurship is more of a “hybrid”—encapsulating a blend of market-based and feminist strategies. Activists envision entrepreneurship as a form of cooperative politics that will offer possibilities of solidarity among women. They believe in feminist interventions in technological production, community building, and political participation, as well as local economic development. This does not simply pay lip service to developmental discourses that use practically the same language and concepts. Julieta has imprinted on la coope her converging beliefs in feminist principles of horizontality, redistribution, solidarity, and community making with an entrepreneurial philosophy because “we are a business; that's clear.”

In one of our many conversations, she explained her vision of feminist entrepreneurship:

> We promote that women be associative, networked, it may be with men, no one is saying the contrary, but led by women. We have realized that neither men or women are prepared for entrepreneurship after college, much less prepared to develop projects that address social problems. This is all part of our feminist approach. Working together in association, to solve social problems, but also generate wealth, women also have to eat. They have no power to resist the draw of these large companies that will offer five times more money, but if they succumb they will not be the owners of their own companies.

Her vision of entrepreneurship is “associative” and “networked,” and concerned with solving social problems. The coop helps rural women be financially independent, mostly so they do not have to work for corporations located in metropolitan areas. This is also part of the coop’s hybrid
model: market-oriented and collective, entrepreneurial and anti-corporate. In Costa Rica, the technology sector is dominated by multinational corporations located in urban areas, such as Hewlett Packard, Intel, and IBM (both in manufacturing and research and development). For Sulá Batsú, therefore, it is important to support women who want to stay in their towns. The coop has organized three “feminine” hackathons in rural areas in Costa Rica. The hackathons are 36-hour non-stop events where groups of girls and young women design apps with a social objective in mind. Participants have designed apps to help teenage mothers find resources, an Amazon-style app for buying in local stores, and a glossary of words chosen and defined by girls so that the adults in their lives understand what they mean by certain concepts such as “stereotypes,” “conflict resolution”, and “communication,” among other products.

Their use and promotion of free and open-source software and free copyright also contests corporate forms of hierarchical and closed knowledge production, in what could be interpreted as a manifestation of a feminist politics of the commons. Beyond the ways in which the technical system functions, free software also comprises a set of political, ethical, and moral norms, values and commitments that embody Sulá Batsú’s organizational philosophy and work (Juris 2008). Kelty (2008) explains: “Free Software exemplifies a considerable reorientation of knowledge and power in contemporary society—a reorientation of power with respect to the creation, dissemination, and authorization of knowledge in the era of the Internet” (2), and Juris (2008) describes it as “a powerful model for (re)organizing society based on horizontal collaboration, participatory democracy, and coordination through autonomy and diversity”

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40 Large technology corporations, such as Microsoft, are using open-source software (Barnett 2010; Vaughan-Nichols 2010). This has fueled debates on the incorporation of open source software in the corporative world. But I am referring to a specific ethos that free and open-source software activists still believe in and promote.
The concept of the commons, which has become increasingly central in the literature on the internet, has been theorized as mainly a “space” in which communities share and exchange goods, labor, and affect subverting capitalist market-based relations (Federici 2011; Hardt and Negri 2011). Marxist feminist Sylvia Federici (2011) argues that international development institutions have appropriated the language of the commons and “put it at the service of privatization. Development institutions have found that the market can only sustain itself efficiently through the circulation of non-monetary relationships in the form of trust and confidence.” Federici (2011) mentions urban gardens as a prime example of the commons, where a community gets together to cultivate and produce food, but also to talk, and share. She argues that urban gardens produce food for neighborhood consumption, and not for commercial purposes. But this is not always true. There are communities that sell the produce from their gardens, and even when the money is reinvested in that community, it is still part of a market.

The boundaries between collective forms of organization and capitalist market-based relations may sometimes be tenuous. Sulá Batsú is a case in point. In an email conversation I had with Julieta about the objectives of the coop, she pointed out repeatedly that Sulá Batsú was “disruptive” because they propose the disruption of traditional cultural norms and socioeconomic approaches that maintain women’s inequality in science and technology. It is not about “adding and stirring” women into science and technology fields, but about transforming those fields from the bottom-up and creating a commons of cooperation, knowledge, and skills. Julieta explained:

The basis of all are the networks of mutual support, we must build technology that is sustained in the encounter, in mutual support that confronts technological development based on the competition of the best, in the pursuit of success understood as the entrepreneur who has a startup and sells it to make money. Our approach to the

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41 Although they have been conflated, there are differences between “free software” and “open-source” software. Stallman (2015)—considered the “father” of the free software movement—has argued that free software is a social movement with cultural and ethical mandates, while open-source is more oriented towards it’s practical value (see also Coleman 2013).
construction of technology is based on the encounter of multiplicities. Exchange and collective construction will create the technological solutions that the world requires.

Sulá Batsú’s work on entrepreneurship and technology is thus based on cooperation and exchange. They embrace entrepreneurship as an ideal form of success, and do not engage in radical feminist and anti-capitalist politics, yet their commitment to collectivization and transformation through solidarity also challenges rationalities based on self-reliance, self-discipline, and personal responsibility. They understand that that they, as members of the coop and activists, could not do their work without each other, and this is exactly what they instill in the participants of their projects. Would international development institutions approve their work? They would. The coop reproduces ideas on the importance of entrepreneurship for women’s and communities’ wellbeing and success. These discourses obscure the historical and contemporary political and economic structures that have produced the inequalities that the technological woman is supposed to overcome. But Sulá Batsú’s making of that technological subject also instills principles of horizontality, solidarity, cooperation, collective struggle, and economic redistribution—through love, trust, and deep affective bonds—that are a far cry from individualist neoliberal politics. Is this a form of overt and planned resistance? Perhaps not. Yet Sulá Batsú’s affective and collective politics contrast with the basis of development discourse (examined in Chapter 4).

Crisis and confrontation

To understand the relationships within Sulá Batsú is to understand their work. Their bonds and relationships, income and knowledge collectivization, horizontality, consensus building, and solidarity are connected to their work on technology, gender, and entrepreneurialism. They envision their work as both an internal and external process. They practice prefigurative politics, defined as “the attempt to embody personal and antihierarchical
values in politics” (Breines 1980:421), or ‘making sure that your activist practice reflects the kind of society your movement aims to build’ (Cockburn 2013). Sulá Batsú prefigures the world they envision: non-hierarchical, horizontal, and collective, built on *solidaridad*. By no means this has been easy, or free of contradictions. They have confronted internal conflicts and irreconcilable differences among staff and board members. Their relationships are a product of a constant process of negotiation. “This has not been easy. But if we change this, we change who we are. The other option is that everyone earns his or her own salaries and give a little. But this is not what we want. I mean, if we get to that point, we would rather dissolve the organization,” Julieta remarked. Alejandra said, “many people simply cannot understand” the model, and leave, while Marcela believes that, generally, women have been much more supportive and understanding than men of their collective philosophy.

In one of their staff meetings, for instance, Julieta was critical of the work of one of the members who was not at the meeting. She was disappointed and frustrated because this person had not completed some very urgent tasks before leaving for vacation. Other staff members vigorously defended their coworker. Julieta later told me: “They defended her, and that is what they had to do.” This speaking up, talking back, and confrontational attitude is also part of their collective and intimate politics. Every time someone has left *la coope*, sometimes after bitter disagreements, it has implied an “affective rupture,” as Julieta explained to me:

Contrary to traditional business theory, in which everyone is considered disposable and replaceable, everyone here is indispensable. Every single person who has belonged to *la coope* has been indispensable, and when they leave, *la coope* goes through a profound restructuring process. *La coope* will never be the same organization after that person left. We have always reorganized, restructured, and changed, but the organization that emerges is different every single time. There is both an organizational transformation and an affective rupture.

One of the most difficult and conflictive moments *la coope* has endured was during one of their financial crisis in 2013. The associates held a meeting to decide the organization’s future.
Julieta, along with other associates, proposed the unimaginable: to launch Casa Batsú, a cultural community center. Casa Batsú was one of Julieta’s dreams. The center would house la coope, some the associate’s other projects (such as bistro), other organizations, and include spaces for activities and events. Julieta and her partner, who has worked in the cooperative field in Costa Rica during decades and is an associate of la coope, laughed while during a conversation they remembered how this almost cost them their relationship. Her partner, along with other associates, thought that the idea of opening Casa Batsú was a huge mistake because it would drain their already scarce economic resources. There were discussions, fights, resentment, and misunderstandings. Julieta told me: “for me it was either we do this one big thing that we had dreamed about, or it was over.” They finally voted and approved Casa Batsú. In a recent post on their website, one of the associates, a musician and artist, recalled that moment and how they had two options: to die or to grow. “And we decided to grow,” she says, adding that “great projects are always born out of risk.” Conflict, fear, and risk are also part of intimacy.

Today, Casa Batsú is located in an unassuming building in the up and coming Barrio Escalante in San José. The building is not identified. The front is occupied by the cafe Manos a la Masa, managed by one of the associates, and an art shop, managed by Julieta’s daughter who is also an associate. Casa Batsú regularly hosts art exhibitions, capoeira and pilates classes, bolero dancing nights, and breakdance classes, among other activities. There is a beautiful courtyard full of plants and graffiti, a kitchen, and office spaces. Casa Batsú hosts the office of la coope, of Acceso, a global organization dedicated to issues of internet privacy, and a casting, video and film company. There is also a meeting room upstairs. Sulá Batsú’s office is lively decorated with art work, and walls are painted in bright orange and green. It’s full of small

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wooden desks, and big bean bags in orange, green, red, and purple. It is an intimate and inviting space.

Sulá Batsú has a “feminist approach” to entrepreneurship; it’s slogan is *una sociedad de saberes compartidos* (a society of shared knowledges). Their feminist approach is focused on solving local and social problems in association with other women, generating local and transnational networks of women, promoting leadership and political participation (mostly in local, municipal governments), and using art as part of their projects. “From consumption to production” is the slogan of one of their campaigns: to support women to become designers and developers of technology. Technology has a very particular place in this puzzle. These activists believe that through technology collective sociality is possible. Technology may not be more vital than land, water, and air, perhaps, but like land, water, and air. In a guide on technology and entrepreneurship that Sulá Batsú published sponsored by the University of Manchester in the United Kingdom, they provide a concise description of their economic philosophy that combines redistribution with entrepreneurship:

> Reflecting on the relationship between ICT’s and strategies for inclusion, ICT’s and the transformation of living conditions, we have reached the conclusion that we must develop participatory action research [to improve areas] in which ICT’s really have an impact: in the employment of excluded communities, especially in women’s employment in the knowledge economy. Efforts should be oriented towards actions where ICT’s generate employment and redistribute wealth, based on entrepreneurship. (Sulá Batsú 2006:6)

This, once again, resonates with official development discourse on digital technologies and women (analyzed in Chapter 4). Sulá Batsú reproduces the technological entrepreneurial model, the woman as producer who will have a multiplier effect on her family, community, society, and they also essentialize women’s nurturing qualities. They believe that “women will lose” if they do not jump on the technological bandwagon. Society too needs this *third world technological*
woman, this knowledgeable, skilled, loving, and caring woman. But Sulá Batsú’s technological subject is also defiant and is committed to social justice, redistribution, and openness.

