

**CREATIVE TRANSFORMATION AND THE KNOWLEDGE-BASED ECONOMY:
INTELLECTUAL PROPERTY AND ACCESS TO KNOWLEDGE UNDER
INFORMATIONAL CAPITALISM**

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ABSTRACT

This dissertation contributes to critiques of informational capitalism by analyzing the role intellectual property (IP) law plays in the appropriation and commodification of knowledge. Using an interdisciplinary framework rooted in the critical political economy of communication and critical legal studies, this dissertation focuses on how IP law is used to appropriate knowledge as a commodity and support accumulation in a so-called knowledge-based economy, better understood as informational capitalism. Informational capitalism is legitimated by neoliberal, libertarian, and technologically-determinist beliefs, which I demonstrate to be fallacies that support political economic concentrations and inequitable processes of commodification, spatialization, and structuration. International organizations and governance regimes, such as the international trade-based IP system, diffuse these beliefs and thereby legitimize practices that remove knowledge and information from their social contexts.

This dissertation propounds the use of a knowledge/information dialectic to highlight the mutually constitutive relationship between knowledge-based resources and informational assets. As I demonstrate, digital and peer-based production alternatives challenge IP law by highlighting the socio-cultural aspects of knowledge/information necessary for commodification to occur. Such alternatives represent an emerging informational politics responding to the inequities of informational capitalism. Using Karl Polanyi's double movement thesis, I focus on alternative practices of knowledge production and management as counter-movements to IP seeking to support a greater variety of socio-cultural concerns and more equitable political economic structurations.

In particular, through a critical analysis of the Access to Knowledge (A2K) Movement (an umbrella term covering various civil society and non-Western approaches to IP), I demonstrate how informational politics simultaneously resist and extend the economically reductionist and technologically determinist fallacies they purport to oppose. By tracing the emergence of the concept of A2K and performing a critical discourse analysis of key primary and secondary Movement texts, I show it to be a counter-movement that concurrently opposes and reinforces key neoliberal, libertarian, and technologically-determinist assumptions. I conclude that human rights-based discourses and human capability approaches to development provide alternative normative frameworks that oppositional movements might use to address the political economic inequities posed by IP-based informational capitalism.

DEDICATION

To my friends, family, and loved ones
for all of their support and patience
—and to Bob Dylan,
for the soundtrack to life.

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According to the peer-produced *Wikitionary*, the word “acknowledge” is “a blend (with a parasitic c slipped in) of Middle English *aknow* (from Old English *oncnawan* (‘to understand’), itself from *on* with *cnawan* (‘to know’) and *knowlechen* (‘to admit’)” (<https://en.wiktionary.org/wiki/acknowledge>). It is only fitting, then, that I admit those who have influenced this project and give my genuine thanks to the relationships that helped me to understand and to know what I do. All errors and omissions are my own.

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*Joseph F. Turcotte
Toronto, ON
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INTRODUCTION

The emergence and mass adoption of new communications technologies often distinguish turning points in established orders, helping to usher in social, political, economic, and cultural transformations (cf. Innis, 2007; Wu, 2010). For example, the arrival of electronic, networked information and communications technologies (ICTs) in the late 20th Century coincided with research and analysis heralding (and bemoaning) the shifts these new technologies would enable—or the havoc they would wreak (cf. McLuhan, 2003; Postman, 1986; 1993). The emergence of the Internet and the World Wide Web as increasingly mainstream technologies trumpeted the dawn of a so-called new “digital age” (Tapscott, 1996; 2015). However, neither the radically transformative social and economic possibilities nor the crises envisioned during the 1980s and 1990s have materialized (Szoka and Marcus, 2010). Instead, the contemporary situation – at least in so-called developed parts of the world networked and connected to this vast technological infrastructure – extends prior historical and political economic circumstances, albeit with some profound underlying variations.

This dissertation examines and analyzes the changes associated with the rise of a digitally networked transnational economy to ascertain how political economic and socio-cultural processes and structurations are being re-shaped by legal reforms that govern the management of knowledge and information. In particular, I examine how the global expansion, “deepening,” and “consolidation” of intellectual property (IP) law (May and Sell, 2005)¹ constitute legal changes

¹ Political economist Christopher May and international relations scholar Susan K. Sell (2005) argue the later half of the 20th Century and early 21st Century have seen a resurgent emphasis on the private property rights afforded by IP law through international trade agreements and provisions, extending the scope and duration of these rights as well as the subject matter to which they can be applied.

that privilege the economic concerns of rights holders at the expense of other social and political considerations (Coombe, 1998a; Coombe and Turcotte, 2012a). Imbricated within a technologically mediated milieu, legal processes and political-economic structurations evolve in tandem (Jessop, 1995). IP has become increasingly politicized with tensions arising between holders of private economic rights and groups who argue these laws restrict the social and communicative acts necessary for social, cultural, and political participation within pluralist liberal democracies (Haunss, 2013; 2011; Haunss and Shadlen, 2009). These conflicting positions exist in a dialectic relationship, within which there “are different elements but not discrete, fully separate elements. [And] there is a sense in which [one] ‘internalizes’ the others without being reducible to them” (Fairclough, 2001: 122-123; see also, Harvey, 1996). Each “side” of the debate resists and (re)incorporates aspects of the other’s position as socio-cultural and political economic life “evolve” concurrently: the conflicting positions of stakeholders exist simultaneously, influencing the possibilities for change as well as its limits.

Economic historian Karl Polanyi provided a lens for interpreting such political economic transformations over 70 years ago, by tracing the social and political economic changes that historically emerged in tandem with the establishment of a market-based economy in Great Britain in which economically oriented considerations and concerns became the governing principles of social and political life (1944[2001]). In *The Great Transformation*, Polanyi argued that these political-economic changes “disembed” the market-based economy from its “social basis” (*Ibid.*), resulting in cleavages between established ways of life and newly commodified and market-oriented practices supported by influential political economic groups. In recent years, Polanyi’s thesis has been modified to recognize that transformations to political economic structurations do not fully “disembed” the economy from its social basis; instead, the social is

reconstituted and renegotiated to accord to (neo)liberal economic orthodoxies (cf. Fraser, 2014; Stiglitz, 2001; Lazzarato, 2009). With this in mind, Polanyi's identification and theorization of a "double movement" occurring at times of socio-economic reconstitution provides a framework for interpreting the contemporary situation. In this dissertation, I argue that a double movement is manifest in the form of opposing social forces actively working to assert their respective interests and guide the transition to a "knowledge-based economy" in ways more conducive to the norms, interests, goals, and perspectives of both economically and more socially-oriented stakeholder groups.

Under Polanyi's Great Transformation, the double movement consisted of economically oriented actors working to assert the interests of capital as the dominant organizing principle of social life, which was opposed by socially-oriented groups seeking to protect and conserve human life and the environment from their debasement and reduction to mere assets for economic exploitation (Polanyi, 1944[2001]: 138-139). I adopt Polanyi's double movement framing to characterize and explain contemporary political-economic transformations taking place under "informational capitalism," as a new form of capitalist accumulation reshaping the global political economy through the generation, commodification, and exchange of knowledge-based resources according to a techno-economic paradigm that harnesses information as a tool for economic productivity (Castells, 2010: 20-21). Media, culture, and communications scholar Arun Kundani links the rise of informational capitalism with the developments of ICTs and ICT-based industries based on the appropriation of knowledge and information as resources for economic activity (Kundani, 1998/99).

Since the 1970s, ICTs have enabled the creation and maintenance of a global political economy in which the governance and coordination of knowledge and information are prioritized

in support of capitalist activities via electronic and, later, digital means. The global diffusion of ICTs has facilitated a transnational political economy, which necessitated the extension of technological, legal, and normative structures to enable the commodification and economic exchange of informational goods and services. Reforming international IP law was crucial to provide the legal protections and incentives deemed necessary to support this market expansion. Informational capitalism is based upon the appropriation and conversion of knowledge-based resources into goods and services for exchange in global markets; to enable this, international legal regimes and governance mechanisms needed to be adapted to protect or promote investments in activities that would generate intangible commodities. IP law – particularly copyright, patent, and trademark law (together with a host of related mechanisms) through the World Trade Organization’s (WTO) Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement – assumed an integral role in this restructuring. As I will describe, through the threat of economic sanctions from large developed countries, a new regime of international, trade-based IP law allowed intangible resources and tangible expressions of knowledge to be legally protected within and beyond domestic borders, providing the globalized regulatory regime necessary for markets based on these assets to develop.