Collective technologies

Technology has the potential of leveling the field, of ushering a new era for social justice. When the activists of Sulá Batsú visit marginalized communities to offer trainings on technology, some of which are completely isolated, with no running water or electricity, the computer always has a place. Marcela, a long-term member of la coope, told me about a particular isolated community of fisher people, in the south of Costa Rica, where she offered a series of workshops on how to use computers. They used a solar battery to power one computer. The fisher people wanted to learn how to use technology for selling their product. Marcela hoped the workshop would have long-term social effects beyond helping them with their emerging business. She hoped they could strengthen community ties and solidarity. Marcela told participants that their pencils, pens, and papers were also technologies just as the computer and the internet, in terms of being tools and spaces that could help them. This particular sense of closeness, familiarity, and demystification of technology, is one of Sulá Batsú’s strategies. Mostly, Sulá Batsú offers workshops for communities, not for individuals. This is key. This corresponds directly with their internal politics, with how they have constructed la coope, and the relationships they have built among themselves. The members of la coope have prefigured the world they envision: sustained on collective relationships of solidaridad while participating as actors in the market. They are certainly not anticapitalist, or postcapitalist, but rather work on a shifting terrain between different, and, apparently opposite, work and life perspectives.

In Sulá Batsú notions of entrepreneurialism and technology are deeply connected to
affective bonds and feelings. This manifests in numerous layers: in how they feel about each other and their work, in their relationships with the communities they serve, and in the experiences of their participants. Longtime associate Lila described her feelings about Sulá Batsú with incredible clarity: “I cannot imagine not being part of this organization. I do not see it as part of my job, I see it as an extension of my life.” And Marcela described the motor of their work: “It's part of the learning process that we realized at some point that passion is what drives the loyalty of our associates and ourselves with the cooperativa. For me, this is key, if there is no passion and love for the cooperativa people leave, because it is exhausting for people and it requires an investment of the heart, of time and life that must be very strong.” “This place is my life,” “we love each other,” “we support each other,” are just some of the phrases I heard once and again. Julieta explained how their vision of entrepreneurialism is connected to pleasure, experimentation, and to making mistakes:

For us, the pleasure of going to work should be part of business management. Love and affection among your compañeros should be part of entrepreneurship. When you analyze business theory, this is never considered. They speak of profitability, marketing, commercialization, but not about this. The main bastion of our work is passion. For us, passion is part of entrepreneurship, fun, laughter. And the other thing that we always consider as part of our work is being able to make mistakes, meter las patas [make mistakes], without malicious intent obviously. This is also part of entrepreneurship. This is our model of a solidarity-based economy.

Sulá Batsú is a place drenched with emotion, ranging from love, passion, affection, to distress, preoccupation, and conflict. I realized this during the time I spent at la coope. The office is organized as an open space, where everyone can look at each other. They work, and talk, and laugh, and also have discussions and move through conflicts regarding differences in approaches, styles, and objectives. They have had debates on issues that range from funding opportunities (a project with Microsoft, for example) to discussions on religion and sexuality. They are frank and honest, and do not pretend to agree on everything. Disagreements are also part of their affective
politics. Every single day at 3:00 pm we had coffee together, with bread, butter and pastries. It is a sacred moment for bonding. Marcela told me that the horizontal structure of la coope had cost her a lot to understand, but “that is the idea of la coope, with Julieta we can sit down to talk about different aspects of la coope, and we can also have very strong discussions, with a lot of love and respect we also fight. With respect, and love, we can also say mae, I am sorry.” These affective bonds as coworkers, friends, and entrepreneurs extend to the communities they work with. Lila explained that their work in communities was about more than training in the use of technologies:

The organization has given me a vision of thinking that if these things happen [the relationships we have at la coope] I must replicate them with the people we work with. When we work in a community, we go with some specific goal, to offer information, knowledge, the use of technologies. Although this is our mission there is always space to talk to them. You can also help by talking about your life story, passing the experience on to someone. The possibility of transmitting all the knowledge I have gained, not in a classroom, but over the years of working in this organization.

Technology is envisioned as a tool for producing knowledges that they can build upon. Knowledge production is crucial for Sulá Batsú: the creation of local and diverse knowledges, of sharing knowledge, of building knowledge, and of legitimizing women’s knowledges (gestión de conocimiento). This is one of the reasons they conduct participatory action research, and let the communities define their needs and priorities. Technology opens the possibilities of knowledge production and, more importantly, of exchanging those knowledges. Julieta summarized her vision of social transformation through technology:

Technology is a social construction and as such every program that is developed, every code that is made, is a way of expressing, of writing, of saying things. […] For this reason, if women are not integrated in the construction of the technologies that move the world we are not including the vision, perspectives, and knowledge of half the population. However, if we integrate them using the same processes that have been homogenized and standardized, we would be integrating them into male processes of technological construction, and that will make no difference. For this reason, in all our approaches we look for other ways of creating technology, from other referents, based on problems identified by girls and women and with ways to create innovative, novel technologies, built with freedom by themselves.
Outcomes are important, but their projects are focused on process. On processes of sharing, listening, building, playing—the use of art is vital in their workshops—and creating an awareness of the importance of collective organizing. The coop must comply with reports for funders, and offer evidence of change through hard numbers; quantification remains a requirement. But this is an administrative transaction. In another instance of pre-figurative politics, the process of collectivization is also central to their structure as a cooperative: salaries are collectivized, tasks are shared, and projects are jointly conceptualized and implemented. Although members have specific areas of “expertise,” expertise is also shared because members work across areas: administration, advocacy, project management and evaluation, research, consultancies, and grassroots trainings and workshops in marginal communities. “It is very important for me that all of us work on everything, from working in the communities, writing proposals and reports, to administrative tasks,” Julieta told me.

*TIC-as*

Sulá Batsú’s TIC-as project—funded by UN Women (2013-2016) and renewed by Google (2017-2019)—offers workshops on computing, coding, and leadership to girls throughout their school years, and to young women in college in rural areas. TIC-as—a play with the Spanish acronym of information and communication technologies, TICs, and the informal word used to describe Costa Ricans, *ticos* for men, *ticas* for women—has become the heart of Sulá Batsú. This project has enabled activists form long-term relationships with many of participants. It also encapsulates the cooperative’s main objective: to encourage women to study and work in science and technology fields while committed to their communities. Many of the young women who have participated in TIC-as have become leaders in subsequent TIC-as workshops. TIC-as has already worked with about 245 girls and young women (ages 10-30) in
San Gabriel, the northern city that, according to Julieta, has the potential of becoming a “technological pole” in Costa Rica because of the technological industries and technical universities that are headquartered there. TIC-as has also extended throughout the country, and in March 2017 Google donated $400,000 to Sulá Batsú to expand the project to 1800 girls and 600 mothers (of these girls) in Costa Rica, Guatemala, El Salvador, Nicaragua, Honduras and Panamá.

In TIC-as workshops, girls learn how to dismantle old computers that have been donated, reassemble them, and sometimes even make jewelry out of old computer parts. The idea is that girls understand that computers are not mysterious black boxes (Latour 1992), but instead everyday objects. This is also a deeply emotional experience for both Sulá Batsú activists and participants. Activists explained that girls had “fallen in love” with technology through these experiences. Although usually girls were not afraid of technology—Julieta argues that fear appears at a later age—the process of demystification helped them understand that computers could be part of their everyday lives. The tinkering, meddling, and opening of that black box is indeed an emotional experience for both activists and participants. “These are incredibly intense experiences; seeing these girls handle, disassemble, computers. It is very exciting,” Julieta recalls about the workshops with elementary school-aged girls. Young women participate in workshops with leaders in the science and technology industries in Costa Rica, academics, and technology activists. They learn about leadership and opportunities in their fields, have a space to network and engage in open conversations about their needs and goals as students and future entrepreneurs, programmers and engineers, and also receive trainings in programming and open-source software, among others.
In the summer of 2015, I attended a Café Tecnológico, one of the meetings they held monthly with the TIC-as participants at the local technical college in rural San Gabriel. In a huge conference room, about 30 young college-aged women were visibly eager for the tertulia to begin. Two technology experts talked about their experiences in the private sector, and a visiting professor from Spain and I were also invited to offer talks. The expert’s talks were focused on how to survive and thrive in the entrepreneurial and private sector worlds. They both reproduced heteronormative and traditional notions of gender such as advice on how to be both a good mother and a successful businesswoman. But what captured my attention were the affective bonds between the young women and Sulá Batsú activists. In subsequent encounters and interviews with some of the young women—all of whom are studying scientific fields in college, or are interested in science and technology—many of them remarked that the relationships they had created with Sulá Batsú associates had been fundamental in helping them survive the male-dominated world of science and technology. One of the participants said, “I feel that TIC-as gives us security. They make us feel that as a woman you're really doing valuable work… I really like their attitude, how they motivate women. This has provoked a change in all of us. I have seen how we have grown.” Another remarked: “TIC-as gives you the courage to keep on going. I don’t know how to explain it. It gives you that thing, that *espinita*, of growing, of being truly powerful, like they have taught us.”

Beyond the personal and affective bonds between them, the TIC-as participants also commented, once and again, on how the project had made them feel “powerful,” and how technology, and technological knowledge and entrepreneurialism, helps them gain respect. In interviewed a group of TIC-as participants during a rainy and stormy afternoon in San Gabriel. We met at a local café, with couches and lounge seats, amid magnificent mountains lush with
infinite shades of green. They were all between 18-22 years of age, all hopeful, and eager to talk. They were all from San Gabriel, except one of them who was from the Caribbean coast. We spent a whole afternoon together talking and drinking coffee. One of the TIC-as participants told me: “You really feel powerful because with technology you create things, new things, and you feel ‘wow, I did something different, I achieved something no one has done.’” Another young woman said: “Technology gives you both the power to believe in yourself and help others. It's like a viral network, where one can share knowledge and do great things.” And another participant mentioned: “To be in this field makes others take you more seriously, because people do not expect you to study careers in technology. They expect you to be a teacher or something. And when you say you are studying to become a software engineer, they say “what?!” You start to be taken seriously.” When asked, why technology, why become an entrepreneur? One participant exclaimed:

I want to have superpowers! I want to be super powerful. I want to think about doing something and be able to do it. I want to have the ability of saying, “I will develop a software that many men will use, and they will have to recognize that a women made it.” Because machismo often does not let men acknowledge that a woman actually made something.