Adopting Polanyi’s double movement thesis, this dissertation examines how IP law is constructed and deployed in a transnational economy to incentivize investments in capitalist modes of accumulation based on knowledge-based resources (the movement), while being simultaneously resisted by various stakeholder groups asserting alternative socially-oriented conceptions and valuations of knowledge-based communicative and cultural resources (the

counter-movement[s]). It begins by positing a theory of “Creative Transformation”² as both a rationale legitimating informational capitalism and the attendant legal reforms that enabled it.

Informational capitalism’s reliance on the appropriation and conversion of creative activities from intangible and social resources into tangible and fungible goods, services, and assets requires regimes governing knowledge management to be reformed to account for emerging technological processes. For example, digital technologies help converge recorded information into a binary code of 0s and 1s, which enables the easy reproduction, transmission, and adaptation of previously distinct information sources. Digitization reduces “atoms into bytes” (Negraponte, 1995), allowing information to be captured and controlled. Through IP law, the commodification of knowledge-based resources increasingly sequesters previously communal, community, and public goods under the control of private corporations and actors. Social scientist Bronwyn Parry (2002), for example, describes how IP regimes colonize new domains of biological life forms as information available for economic exploitation. Similarly, scholar and activist Vandana Shiva explains how the “biopiracy” (Shiva, 1997) of genetic resources relating to seeds and plant varieties originating in the global South occurred once knowledge-based innovation generated profits rather than primarily meeting social needs (Shiva, 1993a: 32). Both scholars demonstrate how new digital technologies coupled with IP law have enabled knowledge-based resources to be appropriated as informational goods, such that life

² The term "creative transformation" has been used previously to describe the reconfiguration of existing policies and institutions to cohere with the emerging knowledge-based economy (cf. Peck, 2005; Lamba, 2005). In this dissertation, I adopt a critical approach and refer to “creative transformation” in two ways: i) when presented in italics, *creative transformation* refers to the uncritical view of economically-oriented actors in the private sector and public sectors who see Schumpeterian forms of “creative destruction” via ICTs and informational capitalism as the logical and positive consequence of economic progress; and: ii) when capitalized, Creative Transformation is a critical term I use to signal the idealization and manifestation of this technologically-determinist and economically-reductionist logic.

itself is available for digital codification, transmission, and re-appropriation in the service of capitalist accumulation.

Informational capitalist reforms to IP law are legitimized, I will suggest, by an ideology of *creative transformation*, which is optimistically advanced and enacted by corporations, governments, and international institutions. The ideology of *creative transformation* combines economist Joseph Schumpeter's (2003) notion of "creative destruction;" the belief that capitalism must continuously reinvent itself by destroying and replacing previous forms and practices of accumulation, with Polanyi's notion of political economic transformation. For Schumpeter, capitalist reinvention necessarily occurs when existing industries and economic formations are challenged and usurped by new modes of practice; Polanyi's double movement recognizes political economic transformation, while highlighting the contested and contingent nature of these changes. Under informational capitalism, creative destruction and the Great Transformation have merged, while we have lost any critical awareness that capitalist reinvention occurs through political economic restructuring and the privileging of one way of thought over another.

This dissertation demonstrates how Creative Transformation relies on the commodification of creative activities – through the appropriation and economization of knowledge-based resources – as a means of advancing Schumpeterian creative destruction under informational capitalism. For Schumpeter, processes of capitalist accumulation are dependent upon the creation of alternative capitalist forms in order to replace existing practices and propel the overall economic system forward. This form of capitalist reinvention is rooted in Marxist critique and has been developed further by social scientists, such as economic geographer David Harvey (2003; 2005) and sociologist Manuel Castells (2010). I argue that *creative*