Being exposed to different ways of understanding and feeling technologies has awakened a feminist consciousness among these participants, even when many consider “feminism” a divisive and problematic concept. TIC-as approach to technology as a collective endeavor, an ideal tool for sharing and building knowledges—not extracting them or making profit from them—together with the sense of solidarity, affection, and respect that the coop aims to spread, has been fundamental in creating a feminist technological awareness.
Conclusion

“Not one of us would have been able to do any of this alone,” remarked Julieta during a session with *la coope* where I presented this research. We were discussing what it meant to them to be part of a collective, to share knowledge, tasks, time, space, income, and also share affection, love, *solidaridad*, conflict, pain, and disagreements. They did not understand when I told them there seemed to be a contradiction between focusing on entrepreneurship as a solution to inequality while also working towards collective strategies, making communities stronger, and strengthening local autonomy and knowledges. “In *la coope* there are some profound levels of defiance of socioeconomic neoliberal models,” she added when mentioning their work towards building a solidarity-based economy. Intimacy makes much of this possible, even when the coop reproduces a certain neoliberal model.

To date, the literature has approached intimacy in the context of development mostly as an instrument to achieve something. The findings that I have presented suggest that intimacy is more than a means to be more efficient and self-reliant. Intimacy might lead to alternate routes and paradigms. In the case of Sulá Batsú, feelings are imbricated in the very fabric of the organization. This shatters static notions of development, entrepreneurship, and the neoliberal focus on individualism. In Sulá Batsú, relationships with and through technology are also entangled with intimacy. Technology—considered the ultimate sign of the globalized network society—is bundled in affective relationships that also make market/non-market boundaries tenuous. Intimacy in Sulá Batsú makes the individual, collective.

Development plans, in this case regarding the virtues of *third world technological woman* encounter challenges; sometimes even unbeknownst to the actors. Sulá Batsú is not an anti-capitalist, post-neoliberal or anti-development organization. Members affirm that “women
cannot be afraid of the market,” and that la coope is an “enterprise.” Yet their project also challenges market logics based on individualism, self-sufficiency, and personal responsibility as solutions to inequality, even when they operate within those same dynamics. Sulá Batsú reproduces the entrepreneurial framework in their work with women. They support entrepreneurship as a model for success, financial independence, and wellbeing. Yet, as a solution to inequality, entrepreneurship leaves structural power and inequality intact. At the same time, Sulá Batsú challenges this dominant development paradigm through principles of horizontality, redistribution, knowledge exchange, collective struggle, and consensus. The profound emotional relationships embedded in their organizational process support these forms of feminist praxis. Sulá Batsú both reproduces and subverts the entrepreneurial model. In this chapter, I argue that entrepreneurship is not necessarily in an either/or relationship with respect to other collective, non-marketized practices. The micro-politics of this “uneasy alliance” reveal that while Sulá Batsú centers a third world technological woman, their practices—enabled by close emotional relationships—contests individualist development agendas.

I have analyzed the numerous possibilities, dilemmas and paradoxes of the making of the third world technological woman in the previous and current chapter: in Chapter 2 through a discursive analysis of development discourse on gender and technology, and in this chapter through the study of the fashioning of technological entrepreneurs amid feminist principles of horizontality, collectivization, and solidarity. In the next chapter, I analyze how the making of the “third world” technological subject is already always threatened and in danger through increasing online violence.
Chapter 6: Dreams and Nightmares: Online Violence and the Technological Woman

Feminism insists on methods of thought and action that urge us to think about things together that appear to be separate, and to disaggregate things that appear to naturally belong together.
- Angela Davis (2013)

The emphasis on online violence “scares women away from technology.” This was the immediate reaction I received in an interview with a well-known feminist who had been a key activist around issues of gender and technology in Latin America. Her activism was centered on both advocacy on implementing a gender perspective in local and global policies on technology, and on empowering women in the use of information and communication technologies. Two paradoxes became clear: How can you “empower” communities to use technology while simultaneously telling them that the internet is a space rife with violence, harassment, and surveillance? And, how can development discourse mobilize a “politics of life” through technology when violence is pervasive?

In this chapter, I answer the following question: How does violence online complicate development discourses on gender and technology? I argue that online violence challenges the linear and unproblematized narrative that technology equals progress and empowerment. Online violence is a threat to emancipatory development discourses and policies on technology. I found that the Women’s Rights Programme of the transnational organization Association for Progressive Communications (APC-WRP hereon) challenges economic approaches through their activism against online misogyny in the developing world. Their work connecting structural and interpersonal violence opens the door to discussions on neoliberalism, colonialism, and sexuality and pleasure. This chapter thus unravels dilemmas of development frameworks focused on connections between technology and emancipation analyzed in chapters 4 and 5.

Violence against women has been for decades an important focus of the women’s movement, from grassroots movements to policy advocacy campaigns at the local, national and
transnational levels. It has provided a “unifying agenda” (Friedman 1995:21) for women in both the developed and developing countries. Laws against violence against women have spread throughout the world, and activists and scholars consider this one of the women’s movements most successful campaigns (Desai 2008; Ferree and Tripp 2006; Keck and Sikkink 2014).

Violence against women has not been eradicated—far from that—but it certainly has gained global visibility. One on hand, the emphasis on violence has crystallized feminists around a very important and urgent problem, and on the other, it has caused divisions. Some have criticized the over-emphasis of representing women in the global south as victims in need of saving (Abu-Lughod 2002; Mohanty 1988; Spivak 1988), and others, the complicity of feminists in strengthening the coercive arms of the state through criminalization—what has also been called “carceral feminism” (Bernstein 2010).

A critical and decolonial analysis of violence (Connell 2016; Escobar 1995) in the context of development connects structural, historical and intimate power relationships. Connell’s (2016) decolonial framework calls for scholarship that understands violence as constitutive of gender relations, and not as a consequence. In her study of the microfinance industry and the financialization of poverty, Ananya Roy (2012a), for instance, explicitly connects development practices with violence by counter posing the “timeless images of aspiration” of the microfinance heroine with the epidemic of suicides of women who could not repay their microfinance loans. In this way, Roy theorizes the “necropolitics” of neoliberalism and “the work of death” underneath its heroic façade. The explicit connection between neoliberalism and violence is rarely theorized in the literature, although violence is empirically pervasive. My research aims to make clear the connection between violence and developmental logics on technology. Not only is the technological woman exposed to various forms of online
violence (harassment, stalking, doxing, etc.), but as she gets technological she also becomes part of circuits of information that are increasingly under state and corporate surveillance (Dubrofsky and Magnet 2015; Lyon 2014). This enables what Roy (2012) calls “the biometrically scanned body of the Third World woman” (145). Online violence thus reveals broader structures of power and inequality. But I have found that activism against online violence also enables conversations on agency, sexuality, and pleasure. This is APC-WRP’s approach.

This chapter contributes to these debates by examining what online violence reveals about gender politics, development and technology. I have found that violence against women online complicates development discourses on the technological woman (analyzed in Chapter 4). Violence against women online makes certain tensions evident: between fear and embracement, appropriation and distance, use and danger, play and exploitation, victimhood and agency. The specter, and reality, of violence lurks behind liberatory discourses on gender and technology.

While the “third world” gendered technological subject is framed as a savior, and the ticket to a brave new world, she is simultaneously threatened by the tools, and in danger in the very spaces, that she is supposed to master. The making of the technological woman is, then, also always being unmade. But, at the same time, danger leads conversations on other possibilities, such as pleasure. My research advances feminist scholarship in the field of gender and development by revealing the challenges and possibilities of activism against online violence in the global south.

In this chapter, I focus on the work of two organizations: the APC-WRP and Colnodo, a nongovernmental organization in Bogotá, Colombia. The APC-WRP has pioneered work on violence against women online since 2005. Colnodo—an APC member—is a leader in Latin America in training and capacity building in technology. Colnodo also works on violence against women online and digital security and privacy. The APC-WRP offers a transnational perspective
that is also grounded in the global south, while Colnodo provides insights on the challenges of the local and the global. The chapter analyzes online violence, the ways in which APC engages in activism against online violence and how they foreground pleasure, sexuality and technology, and the relation between APC and Colnodo on activism against online violence.

What is Online Violence?

“Violence that happens online is particularly interesting because it's an exaggerated form of patriarchy, so you can see some of the things people no longer say, you know, in real life...find some freedom to say it online. And I think that's good and it's interesting, although it can be harmful. Because it helps us sort of look at patriarchy under a magnifying glass.”

APC-WRP associate (interview)

In recent years, news on online harassment—bullying, trolling, stalking, doxing (to reveal private information on the internet)—and the links between online and offline violence against women, teenagers, LGBT people, ethnic and racial communities in the United States and Europe has proliferated. The most publicized cases are from the “global north,” although it is considered a “global problem” that mostly targets marginalized communities along lines of gender, sexuality, and race (Citron 2014). APC-WRP defines violence against women online as:

“Technology-related violence against women (tech-related VAW) [that] encompasses acts of gender-based violence that are committed, abetted or aggravated, in part or fully, by the use of information and communication technologies (ICTs), such as phones, the internet, social media platforms, and email. Technology-related violence against women is part of the same continuum as violence against women offline.”

I use APC’s definition throughout this chapter. Yet I include in my analysis other digital technology-related forms of violence such as state and corporate surveillance, the exploitative working conditions of the electronic industry in the

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43 Taken from APC-WRP’s website dedicated to their research and findings on violence against women online: http://www.genderit.org/onlinevaw/faq/
global south, and the environmental harms caused by electronic waste. I use “online violence” and “online misogyny” alternately. The inclusion of online violence in official development documents has been slowly emerging in the past years. In 2013, for the first time the agreed conclusions of the Commission on the Status of Women’s 57th session included the issue of technology and violence, calling for states to:

- Support the development and use of ICT and social media as a resource for the empowerment of women and girls, including access to information on the prevention of and response to violence against women and girls; and develop mechanisms to combat the use of ICT and social media to perpetrate violence against women and girls, including the criminal misuse of ICT for sexual harassment, sexual exploitation, child pornography and trafficking in women and girls, and emerging forms of violence such as cyber stalking, cyberbullying and privacy violations that compromise women’s and girls’ safety. (United Nations 2013)

There have been many high-profile cases of online abuse against women in the United States and Europe. Media critic Anita Sarkeesian, game developers Zoe Quinn and Brianna Wu—also victims of the infamous Gamergate attack—Brazilian-British activist and journalist Caroline Criado-Perez, and journalists Sarah Kendzior, Amanda Marcotte, Amanda Hess, Jill Filipovic, and Soraya Chemaly are just some of the most well-known survivors of violent online abuse in the United States and Europe (Albirini 2008; Buni and Chemaly 2014; Chemaly 2014; Filipovic 2014; Hess 2014; Jason 2015; Kendzior 2014; OSCE 2016; Stuart 2014). Besides public figures, journalists, and artists, online violence has also been connected to intimate partner violence (in some of these high-profile cases there has also been a connection).

Dozens of news articles have been written on the issue, and consistently it is women who are the main targets of online abuse (Citron 2014; Henry and Powell 2015a; Marwick and Miller 2014). In their 2014 survey on online harassment—a self-administered survey sent via the internet by 2,849 web users in the United States—the Pew Center found that although men are more likely than women to receive some kind of online harassment, young women, ages of 18-
24, “experience certain severe types of harassment at disproportionately high levels,” that are sexual in nature such as stalking and sexual harassment (Pew Research Center 2014:15; see also World Wide Web Foundation 2015 for similar results in their survey of poor urban dwellers in nine developing countries). “Men are more likely to experience name-calling and embarrassment, while young women are particularly vulnerable to sexual harassment and stalking,” the survey found. African-Americans and Hispanics are also more likely to be harassed online than White people. The nature of online communication makes it difficult to accurately assess the gender of the perpetrators, but some studies have suggested that men are more likely to be the aggressors (Henry and Powell 2015b, 2016).

In recent years, activists have been combatting online abuse. Activists in the United States such as Sarkeesian, Jaclyn Friedman, and Chemaly have launched websites with resources and support for online abuse victims.44 Activists and developers such as the Boston-based Safe Hub Collective and the Tactical Technology Collective in Berlin have developed feminist guides—specifically for women and other marginalized communities—with a wealth of information and resources on privacy and security to combat online abuse.45 In Latin America, the network Coding Rights launched a guide on how to send “safe nudes” that emphasizes the need to find secure ways to manifest and enjoy online sexuality, Brazilian feminist collective “Think Olga” created the initiative “Manda prints” to record instances of online violence to send to the police, and Fundación Karisma in Colombia launched the campaign “Alerta Machitroll”

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against trolls that target women. There is also a growing community in the region of decentralized, grassroots feminist and open and free software activists that are sharing and generating information on digital privacy and security, hacker ethics, and the digital commons (connected to issues of violence, and also state and corporate surveillance). Some of these are the network behind the web project “Sursiendo” based in Chiapas (Mexico), “Acción Directiva y Autogestiva” (Mexico) the Nicaraguan activists of “EnRedadas,” and “Hacklab de Barracas” in Argentina. Perhaps one of the first, and most well known in the global south, campaigns is APC-WRP’s “Take Back the Tech.” Launched in 2006, “Take Back the Tech” is a global campaign that highlights the problem of tech-related violence against women. It leads various campaigns during the year, but their biggest annual event is during the 16 Days of Activism Against Gender-Based Violence (25 Nov-10 Dec). The campaign has been localized and reproduced in Bangladesh, Bosnia and Herzegovina, Brazil, Cambodia, Canada, Democratic Republic of the Congo, Germany, India, Kenya, Macedonia, Mexico, Malaysia, Pakistan, Philippines, Rwanda, South Africa, Uganda, UK, Uruguay, and the USA. Individuals and organizations use and adapt their graphics and kits, and upload their content on the “Take Back the Tech” website.

Questioning Narratives of Empowerment

*APC’s Women’s Rights Programme*

APC’s Women’s Rights Programme is an unapologetic feminist initiative. In my interviews, most APC-WRP members identified as feminist. This is also evident in the language they use for many of their initiatives, such as the “Feminist Internet Principles” and the “Feminist Tech Exchange.” Many of them—most of whom are from the global south—are also

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47 Take Back the Tech: https://www.takebackthetech.net/
concerned with Western narratives on gender and technology, and are set on challenging these discourses through their work. There are numerous reasons for this, such as organizational trajectories and also individual experiences with feminist activism. Many of the APC-WRP members and collaborators I interviewed speak about power relations, intersectionality, patriarchy, gender politics, sexuality, and the need for politicizing technology and criticizing development discourses, for instance.

APC, founded in 1990 and with consultative status to the United Nations since 1995, is both a transnational network and nongovernmental organization that works on internet rights advocacy and policy on the state and suprastate levels as well as with grassroots organizations around the world. As of January 2017, APC had 50 organizational members in 36 countries and 24 individual members in 22 countries, the majority from the global south. APC is a decentralized global virtual network with a small staff that uses the internet to work and communicate. Its origins date back to the mid-1980s when seven grassroots electronic networks started to exchange information. In 1990, they founded APC as a “global network of networks.” The focus of APC members—known as “nodes”—was on connecting the non-profit sector and social movements around the world (working much like internet service providers today): “APC pioneered the use of ICTs by civil society. In many countries where they operated, APC nodes (computer centres which simply picked up e-mail, forwarded it, and offered related services) were often the first providers of access to the internet” (Noronha and Higgs 2010). As the internet has expanded, APC’s role as an electronic service provider has also morphed. They have become more focused on internet rights and policy, and grassroots activism, with three program
areas: “communications and information policy, women’s rights, and strategic use of technology and capacity building”\textsuperscript{48}.

APC-WRP, founded by APC members in 1993 as the “Women’s Networking Support Programme,”\textsuperscript{49} has been a pioneer advocating against online violence in the global south at least since 2005. It is financed through APC’s funding, while also receiving support for their specific projects from the Ford Foundation, the Dutch Ministry of Foreign Affairs, the International Development Research Centre (IDRC), and the Swedish International Development Cooperation Agency (Sida), among others. They work at the intersection of research, policy advocacy, movement building, and grassroots capacity building and training. They have issued dozens of papers, briefs, reports, fact sheets on violence against women online (among other issues), and regularly participate in local, national, and global conferences on internet rights and women’s rights. The members I interviewed are from Argentina, Lebanon, Malaysia, South Africa, and the United States, and they live all over the world. Some of them are part of the core staff, others work through contracts. They participate in the annual APC meetings in South Africa, and communicate frequently as a group via email, the open source video-conferencing application jitsi (similar to skype), and other digital platforms, since there have no physical headquarters. They are open software users and promotors, and very aware of digital privacy and security issues (on which they also offer trainings). APC-WRP is also known among the global feminist community for their trailblazing work at the 1995 Fourth World Conference on Women in Beijing, China, organizing the online communication and networking before and during the conference. This was pivotal for feminist activists from around the world.

\textsuperscript{48} Taken from APC’s website: https://www.apc.org/en/

\textsuperscript{49} Taken from the “Internet Hall of Fame” page of one of APC-WRP’s founders, Karen Banks: http://internethalloffame.org/inductees/karen-banks
APC-WRP has spearheaded the important global campaign “Take Back the Tech” since 2006, which raises awareness on gender violence on the internet. Another of their central projects is “EroTICs” that studies the complexities between sexual and internet rights. Their Feminist Tech Exchange (FTX) offers activists workshops and training on information technologies from a feminist perspective. In an interview with an APC-WRP leader, Mira, she explained that their “formal objective” is to “ensure that diverse women's movements are able to use technology in a way that will advance their work.” Frida, a project associate, said that APC-WRP works towards achieving an understanding of gender and technology “from a political perspective” and a “feminist practice of technology” that is inclusive, participatory, and also “fun.”

Shifting discourses

One of APC-WRP’s aims is to shift narratives, “discourses, norms” as the manager told me during our interview. Relationships between women and technology in the developing world are mostly framed as economically beneficial (discussed in Chapter 4), thus online violence complicates this narrative by showing that there are challenges in the relationship between women and technology. This is not an APC-WRP strategy of active resistance or contestation, but the emphasis on online violence does open up other questions about information technologies. APC-WRP includes a broad analysis that contextualizes violence within capitalism, homo/transphobia, racism, misogyny, and inequality in general, and they have increasingly centered the erotic possibilities of sexuality and technology. Their work on violence dovetails into discourses on women in the global south as victims, and the implementation of legal and punitive frameworks to combat online violence. But, at the same time, the centering violence against women online complicates development rhetoric on technology as a solution to
inequality. APC-WRP relates their work only tangentially to technology facilitated human trafficking and other forms of sexual exploitation; they mostly keep these separate because issues of pornography and objectification can lead to conservative politics. In her powerful speech at one of the high-level events at the 59th CSW session in 2015, Jac sm Kee questioned how information and communication technologies were being framed at the forum. Although she did not directly mention violence online in her brief speech, the critique of the economic discourse is evident:

Is it seen as a central, political revolution that enables a HIV+ woman in Uganda to change the way her village relates to her because she can access information through her phone? Or something that helps a transgendered person in South Africa see herself, and find out about doctors, health info, and a community that supports her in her journey of transitioning? Or a space where feminist activists in Southeast Asia can mobilise with others to communicate and strategise for political change and peace building across borders? Or is it seen as a matter primarily in the service of the economy – that the way women and girls relate with technology is primarily for production, capital accumulation, markets and the commodification of our bodies, energy and imagination?

She refers here to the myriad of social, political, and cultural relationships that can exist between “third world” women and technologies, moving beyond discourses and policies that attempt to dictate these relationships as economic. It is in this same vein that I argue that online violence complicates the linear route planned for the third world technological woman. Violence and surveillance are inherent to the network society. The gendered technological subject is thus always already in danger: the heroine is already a victim. The trap is nearly impossible to break, at least discursively.

It is in this context that APC-WRP has aimed to privilege agency, although the image of the victim has been difficult to escape. As a critique of this, APC-WRP’s manager told me: “In order to gain power and to gain legitimacy to be heard, you actually have to claim power through this narrative of victimhood. So, it's almost like a self-iterative process.” APC-WRP’s visual and graphic image is a powerful statement to their emphasis on agency. The images APC-WRP uses
in their campaigns and projects, such as “Take Back the Tech,” are of empowered women, holding USB cables as whips, as superwomen and supergirls, women who are happy, empowered, and in control. Their graphic artist, and the designer of many of these images, said in an interview: “I try to create empowering images for women’s rights organizations, and break down the victimized imagery of women, and give them some power, this is what I try to do in my work with APC, break down that narrative.”

This foregrounding of other narratives includes agency, play, and pleasure. Julie, involved in coordinating two important APC-WRP projects on violence against women online, the “MDG3: Take Back the Tech! to End Violence against Women” (2009-2011) and “End Violence: Women’s Rights and Safety Online” (2012-2014)—said during our interview at CSW59 in March 2015:

The idea of the global south is that we are starving. If the idea is that women in the global south are innovating, that we are doing amazing things, experimenting and playing, it does not fit into the development discourse. Funders do not want to fund happy Black women, no one is going to give you money if you are smiling and have a beautiful set of teeth, no! That is why it has been hard not only to talk about it [their work], but to get donors to see it as an important agenda, is that it does not fit into that narrative. We are talking about accessing the internet as a catalyst, as something to enable a range of other rights.