transformation is a combination of Schumpeter's creative destruction and Polanyi's Great Transformation used to advance capitalism's ongoing renewal through informational activities. Particular forms and industries of capitalism are always-already being threatened with destruction by the existence and emergence of alternative modes of accumulation. In many cases, these transformations occur at times of technological or political economic upheaval—such as in the case of the transformations of largely agricultural economies towards industrial modes of production and manufacturing or movements from feudal political economic arrangements to market-based economies or those driven and planned by the state. I argue that informational capitalism similarly relies on emerging technological forms and the extension of political economic environments conducive to and supportive of economic regimes based on the appropriation and marketization of knowledge-based resources at the service of capital accumulation. *Creative transformation* promotes these changing technological and political economic circumstances by simultaneously propagating and reinforcing technologically and economically reductionist ways of envisioning and governing creative endeavors.

I argue that Schumpeter's creative destruction has been valorized and adapted in the hegemonic ideal of *creative transformation*, which reifies conceptions of knowledge and information as primarily individualized and proprietary resources to spur economic activity and socio-cultural transformation by challenging and replacing existing political economic practices. The emerging Creative Transformation is in line with Polanyi's Great Transformation, wherein social and cultural resources were problematically reduced to economic commodities and assets. *Creative transformation* naturalizes the appropriation of knowledge-based resources and creative activities as individuated economic exercises of innovation. As I will demonstrate, the belief in the necessity of capitalist reinvention driven through innovation has become central to the

discourse of actors promoting the benefits and promises of informational capitalism (cf. Atkinson and Ezell, 2012). This dissertation argues that the *creative transformation* has become the rationale for informational capitalism— contributing to a logic that has been adopted in a number of private, public, and transnational forums used for constructing knowledge management and IP regimes in ways conducive to private and proprietary conceptions of knowledge-based resources in the informational economy.

Creative transformation has become the dominant rationale for informational capitalism— expressed in a logic adopted in a number of private, public, and transnational forums dedicated to constructing knowledge management and IP regimes in ways conducive to private and proprietary conceptions of knowledge-based resources in a globalized economy. Theorists and policymakers promoting the idea of a “knowledge-based” or “digital economy” adopt and diffuse norms, so-called best practices, and orienting principles premised on the belief that a renewed form of Schumpeterian creative destruction – based on knowledge and information – will inevitably and necessarily reconstruct existing structures, sectors, and realities in ways that are beneficial to the global public. Tellingly, domestic governments, international organizations, and industry-oriented lobby groups present *creative transformation* as a universal and natural political economic “evolution”. For example, as Alec Ross, the former Senior Advisor for Innovation to then-Secretary of State Hillary Clinton argues, innovation and creativity harnessed via digital technologies are creating “newly empowered citizens and networks of citizens [that] are challenging the established order in ways never before imaginable—from building new businesses to challenging old autocracies” (Ross, 2016: 5).

The celebratory rhetoric of *creative transformation* exemplified here by Ross, and diffused internationally through efforts of American diplomats and business leaders, is, however,

problematically reductionist: Creative Transformation privileges technological and economic orientations over alternative political, social, and cultural conceptions and realities, which may better reflect or address pluralistic political and socio-economic concerns. This dissertation critically analyzes *creative transformation*, demonstrating how the political economic restructuring of informational capitalism results in inequitable outcomes that foster oppositional political activities. The double movement of informational capitalism, I will argue, revolves around informational political activity that resists Creative Transformation and is manifested in the form of counter-movements that emerge in response and reaction to the dominant political economic movement of the digital, knowledge-based economy.

This dissertation explores the political economy of informational capitalism by focusing on the various roles that IP law plays in the construction and maintenance of Creative Transformation as well as alternative possibilities and outcomes by identifying, locating, and analyzing this double movement. Through an interdisciplinary critical perspective, which combines aspects of the critical political economy of communication studies³ (PEC), critical media and information studies, and critical legal studies⁴ (CLS) approaches, I argue the

³ “Political Economy” describes the customs, practices, and knowledge used to govern economic management in various realms – be they communal, state-based, international, transnational, or at the level of individual household units – as well as the intellectual description and analysis of systems of production, distribution, and exchange (Mosco, 2011: 23). According to Robert W. McChesney (2007; emphasis removed), “political economy of communication has two main components. First, it address[es] in a critical manner how the media system interact[s] with and affect[s] the overall disposition of power in society ... The second area in the political economy of communication tradition [is] largely its exclusive domain: an evaluation of how market structures, advertising support, labor relations, profit motivation, technologies, and government policies [shape] media industries, journalistic practices, occupational sociology, and the nature and content of the news and entertainment”.