APC-WRP’s activism against online violence is thus more of a gateway to talk about how the internet, and digital technologies in general, can open a range of possibilities for women and other marginalized communities beyond economic empowerment. In other words, advocacy against violence is the entry point, not the ultimate objective. Julie considers that APC-WRP’s work on online violence advances more complex narratives about the relationships between women and technology in the global south. Their goal is to center feminist and social justice politics around issues of sexuality, the body, privacy, and rights (among others). In this regard, she mentioned:
This work is changing how we understand who we are in this world, our bodies, what happens between the body and the technology. It is shifting what privacy means, it is blurring the line between our age-old arguments of what is public and what is private, to the fundamentals of feminism. And I realized ‘oh shit why is no one talking about this at all?’ even in the spaces we were working in. Some people said ‘what is the point, we have no computers, no electricity.’

Julie believes that women in the “third world” continue to be framed as subjects with only material needs, while their “complex personhood” (Gordon 1997) is denied. APC-WRP’s work on violence, and agency, sexuality, and pleasure, confers complexity to the relationships between women and the technologies they use. Technology is the key word here. Technology not as a tool for economic advancement, or a magic bullet to end poverty, but rather as a tool and space with numerous dimensions including sexuality. For APC-WRP’s manager, the strategy comes in stages, and their aim is to present a more complete panorama:

In the first stage, you maybe need to understand this as poverty alleviation. And then you need to understand this as STEM. And then you need to understand this as intervening in actual women's lives and bodies. And that's where APC comes in. But eventually hopefully they all start to come together and give a fuller picture. And see this in the kind of more integrated human rights of women... in all of the human rights, from freedom of expression, to right to public participation, gainful employment, family life, information, health, so on and so forth. So, that is what I think we're kind of working to do.

To achieve their objectives, feminist activists have to make strategic decisions that should not always be considered a sign of “selling-out” or of deradicalization (Phillips and Cole 2009). Activism within the “UN-orbit” (Phillips and Cole 2009:190) demands certain compromises in order to create awareness and effect change in policy. But this is not a zero-sum game. In my research, I have found that feminist activists who orbit the UN sphere also traverse diverse contexts at different times, thus activism is fluid and contingent. Their compromises at one point might have radical potential or meanings at another. APC-WRP moves both within the transnational “UN-orbit” and the local grassroots, making the multi-directional nature of feminist activism under globalization evident (Ferree and Tripp 2006).
APC-WRP activists are critical of structural inequality, colonialism, patriarchy, misogyny, heteronormativity, racism, and capitalism. And they use this language. The activists I interviewed were all very politicized, and aware of the global north/global south power inequalities and Westernized representations of gender. This is precisely why their work attempts to contextualize violence within larger structural contexts and historical trajectories—an analysis that is absent from mainstream development discourse. The queer and feminist activist Rosa—a collaborator of APC-WRP’s “EroTICs” project—said in an interview:

Usually a lot of the discourse is about white women who are getting harassed. And liberal approaches to dealing with the problem, as if it's isolated cases, as if it's not structural, as if it's not connected, as if patriarchy is not connected to racism, or to colonialism, or to heteronormativity. So, both at the level of analysis and at the level of solutions, we find some problematic ways of dealing with these solutions. And then the fact that they're not really interested in women of the global south, who are the majority of women dealing with these issues. They mostly seem to be focused on northern women experiencing violence.

Rosa makes the links between online violence and broader structures of power and inequality clear. APC-WRP’s advocacy is consistently focused on contextualizing online violence within these structures. Thus, their work could be called “decolonizing,” according to Connell (2016). Their global advocacy and grassroots activism against online violence—from interpersonal violence to state and corporate violence through online surveillance—makes the connections between the intimate and the structural transparent. They also insist on a “southern perspective” that moves them beyond the “women and STEM” movement in the global north, for instance, which they find grounded in liberal feminist thought. Rose said that UN Women started paying attention to online misogyny recently, but that the focus is always “neoliberal” and market-oriented, meaning that they do not challenge broader structural inequalities.
So, when it's not an approach that challenges capitalist models of economy online, it doesn't get to the root of the problem. For example, having to deal with social network companies like Facebook, Twitter, and Google, whose primary concern is always profit, it becomes different to ask them to reform their policies so that women don't experience violence. Usually it benefits white women.

One of the coordinators of “Take Back the Tech” in the U.S., Mary, agrees that the global north—mostly through corporative social media platforms based in the north—dominates the conversation on violence against women online. So, APC-WRP challenges that narrative by unearthing stories in the global south. And in the global south gendered violence cannot be separated from larger structures of inequality and historical trajectories of racism and colonialism. Mary explained:

It is great that it's turning into a big conversation, but it's still very dominated by North America and Western Europe. And part of that is these major platforms. That's where they're located, that's where they're headquartered, that's where they can be held accountable. But then that just means that the stories that come out tend to revolve around people in that part of the world. And what we know is that of course women in the global south are experiencing this too, sometimes at higher rates and sometimes in different ways than women in the north are experiencing.

APC-WRP is emphatic on maintaining a perspective anchored in the south, which is critical not only of interpersonal violence but also of the corporate platforms that have also become violent and dangerous spaces for many communities.

APC-WRP also advocates for community and grassroots-based solutions to online violence, although recently they have produced research on the importance of criminalizing online violence and protecting victims. APC-WRP offers workshops, trainings, and other grassroots initiatives for women and other marginalized communities on security, surveillance, privacy, and violence. Mary and Rose, in separate interviews, agreed on the importance of community-based responses and collective power, beyond corporate regulation and legal and criminal remedies. Rose said that there are many “different strategies to resist this violence:
through community organizing, through becoming louder than the trolls, through providing support for each other, through digital security trainings, through fostering a practice of security within different communities.” She added that “a lot of the mainstream narrative is to use online violence as an excuse to censor or to regulate or to scare people or to give more control to companies, corporations.” Mary explained that APC-WRP’s advocacy on increasing feminists’—not only “women’s”—presence in internet governance structures also made their work “communal rather than individual” because the goal is to create a large community of feminists in technology.

**Uneasiness**

Some tensions around activism against online violence were evident during my research. In an interview, a veteran feminist and technology activist told me “the whole violence online thing scares women away, just when we want them to embrace technology.” Another activist said: “the violence issue is important, but I think it scares women off,” and added: “this is not an issue for all of us [working on gender and technology].” In an interview during the 59th CSW in March 2015 in New York City, a United Nations official warned me that she would not talk about the “whole violence against women online” issue because they still did not have an official stance. This, regardless of the fact that the 59th CSW had numerous high-level and side-events on violence against women online. The United Nations launched its first full report on violence against women online in September 2015, and retracted it soon after. Titled *Cyberviolence Against Women and Girls: A World-Wide Wake-Up Call*, the report was criticized by high-profile victims of online violence such as Zoe Quinn. The report was criticized mostly for its

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faulty research, for conflating trafficking with sex work and pornography, over-emphasizing legal remedies, criminalization and policing, and for being too vague and superficial in its recommendations, among other critiques. The report includes citations from the Association for Progressive Communications (APC) work, and collaborations from some well-known gender and technology experts such as Nancy Hafkin.

Within APC-WRP there is also concern. Activists were very forward during interviews. On one hand, they are proud that they have been able to advance discourse and policy related to online violence. On the other hand, they are uneasy with increasing cooptation of their work by development institutions and corporations, and the creation of a singular discourse on violence against women online. They are also worried about the absence in public discourse of fun, play, curiosity, and freedom as other possibilities between gender and technology. Julie, a crucial figure in APC-WRP’s activism on violence against women online, was very honest in our interview:

[…] in the last two years, I have been increasingly worried that we have over-privileged vawo [violence against women online], as an issue in the context of technology. And that over privilege has resulted in a few things, like we see in this meeting [CSW59], the interest around tech is violence, not around transformation and freedoms, which is what we talk about when we talk about tech. We are also responsible for this. If I can claim that vawo is on the agenda because of us, I also have to claim that freedom and transformation through tech are not on the agenda because that is a decision that we made.

Julie believes that APC-WRP has “over-privileged” violence against women online, when their intent was to open a range of conversations. APC-WRP’s advocacy on online violence has initiated transnational conversations around gender and technology that have

gone beyond simplistic economic and market-oriented frameworks. Yet development institutions have proven to be experts in the cooptation of feminist concepts and issues (Cornwall and Brock 2005; Cornwall et al. 2007; Cornwall and Rivas 2015). Recently, these institutions have started to acknowledge online violence as a threat, yet they obscure the roots of this violence. Appropriation has left out the histories, trajectories, and possibilities for transformation that APC-WRP’s activism has centralized. Julie hits on an important point when she says that online misogyny blends comfortably into global activism against violence against women:

In hindsight, I don’t think we should have done anything different, but I think the over-privilegining of vawo is not only about tech but about feminism and the women’s movement, because it’s always there, not only in the north or south, but generally, it is always being privileged and we have done exactly the same thing.

Julie argues that the future of APC-WRP is to continue to work on violence against women online, “but in a way, that centralizes women’s agency, and freedom, and the transformative potential of technology.” This is the shift that she argues needs to be the “entry point.”

Perhaps, there comes a moment when organizations that seek to remain radical need to transform their agendas. APC-WRP’s activism has been about shifting discourses, about social change and feminist politics. Their activism on violence against women online may have already served these objectives. They have had to make strategic decisions. It is only recently that “online violence” has started to resonate with development institutions. I argue that it has taken this long because it conflicts with mainstream economic and liberatory discourses on technology in the developing world. Yet I believe that online violence will also become completely absorbed into development discourse and policy.
APC-WRP’s manager is very proud of their activism against online violence, and emphasizes that it is about women “reclaiming power” over the internet and technology. But she also worries that violence might start to dominate discussions on gender and technology:

We started this work in 2005 so it's taken ten years for it to get the kind of formal recognition that it has now. And the work isn't over. I mean you only have some mention of it in policy documents here and there [...] but you still don't have this kind of overview of saying, actually, online violence against women is part of the larger rubric of violence against women. [...] So in that sense it's still something that's slowly, that's starting to be visible. And starting to have recognition. And starting to have some serious responses. And I think that is a good thing. But it cannot be the only thing.

There is sense of pride of their activism against online violence, and also a recognition that they must expand their repertoire. In this same vein, in an interview at CSW59, APC-WRP’s project associate Jane said that “focusing just on violence is unproductive.” She emphasized the power of naming as a feminist issue in technology. For instance, she believes that using the word “feminism” is a radical position. She said that although it seems that their focus has been on violence online, it has also been about security, privacy, voice, the power of storytelling and communication, and transformation of unequal power relationships and inequality. Frida, a long time feminist and tech activist who has been very involved with “Take Back the Tech” campaign, believes that the organization should focus on the Feminist Principles of the Internet because “it's a more positive frame of the way you want to carry out the work [...] but I think that's a really hard thing to fund sometimes, maybe I'm wrong.” Frida said in an interview:

I mean if you look at those principles, it's a more positive frame of the way you want to carry out the work, you're not starting out from the negative, from the prevention point—you either cross your arms, cross your legs, protect yourself—you're not from a defensive pose. And so that's the type of work we'd really like to be doing. But I think that's a really hard thing to fund sometimes. But maybe I'm wrong.

The *Feminist Principles of the Internet* are part of APC-WRP’s future agenda because it includes a range of topics regarding gender and technology. The feminist principles represent a shift in their political strategies and activism on gender and technology in the developing world. These principles are less palatable to development and funding agencies, yet true to APC-WRP’s feminist politics.

*Imagining a Feminist Internet*

The *Feminist Principles of the Internet* is an evolving document that was collectively authored by 50 activists who met at APC’s “Global Meeting on Gender, Sexuality, and the Internet” in Malaysia in 2014. It builds heavily on their research from the “EroTICS” project on gender, sexuality, and agency online. It was then expanded and transformed in a second meeting in Malaysia in 2015. The document is an invaluable roadmap to imagine a feminist internet. It covers issues of access, resistance, violence online, the corporatization of the internet, the importance of open source platforms, and sexuality, among others. The *Feminist Principles* are a step towards integrating activism on online violence with other important issues, such as agency, sexuality, play, and consent. In their website, they explain that the Feminist Principles of the Internet provides “a framework for women's movements to articulate and explore issues related to technology. They offer a gender and sexual rights lens on critical internet-related rights.” And APC-WRP’s idea of a feminist internet,

[...] works towards empowering more women and queer persons – in all our diversities – to fully enjoy our rights, engage in pleasure and play, and dismantle patriarchy. This integrates our different realities, contexts and specificities – including age, disabilities, sexualities, gender identities and expressions, socioeconomic locations, political and religious beliefs, ethnic origins, and racial markers. 52

52 Taken from the introduction of the *Principles*: http://feministinternet.net/en
It is important to understand that issues regarding women’s (and other marginalized communities) sexual pleasure disrupts development paradigms (Jolly et al. 2013). This is why activism around sexuality, pleasure, and technology may be APC-WRP’s most radical contribution yet. In a 2010 essay on the language of development, gender and development scholar Andrea Cornwall argues that “pleasure,” for instance, is a term that provokes tremendous discomfort among development actors, yet suspects that if incorporated it might also become deradicalized:

As a former bilateral donor commented, 'the very idea of talking about pleasure in the context of development makes me very uncomfortable'. This is precisely what is needed, it might be argued: words that provoke discomfort, that shake people up. Talk of 'pleasure' takes us beyond monochromatic representations of abjection, reminding us of the humanity of those whose lives development agencies would wish to improve. Pleasure-based approaches suggest more prospect of enhancing well-being and saving lives than current development models (Jolly 2006). But there is equally no guarantee that as a result of its incorporation, pleasure would not become tomorrow's freedom. (Cornwall 2007:480)

Similarly, the “EroTICs”\(^{53}\) initiative “aims to narrow the gap between political assumptions and a better understanding of content and ‘harm’ based on women’s real experience of sexuality online” (EroTICs website). This project—a two phase (2008-2011; 2012-2014) exploratory multi-country research project—also attempts to change the conversation on gender, sexuality, and technology by emphasizing not only how important the internet is for diverse sexual communities, but also how regulation, surveillance, heteronormativity and “fear” can specifically harm these communities (APC 2011). Rose, who wrote the section on Lebanon for the 2011 EroTICs research report, explained in our interview:

\[\text{[The aim of the Erotics Project is] to explore how sexuality was actually framed in reality outside of this patriarchal, religious, imperial discourse. […] And so the research looked at women's usage of the internet, it looked at sexual expression, particularly at marginalized sexual expression. So, I remember in Brazil there was research around the BDSM community [Bondage and Discipline, Sadism and Masochism], in Lebanon it was the LGBT community, in India it was young women in urban areas using the internet to}\]

\(^{53}\) Erotics project website: http://erotics.apc.org/about-erotics
talk about their sexuality, in South Africa it was looking at lesbians and chat rooms. So, we actually found through the research that actually sexual minorities and women and young people were using the internet to explore questions around their sexual identities and their desires.

Rose confirms the need to do work on sexuality, desire, pleasure, and technology that goes beyond policing sexuality and over-regulation. This is part of the balance a transnational organization and network like APC-WRP is trying to achieve: between funding agencies and local member organizations, and between the strategic (and important) awareness of online violence in the global south while also introducing sexual politics on technology. This delicate balance is difficult to achieve, as I analyze in the next section on the possibilities and challenges that APC-WRP’s activism encounters with one of its “nodes”: Colnodo, in Bogotá, Colombia.

Transnational and Local Activism on Online Violence

In Colnodo, activism on violence against women online has landed rather awkwardly. In a country ravaged during decades by a violent conflict, online violence is not yet considered a priority. Guerrillas, paramilitaries, state violence, corruption, narcotráfico, massacres, internal displacement, sexual violence, indigenous marginalization, are just some of the dimensions of Colombia’s conflict. The women’s movement has led the campaign against violence in the country, including intimate partner violence, state violence, and conflict-related violence. They continue to confront numerous challenges after the historic peace accords between the FARC (the guerrilla Revolutionary Armed Forces of Colombia) and the government in 2016 (Lamus Canavate 2009; Meertens 2016; Mora and Lara 2015; Victoria and Melo 2010). Understandably, social movements do not consider online violence a priority. These are some of the dilemmas of transnational and local alliances (Alvarez 2000; Thayer 2010). In this context, the issue of online
violence unleashes additional tensions between the local and the global. This section will focus on some of these tensions.

Colnodo, founded in 1994 and whose founder and director, Julián Casasbuenas, is the chair of APC’s board (2014-2016), is an internet pioneer in Latin America. Their Unidades Informativas Barriales (UIBs: units of community information) became the model of the now famous state sponsored telecentros—centers that offer access and other technology-oriented services in communities. The UIB project started in 1997 in poor urban communities in Bogotá, administered by community-based organizations and teams led by women.54 This is very important, not only because it was mentioned frequently in interviews, but also because it gives a sense of the commitment of Colnodo to making digital technology widely available. Colnodo is still active in grassroots training in technological appropriation and adoption with women and other communities, such as indigenous, afro-descendant, urban and rural low-income, and LGBT communities. They also participate in transnational internet policy at the regional and global internet governance forums, and are advocates for more inclusive technology policies in Colombia. Colnodo covers numerous areas of action on local, national, and transnational scales. Colnodo’s staff—similar to Sulá Batsú members—have had to negotiate their grassroots work as an APC node. Organizations that are nodes are official APC members that share APC’s vision and mission. Members participate in APC’s events and meetings, and can be elected to the two main governing bodies: the board of directors—which makes policy and managing decisions—and the “council,” which is in charge of deciding the strategic priorities and electing the board members for three year terms.

54 http://www.uib.colnodo.apc.org/
As we have seen, violence against women online is one of APC’s, specifically APC-WRP’s, priorities and it seems like an emerging topic in the Latin American region. Sylvia, a project associate of APC-WRP, mentioned in an interview that in Latin America feminist activists had not fully embraced the violence against women online issue. Similarly, a member of Sulá Batsú mentioned that online violence was not a priority in Costa Rica. She said that the coop was more focused on “appropriating technology”—which means the ways in which communities appropriate technologies for their own objectives—than on talking about its dangers. She remarked:

It still seems very important to us to focus on the production of local content. We, as poor countries, are not producing content for the network, we continue to be mostly consumers, for me this as important, to strengthen the local economy with the technology remains as important as the issue of privacy and security. Moreover, I do not like the approach given [to online violence], it is an approach that scares off […].

She emphasized that Sulá Batsú’s objective was on creating technology, specifically supporting women to become entrepreneurs and scientists. A focus on online violence, would only instill fear. Yet, the coop is aware of issues of online privacy and surveillance, and have integrated trainings on online security in its work with marginalized communities. It is interesting to note that although activism against violence against women has gained tremendous recognition at all scales—transnational, regional, and local—the fate of online misogyny has not followed suit.

The coordinator of Colnodo’s women’s digital security project at the time of this research recalled that when APC-WRP received the funding for the FLOW project that included Colombia as a case study, they started to talk to women’s and feminist organizations in Colombia to see if online violence resonated with their work. It did not. She said that it “was a constant challenge to be working on this issue”:

These organizations have worked a lot on how the armed conflict has affected women, but the issue of technology has not ever been important, because it is a new analysis. So
we have not have been able to help these women who have been displaced, whose partners have been killed, who are in cities waiting for their lands to be returned, and now we say 'look, there is also digital violence'…

In the Colombian context, online violence is not yet a priority. But Colnodo’s close relationship with APC—which includes receiving specific funds for projects on online violence—has influenced them to continue to work on this topic. In 2016, Colnodo produced a book, with funds from the APC-WRP, with four case studies of online violence against women in Colombia. In early 2017, Colnodo launched the open-source mobile application “Piensa en TIC” (“Think about Yourself,” playing with the Spanish acronym of Information and Digital Technologies) with digital security tips and tools for young women. Colnodo’s Director of Appropriation, Olga Paz, explains the objective of the app (designed by Colnodo with APCs support) on the website:

We are interested in sensitizing women, especially young women because of the level of participation they have in the digital world, about the risks they can face in these spaces […] It is not a matter of demonizing new technologies, but to look for answers and actions to respond to a phenomenon that we see increasing every day with complaints of new cases. So that women who face these situations, can act and defend the right to build and transit these digital spaces without discrimination and violence against them.55

They have also conducted various Feminist Technology Exchanges—funded by APC—that brings feminist activists together for intensive workshops on online privacy and surveillance. The goal of the feminist exchanges is to strengthen women’s movements’ knowledge and dexterity on these issues. But their grassroots work in this area has been a challenge. This does not mean that violence on the internet is not a problem in Colombia, and it is definitely emerging as yet another challenge women and other marginalized communities have to face. But it also presents a tension for feminist and technology activists alike, between fear and embracement, and also between the global and the local.

55 Taken from Colnodo’s website: http://colnodo.apc.org/novedades.shtml?apc=k-xx-1-&x=11259
Conclusion

In this chapter, I have argued that that online violence challenges the linear and unproblematic narrative that technology equals progress and empowerment. Online violence is a threat to emancipatory technological development discourses. I found that the Women’s Rights Programme of the Association for Progressive Communications, a global pioneer in activism against online violence, challenges economic approaches by integrating other dimensions of the relationships between gender and technology in the global south. This has opened the door to discuss issues regarding colonialism and structural violence, as well as agency, pleasure and sexuality. Their local and transnational activism against online violence connects structural and interpersonal violence against women and other communities.

This work has been groundbreaking, yet its feminist radical roots seem to be waning as it emerges in development discourse as another box to check in the global struggle against inequality. Although they continue to do work against online misogyny, APC-WRP has amplified their tactical repertoire and included issues that are more difficult to accommodate in the development paradigm, such as sexuality, pleasure, and play. Their *Feminist Principles of the Internet* continue to criticize neoliberal economic discourses on gender and technology in the developing world, and also open conversations on technology and pleasure. APC-WRP’s feminist activism continues to defy mainstream discourse even when the organization remains an important actor in that terrain.