⁴ The goal of CLS and other critical scholarship addressing the role(s) of structure in society is to uncover the reified beliefs and relations underlying social life and possible futures (Peller, 1985). It is, therefore, necessary to “deconstruct” the “familiar common-sense categories, such as the public- private distinction employed in contract discourse, [which] can be turned upside down so as to shake up our conventional perceptions of reality” (Gordon, 1987: 217) in order to demonstrate that existing social, political, economic, and legal structures are not universal, natural, nor inevitable (Genovese, 1991: 153-4). Critical social theory – whether focused on legal, cultural, political, or economic structures – “views social reality as a dialectic between social structures and individual thought, belief, desire and action. Individual thought, belief, desire, as well as action are shaped and constructed by social structures,

movement to enact changes to the international IP legal regime is based on *creative transformation*'s need to facilitate informational capitalistic forms of commodification, structuration, and spatialization. This movement results in political economic inequities. Informational politics (cf. Castells, 2010; Jordan, 2015; 2013), or what I describe as informational capitalism's counter-movements, arise in response to the political economic and socio-cultural concentration of knowledge-based resources and informational assets under the control of private, commercial monopolies: counter-movements work to (re)characterize and (re)orient how knowledge and information are legally governed and deployed in ways more protective of social interests and concerns. How knowledge and information are socially constructed, legally protected, and publically deployed are fundamental concerns of informational political activity.

This dissertation proposes a dialectical⁵ conception of knowledge and information, a knowledge/information dialectic, as a means for moving beyond the technologically

which in turn are the product of previous individual thought, belief, desire, and action" (Balkin, 1991: 1137). This project employs this critical lens in order to demonstrate how various structural conditions of informational capitalism are "fully imbricated in shaping lifeworld activities, bestowing proprietary powers, creating markets, establishing forms of cultural authority, constraining speech, and policing the public/private distinction that protects corporate authors from social accountability" (Coombe and Cohen, 1999: 1031). Combining the PEC and the deconstruction of CLS and critical media and information studies helps shed light on the dialectical relationships that are masked by reified discourse and attendant governance mechanisms. This deconstruction opens up the realm of possibility for alternative social, legal, political, and economic arrangements.

⁵ Early, now 'canonical', political economy scholars sought to avoid deterministic theorizations by employing dialectical critiques of economic arrangements. The work of writers such as Harold Innis and Theodor Adorno assume a dialectical middle ground that balances political-economic considerations with considerations of agency, human volition, and freedom (Babe, 2009: 5). As Robert Babe argues, Innis' work recognizes a symbiotic relationship between political-economics and cultural as well as communicative modes of practice: Predominant modes of political and economic organization support and are supported by the cultures, cultural artifacts, and cultural processes of various societies and ways of life (*Ibid.*: 4). Adorno and other Frankfurt theorists studied the social as well as economic conditions and practices that contributed to political-economic arrangements (*Ibid.*:16), adopting the Marxist critique of alienation in terms of how it functioned within the "culture industries" (Horkheimer and Adorno, 2006).

deterministic⁶ and economically reductionist concepts presupposed by proponents of *creative transformation* to take into account the social and cultural dimensions that contribute to the creation and management of knowledge based resources. It argues that informational politics occur when the pluralistic concerns of diverse stakeholders and interest groups are asserted and debated in legal, social, and political forums. Informational politics take place in a number of areas associated with the reshaping of fundamental liberties in an era of informational capitalistic activity, which include concerns about freedom of expression, the privacy of individuals' online activities, and the security of domestic, corporate, and personal information in technologically-mediated spaces. Furthermore, these counter-movements embrace efforts focused on better addressing food security, environmental protection, and health-related needs. As I will demonstrate, such counter-movements often propose alternative arguments grounded in international human rights norms to assert more social conceptions of knowledge/information management. These groups oppose the privatization and corporatization of knowledge/information in order to recast the international IP regime to serve and protect the interests of "people, not profits" (cited in Pleyers, 2010: 6).