Activism against online violence in the developing world has confronted challenges on two levels: on the transnational UN-sphere as well as on the local sphere. The case study of Colnodo’s advocacy on online misogyny and the resistance it has encountered with local feminist movements in Colombia represents an instance of these challenges on the local level.
Online violence is not a priority in a country that has been ravaged by violence, and where women and other marginalized communities—indigenous, poor, African-descendant—have been particularly affected. In the case of Sulá Batsú, on the other hand, resistance to working on online violence is in part because it might frighten women away from technology, and jeopardize the cooperative’s focus on entrepreneurship and empowerment. I believe this is not a factor for Colnodo—a pioneer in technological appropriation—due to their close connections with APC. In sum, these varied responses to activism against online violence point to the complexity of the issue.

This chapter unravels the dilemmas of development frameworks focused on connections between emancipation and entrepreneurship through digital technologies analyzed in Chapters 4 and 5. It presents some of the challenges and re-appropriations in the making of the

technological woman.

In the next and final chapter, I conclude with the broad implications of the dissertation and suggestions for future research.
Conclusion

The third world technological woman has been the central thread of this dissertation. I first discovered her in the pages of dozens of reports on gender and technology produced by the United Nations, World Bank, and technology corporations. Technology is the frontier of the network society, and women are ideal conquerors of this frontier. “Third world” women may lead simple lives, according to the reports, but they are also needed as refined economic neoliberal actors. This woman was full of tremendous potential and had the necessary talent, drive, and ability to change the world. Dreams of the future, of progress and hope, had been deposited in her. Technology—specifically digital technologies (hardware, software, mobiles, internet)—would help her succeed in many facets of her life. Technology could help her be a better mother, community member, citizen, entrepreneur, and worker in general. Moreover, her “natural” connections to place and marginal/indigenous knowledges became ripe for technological intervention. This discourse obscures the ways in which development and neoliberal politics have produced many of the inequalities this technological woman is supposed to overcome.

I continued to look for this woman, and found her, or versions of her, in other places. I found that she was also a central figure in activism around issues of gender and technology. I wanted to understand how these activists envisioned this woman. Was she still considered the savior of the developing world? The key to a new bright future? The ultimate commodified figure? The ideal mother and wife? The exemplary entrepreneur? The rational and emotional woman? The answer is yes and no, to all of these questions. I found that activists use numerous strategies and tactics to reimagine this technological woman. Sometimes, she conforms to the scripts, and other times she defies them. Most times, it’s both. I found a cooperative focused on
women, technology and entrepreneurship that practiced politics of horizontality and redistribution, while building a community based on care and love that was defiant and collective to its core. I found transnational feminist activists working on online violence against marginalized communities, while advancing conversations on technology, sexuality, and pleasure. I also found tensions around the issue of online violence, from the corridors of United Nations offices to non-governmental organizations.

*Dreaming the Future: The Gendered Technopolitics of Development* has focused on exploring and understanding narratives and practices on gender and technology in the developing world, with a focus on Latin America. The main research questions of my investigation were: 1) In what ways are gender, development, and the uses of technology being framed by development institutions and understood on-the-ground? 2) What are the origins, trajectories, and consequences of these interactions? My dissertation makes a contribution to the field of gender and development by: 1) expanding debates on appropriation and depolitization through the study of both macro-institutional discourse and organizational micro-politics 2) examining technology as a central locus of gender, development, and power 3) explicitly theorizing violence (in this case online) as inherent to gender, development, and neoliberalism 4) bringing Foucauldian, feminist, and decolonial theoretical frameworks together to understand the strategies of control and discipline, as well as of contestation, of discourses and practices on technology.

**Implications: Technology, Gender, and Power**

My research analyzes the ways in which digital technologies are being used as tools and spaces of power. I examine some of the relationships between gender and digital technologies within contexts in which technologies are mostly analyzed in terms of access, divides, and gaps. The study of access and gaps continues to be important, indeed, yet understanding the ways in
which institutions, as well as women and other communities, are conceptualizing these technologies in the developing world offers insights into relationships beyond use, efficiency, and survival. The tendency in the literature has been to study digital technologies in the developing world using economic frameworks, yet there is so much more to the relationship between marginalized communities and technology beyond instrumental paradigms. Technologies fuel dreams and desires, pain and suffering, as well as ways of knowing and being. Marginalized communities particularly, intersected by class, race, gender, sexuality, religion, will continue to be impacted in diverse and numerous ways by technological ubiquity. In addition, these communities are, and will continue, to remake, reimagine, and interrogate their relationships with digital technologies. My research advances a myriad of possibilities for understanding and theorizing feminist technopolitics—concerned with race, sexuality, gender, class, and the environment—in the developing world when the stakes are high for both economic development and feminist and social justice politics, more so in times of increasing inequality and technological ubiquity.

In this context, intimacy offers a conceptual framework that deepens our understandings of numerous kinds of relationships—such as between gender and digital technology—and a conceptual platform to connect these “personal” and “interpersonal” relationships with broader institutional and transnational processes. Incorporating the study of the “intimate” in our empirical observations as well as in our theoretical analyses broadens simplistic and flat portrayals of the communities we study. Intimacy is inherently messy, and thus—as a theoretical lens—has the capacity of complicating the categories we have defined before entering the field, as well as the predetermined notions of how we are supposed to solve our analytical conundrums. In my research, close relationships between activists, between activists and the
communities they serve, and between women and digital technologies, complicates rigid conceptions of neoliberal individualist logics focused on entrepreneurship, of how third world women relate to digital technologies, and of the meanings of feminist politics. Intimacy also makes visible the threads that extend between our most personal relationships and emotions and broader social, political, economic and cultural politics. Once intimacy is incorporated in the analyses, for example, the study of development cannot only be about economics and efficiency, or the study of digital technologies only about access and infrastructure. At the same time, examining intimacy provides a ground to explore how institutions attempt to shape subjectivities and human relationships for specific agendas. The implications of connecting and theorizing these realms is critical particularly in research on digital technologies in moments of both an increasing focus on market-based approaches to inequality and of state and corporate diffusion of mechanisms of surveillance and control. Appropriation and depolitization of feminist political concepts, principles, and values also continues to be a major concern for feminist scholars and activists (Cornwall 2007; Cornwall and Rivas 2015; Fraser 2013). Feminists have been ambivalent about the consequences and meanings of institutional appropriation of feminist principles and values. On one hand, appropriation has centered important struggles and populations in discourse and policy. On the other, the absorption of these concepts and values furthers specific agendas that can be antithetical to the social justice and feminist objectives that birthed them. Appropriation, as this dissertation shows, is persistent. Development discourse and policy seem to often swallow up and recycle forms of critical and political thought, even “anti-development” (Elyachar 2002). But my research has also demonstrated that appropriation is contested and works in multiple directions, from “above” and from “below.” Social justice activists reimagine their politics and practices in light of new and increasing forms of
appropriation. They are also strategic and speak the language of mainstream and institutional politics, sometimes forming “uneasy alliances” (Orloff, Raka, and Savci 2016). Feminist scholars should thus remain attentive to debates about appropriation and re-appropriation, and the macro- and micro-politics at hand. Re-appropriation can occur sometimes in the subtlest of forms, as in the tinkering and tweaking of hegemonic discourses and politics to serve transformative principles.

Another important implication for both feminist politics and scholarship is to understand that violence (racism, misogyny, heteronormativity, ecological devastation, poverty) is constitutive, and not a consequence or a by-product, of neoliberalism, development, or modernity (Lugones 2007; Mignolo 2000, 2011; Quijano 2000). Violence is formative to these institutions, politics, and policies. This is particularly critical when examining discourses (and policies) that proclaim development, progress, modernization, and security. These discourses and policies—with their happy endings and linear stages of progress—contain within themselves various forms of exclusion that are built upon histories of violence. This enables us to understand the ways in which violence was, for instance, always already in discourses that extolled women’s “nimble fingers” of the maquiladoras (Fregoso and Bejarano 2009; Largarde y de Los Ríos 2009), the heroines of microfinance (Roy 2012), or the third word technological woman. Beyond the inherence of violence in discourse, violence also materializes in very concrete forms in the lives of the women with “nimble fingers” of the maquiladoras, the heroines of microfinance, and the third word technological woman through online abuse and surveillance, for instance. The connections among these various forms of violence must be theorized. To be clear, violence against women is prominent in both scholarship and policy (thanks to feminist activism). There is also a body of literature that links interpersonal and institutional and historic violence in the
developing world. I am not saying that violence is invisible in the literature. I am saying that although empirically pervasive, it is not necessarily theorized as part and parcel of these broader processes.

Amid the importance of theorizing violence as constitutive of the information society, my research also shows that it is crucial to explore other kinds of relationships between gender and digital technologies in the developing world such as pleasure and play. This is more than an empirical finding of my dissertation. It is also theoretically significant. Pleasure and play break away with instrumental visions and narratives of how “third world people” are supposed to relate and interact with these technologies. Beyond economic development (including promoting entrepreneurship), survival, and progress, there is a vast field of possibilities that subvert historical notions of “third world” women’s sexuality as abject and disease-ridden or promiscuous and fetishistic. “Third world” women’s control of their eroticism and pleasure is an area ripe for scholarly examination, and digital technologies (through sexting, webcams, internet dating, etc.) offer an innovative and contemporary field for this exploration.

This dissertation also has implications beyond the “developing world.” Development frameworks are being used to understand problems in the “developed world,” as inequality, poverty, and violence afflict communities across the globe. These frameworks also contribute to understand these communities’ strategies and tactics of survival, resistance, and adaptation. My research sheds light on particular neoliberal politics in times when technology has a rising presence in people’s everyday lives around the world. The cult of entrepreneurship, and more specifically women’s entrepreneurship, and the importance of access to financial capital is also growing across the global north and south alike. State and corporate technological surveillance, as well as ethical concerns about “big data,” are also pervasive in the current political landscape
in the United States and Europe. Research on the implications for marginalized communities is critical when differences along lines of nationality, religion, gender, race, sexuality, and disability are increasingly considered threats to national and global social, political and economic stability and prosperity. Research that examines the possibilities and challenges embedded in discourses and practices of development, progress, and security and safety, among others, will continue to be critical.

Besides this dissertation’s theoretical contribution to the field of gender and development, it also contributes to women’s activism on issues of gender and digital technology. The findings shed light on the ways in which development agencies are appropriating feminist concepts and gender tropes to further specific socioeconomic agendas. The findings reveal some of the tactics of power and discipline that underline emancipatory discourses on technology. At the same time, I show that activists employ a series of creative strategies to work through or against these disciplinary tactics. It is important to create coalitions across differences that foster collectivized practices around digital technologies built on horizontal relationships, economic redistribution, the open exchange of knowledge, and care and solidarity. Critiques of colonialism and neoliberalism should be foregrounded to understand the social, economic, and political trajectories of technologies in the network society. Activism against online violence—including state and corporate surveillance—could make explicit the connections between intimate and structural violence, and propose solutions beyond criminalization and regulation. It is also crucial to continue to integrate a politics of pleasure to broaden the conversations and grassroots mobilization against online violence.

**Moving Forward**
This research also leads to further questions. One of these questions is on the role of the state on issues regarding gender, technology, and development. I examined broader, transnational institutional discourses, and their local translations and contestations. State discourses, practices, and policies also intervene in the making, and unmaking, of the *third world technological woman* and in local and regional organizational practices. The three organizations under study in this dissertation engage with the state in numerous ways, mostly through funding for projects or consultancies and advocacy around gender and technology. Sulá Batsú and Colnodo, specifically, have also closely worked with municipal governments in Costa Rica and Colombia, respectively. Both organizations have for long offered digital trainings, workshops, and capacity-building, for diverse communities (women, men, indigenous, afro-descendant and queer communities) in urban and rural areas under the auspices of various municipalities. This means that they navigate a range of transnational, regional, and local spheres, and these negotiations also shape their work. These analyses would further enrich knowledge on the intersections and tensions between mechanisms of power as well as of negotiation and contestation on different scales.

The increasing corporatization of development is another significant trend that should be further examined. Major Silicon Valley technology corporations, such as Google and Facebook, have in recent years launched initiatives in the area of gender and technology and started to fund grassroots projects in Latin America including two organizations studied in this dissertation. The funds, in these two cases, are for projects that focus on training in digital technologies for supporting women and youth’s entrepreneurship. It will be critical to study the rationalities and tactics used by these corporations under the guise of women’s “empowerment,” and the
consequences and meanings for organizations and activists as well as participants of these projects.

Another area for future research could be on the implications of online violence, including corporate and state surveillance, for women and other marginalized communities in the developing world. Questions of race, gender, class, sexuality, and ability, together with neoliberalism, corporatism, and colonialism, should be central to these analyses in order to understand both the intimate and systemic forms of violence at hand. Online violence and surveillance are subverting emancipatory discourses on the internet as the great equalizer, and are emerging as focal points of feminist activism in the global south (Gurumurthy and Chami 2016, 2017; Shephard 2016). Online violence against women, for instance, combines issues of control and regulation, privacy, and security, and also of resistance and contestation. It would be interesting to compare organizations that are doing similar work across regions and localities to understand the numerous challenges of online violence and surveillance as well as the possibilities for feminist politics. Another important research area to pursue is to explore why online violence has not been incorporated as a central issue for development institutions in contrast to violence against women in the developing world.

Comparative research always sharpens our analyses. I examined discourses that target women in the developing world because I was interested in understanding the significance and implications of the third world technological woman. But it would be interesting to use an intersectional lens to compare policies and programs for minority and low-income girls and women in technology and science in the United States and Europe with Latin America and the Caribbean. In the United States, for example, the recent push to integrate women, and specifically women of color, into technology and science fields resonates with neoliberal
development plans in the developing world that have appropriated feminist concepts and political claims and are focused on individual economic progress. It is therefore important to examine and compare the underlying mechanisms of exclusion that are also being deployed in the global north with women of color. This comparative analysis will seek to more fully understand how training women in technology contains in its fold subtle, and not so subtle, forms of inequality.
Appendix A: Interview Questionnaire

I. Activists

Please tell me about your background, tell me your story.

Please tell me about your experiences with information technologies.

How did you get interested in working with women and technology?

Activism & Information Technologies

What are the objectives, strategies and goals of your organization?

How is the organization funded?

How do funders influence the organization?

Which organizations/agencies/corporations have most influence on your work?
  Why?

What is your most important campaign, policy work, and issues?

Training, Workshops on Gender & Information Technologies

What is the objective of training women how to use technology and the Internet?

What are the potential consequences of teaching/training women ICT skills?

Why are information technologies important for women?

What do information technologies offer women?

What do women offer to the production and development of technology?

What kind of future do you expect that the Internet will bring for women?

Feminism

Do you consider yourself a feminist? Since when?
  Why, or why not? What does feminism mean to you?
Do you identify your work as “feminist”? Why, or why not? In what ways? Since when?

Please tell me three words on how you would describe the relationship of ICTs with women. Is there anything else you want you tell me about?

II. Participants of workshops and trainings

Please tell me about your background, tell me your story.

Please tell me about your experiences with information technologies.

Why did you sign up for these trainings?

Please walk me through the training/workshop

How have these workshops influenced you?

Please give me the three top examples of how technology influences your life.

What do you expect from these technologies?

Please tell me three words on how you would describe the relationship of ICTs with women

Is there anything else you want you tell me about?

Focus Group TICas Costa Rica

Why did you decide to study in the field of science and technology?

Why did you decide to participate in these workshops?

How have these workshops influenced you?

What do digital technologies, or the study of S&T, offer you?
    What do you think it offers to women?

What do you offer to the production of technology?
    What can women offer to the production of technology?

What are your expectations? Your dreams?
Do you identify as a feminist? Why or why not?

Please tell me three words on how you would describe the relationship of ICTs with women.

Is there anything else you want you tell me about?

**III. UN/State/Corporations/Officials**

In what ways is it important for women to learn how to use digital information technologies?

What are the objectives of your gender and technology programs?

What are your strategies to reach these objectives?

What is your vision on gender and technology?

What are the particularities of your work on gender and technology in Latin America and the Caribbean?

How do you see ICTs related to development?

How does gender fit in?

What kind of future will ICTs bring for women in the region?

Do you consider yourself a feminist? Since when?
   - Why, or why not? What does feminism mean to you?

Do you identify your work as “feminist”?
   - Why, or why not? In what ways? Since when?

Please tell me three words on how you would describe the relationship of ICTs with women.

Is there anything else you want you tell me about?
Appendix B: Demographic Questionnaire

Your nationality:
Your age:
Your gender: □ Man  □ Woman  □ Other □ Prefer not to identify
If Other, please specify:
How would you identify yourself in terms of class position?
□ Working class  □ Middle class  □ Middle-Upper class  □ Upper class □ Prefer not to identify
How would you identify racially/ethnically? □ ______ □ Prefer not to identify
Your Profession:
Your position in the organization:
How long have you worked at the organization?
What is your highest level of study?
□ Baccalauréat
□ Licence (Indicate specialty): __________________________________________
□ Master (Indicate specialty): __________________________________________
□ Doctorat (Indicate specialty): ________________________________________
□ Other (Indicate specialty): ___________________________________________

Comments:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
# Appendix C: List of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Name</th>
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<tbody>
<tr>
<td>CEPAL</td>
<td>Comisión Económica para América Latina</td>
</tr>
<tr>
<td>DAW</td>
<td>United Nations Division of the Advancement of Women</td>
</tr>
<tr>
<td>ECLAC</td>
<td>United Nations Economic Commission for Latin America and the Caribbean</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<tr>
<td>ILO</td>
<td>International Labor Organization</td>
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<tr>
<td>ITU</td>
<td>International Communication Union</td>
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<tr>
<td>USAID</td>
<td>United States Aid for International Development</td>
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<tr>
<td>UNCSTD</td>
<td>United Nations Commission on Science and Technology for Development</td>
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<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific, and Cultural Organization</td>
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<td>UNICEF</td>
<td>United Nations International Children's Emergency Fund</td>
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<td>UN Women</td>
<td>United Nations Women</td>
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<td>WSIS</td>
<td>World Summit on the Information Society</td>
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## Appendix D: List of Reports Coded

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<th>No.</th>
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<tr>
<td>3</td>
<td>United Nations Women</td>
<td>1995</td>
<td>Beijing Declaration and Platform for Action; Beijing +5 Political Declaration and Outcome</td>
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<td><a href="http://www.unwomen.org/~/media/headquarters/attachments/sections/csw/pf">http://www.unwomen.org/~/media/headquarters/attachments/sections/csw/pf</a> a_e_final_web.pdf</td>
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<td>9</td>
<td>United States Aid for International Development (USAID)</td>
<td>2001</td>
<td>Gender, Information Technology, and Developing Countries: An Analytic Study</td>
<td>Nancy Hafkin and Nancy Taggart</td>
<td><a href="pdf.usaid.gov/pdf_docs/Pnacm294.pdf">pdf.usaid.gov/pdf_docs/Pnacm294.pdf</a></td>
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<td>16</td>
<td>Food and Agriculture Organization of the United Nations (FAO)</td>
<td>2003</td>
<td>Revisiting the &quot;Magic Box&quot;: Case studies in local appropriation of information and communication technologies (ICTs)</td>
<td></td>
<td><a href="http://www.fao.org/3/a-y5106e.pdf">www.fao.org/3/a-y5106e.pdf</a></td>
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<td>23</td>
<td>UNESCO and Gender Advisory Board UNCSTD</td>
<td>2004</td>
<td>Guidelines for Gender Mainstreaming in Science and Technology</td>
<td></td>
<td><a href="unesdoc.unesco.org/images/0013/001396/139681eo.pdf">unesdoc.unesco.org/images/0013/001396/139681eo.pdf</a></td>
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<td>24</td>
<td>United Nations Division for the Advancement of Women (DAW) and Department for Economic and Social Affairs</td>
<td>2005</td>
<td>Gender equality and empowerment of women through ICT</td>
<td></td>
<td><a href="www.un.org/womenwatch/daw/public/w2000-09.05-ict-e.pdf">www.un.org/womenwatch/daw/public/w2000-09.05-ict-e.pdf</a></td>
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<td>28</td>
<td>Gender Indicators in Science, Engineering and Technology: An Information Toolkit</td>
<td>2007</td>
<td>Sophia Huyer and Gunnar Westholm</td>
<td>unesdoc.unesco.org/images/0015/001504/150434e.pdf</td>
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<td>32</td>
<td>Information and Communication Technologies for Women’s Socio-Economic Empowerment</td>
<td>2009</td>
<td>Samia Melhem and Nidhi Tandon</td>
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<td>44</td>
<td>United Nations Economic Commission for Latin America and the Caribbean (ECLAC)</td>
<td>2013</td>
<td>Santo Domingo Consensus</td>
<td>n/a</td>
<td><a href="http://www.cepal.org/cgi-bin/getprod.asp?xml=/12conferencia/mujer/noticias/paginas/5/49995/P49995_5.xml&amp;base=/12co">http://www.cepal.org/cgi-bin/getprod.asp?xml=/12conferencia/mujer/noticias/paginas/5/49995/P49995_5.xml&amp;base=/12co</a></td>
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Works Cited


ECLAC. 2004. Mexico City Consensus. 9th session of the Regional Conference on Women in Latin America and the Caribbean: Economic Commission for Latin America and the