Three alternatives for structuring informational capitalism in ways seemingly more attentive to its socio-cultural basis and the dialectic reality of knowledge/information that will be addressed in this dissertation include the Free-Libre Open Source Software (FLOSS) movements popularized in the early 1980s (Stallman, 1985), the promotion of Information and Communications Technologies for Development (ICT4D) which gained international credence in the late 1990s (World Bank, 1999), and the access to medicines campaigns that arose in

⁶ Technological determinism is an assumption, which is heavily criticized in communications studies scholarship, that technologies themselves are the primary drivers of social, economic, and cultural changes (cf. Roe Smith and Marx, 1994).

response to the HIV/AIDS global health crisis and the inability of people in developing states to afford proprietary pharmaceuticals and treatments (Sell, 2007). As I will demonstrate, FLOSS presents an alternative to the proprietary legal regime now embedded in informational capitalism, wherein software coders, developers, and entrepreneurs demonstrate the viability of relational and non-economic forms of creativity within the high-technology ecosystems of the informational economy. Through the use of open-source software, FLOSS enables the circulation and modification of technological forms – including key aspects of the Internet and World Wide Web – built through peer-based and peer-review mechanisms, which could not exist in a world governed wholly by market exchange. In so doing, FLOSS models an informational political alternative to the dominant trade-based IP regime and the private appropriation and propertization (Landes and Posner, 2003) of socially constructed and constituted resources. Similarly, ICT4D initiatives seek to leverage the potentials offered by increasing the global diffusion of ICTs to enable human development in so-called peripheral or developing locales. By increasing access to ICTs, ICT4D seeks to better distribute the technological tools and resources necessary to promote growth and development. However, for reasons I will return to, both FLOSS and ICT4D may be criticized as having neoliberal groundings that may support new forms of technological and capital dependency (Nederveen Pieterse, 2010).

As I discuss, the access to medicines campaign used appeals to human rights norms and frameworks to emphasize the public health concerns created by the international trade-based IP regime. The human right to health was used to foreground counter-movement claims against proprietary restrictions on essential and life saving knowledge/information, in the form of pharmaceuticals and medical treatments. These efforts contributed to the Doha Declaration on

TRIPS and Public Health (2001), which reaffirmed the right to use the flexibilities of the TRIPS Agreement to meet public policy needs and social objectives. However, debates surrounding the effectiveness of FLOSS, ICT4D, and the Doha Declaration demonstrate how recent and ongoing shifts in informational politics continue to (re)negotiate the “terms of service” governing informational capitalism, enabling and constraining the construction of alternative political economic structurations.

Another example of informational politics that this dissertation addresses is the more recent Access to Knowledge (A2K) Movement. This counter-movement is comprised of a loose coalition of civil society groups, non-governmental organizations (NGOs), and social movement actors under an overarching conception of “access to knowledge” premised on the belief that increased access to knowledge-based goods will enable greater equity and development. As I will discuss, the A2K Movement coalesced in the early 2000s as a response to the perceived failure of the socioeconomic opportunities promised by digital technologies and the spread of ICTs to be realized in the global South. The A2K Movement argues that legal restrictions of access to knowledge created by IP impair the potentials otherwise offered by digital and networked technologies. Only by reforming IP law to encourage greater access to knowledge, Movement actors suggest, can we redress the imbalances of informational capitalism. However, I will argue that the A2K Movement includes both latent and contradictory development premises (Bannerman, 2016), which problematize its efforts to increase accessibility to knowledge/information and prospects for alleviating inequality, poverty, and other barriers to social justice. Through the use of a critical discourse analysis (CDA) perspective, I will explore the literature and advocacy of various A2K Movement actors, to demonstrate how, even in a “counter-movement” such as A2K, *creative transformation* is reinforced. The dissertation

concludes by asking if and how the incorporation of rights-based perspectives might alleviate these concerns and provide a normative basis for a more robust critique of Creative Transformation, which foregrounds political economic inequities and development needs.

Relationship to Existing Literature

Social science scholars have developed a number of theories and labels to describe the structural transformations coinciding with the emergence of digital and networked technologies. These epochal changes have received various labels (Webster, 2006). This dissertation was developed on the basis of a critical examination of the work giving rise to such labels, including Peter Drucker's (1969) argument about the rise of an "knowledge economy" in an "age of discontinuity," Daniel Bell's (1976) notion of a "post-industrial society," Jean-François Lydon's (1984) conception of "postmodern culture," Frederic Jameson's (1991) formulation of "late capitalism," Dan Schiller's (2000) "digital capitalism," critical views of the "information society" (May, 2002), and Manuel Castell's (2009; Castells and Cardoso, 2005) theorization of the "network society" (see also, Barney, 2004). It also embraces the theoretical frame of "informational capitalism" now used to evaluate these labels and demonstrate how these changing processes have led to increasing levels of economic polarization and precarity (Fuchs, 2011).

This dissertation combines the perspective of informational capitalism with a PEC approach informed by cultural studies as well as critical legal, development, and economic scholarship. Through this combined approach, I examine how informational capitalist processes and logics lead to specific forms of commodification, spatialization, and structuration. I argue these changing arrangements are based on a belief in *creative transformation*, which naturalizes

the structural changes occurring through informational capitalist expansion by reifying individualistic ideas about innovation and economically oriented beliefs in technological change. This dissertation considers how the political economy of informational capitalism leads to concentrations of capital and power that pose human, social, and economic development concerns. Polanyi's double movement thesis is used to frame resistance to these political economic transformations as well as the socio-cultural outcomes attending to neoliberal forms of knowledge/information management and governance.

Academic work in related disciplines is used to ground and supplement this characterization of informational capitalism and *creative transformation*. For example, legal scholars and political scientists have shown how IP law enables ownership and control of information-based goods and services (May, 2010; Drahos, 1995; Boyle, 2008; Bettig, 1996); economists and international relation scholars have traced how IP regimes have been extended internationally (Sell, 2007; Drahos and Braithwaite 2003; Drahos, 2005) so that the commodification of information can drive capitalist accumulation in a globalized network environment (Stiglitz, 2008; Sell, 2010; Berry, 2008). Building upon these observations, development-oriented scholars maintain that the purported benefits to developing states from a harmonized international IP regime have yet to be realized (Correa, 2005; Drahos, 2007; Maskus, 1998). This body of scholarship focuses on a desired "balance" within IP law: historically, IP law was forged in a fashion that "balanced" the private rights of creators with the public interest in knowledge/information circulation within a larger society (Wechsler, 2009). Historically, this concern over balance in IP law resulted in state efforts to negotiate compromises between stakeholder groups in national governance regimes (Johns, 2010). More recently, scholars have noted that the liberal legal systems of influential states within the international IP system overlook local needs and historical realities,

disadvantaging marginalized communities by diffusing a purportedly universal model into non-Western contexts, countries with developing economies, and minority cultural communities (cf. Forsyth and Farran, 2015; Boateng, 2011). This dissertation embraces these trepidations and analyzes how the existing international trade-based IP regime and *creative transformation* fail to account for local specificity and emerging realities. The unequal development outcomes identified and criticized in this scholarship (cf. Wong and Dutfield, 2011) has provided greater analytic force and theoretical framing for resistance movements as well as development-oriented projects and campaigns. This dissertation surveys these various fields of scholarship and presents empirical examples of counter-movement advocacy that have been animated by such apprehensions.

Research Questions and Methods

This dissertation focuses on the larger question of how existing structures, institutions, and legal regimes have been reshaped to enable the emergence of a knowledge-based economy facilitated by digital technologies such that capitalist accumulation is premised upon the harnessing of “knowledge” and “information”. The paradigm of informational capitalism has been loosely used to signal the increasing importance of intangible, informational goods for economic activity (Kundnani, 1998/99). However, to date, theories of informational capitalism have not adequately addressed the role that IP law plays in governing relationships between “knowledge,” “information,” commodification, and capital accumulation. This dissertation seeks to address theoretical gaps in the literature by analyzing how “knowledge” and “information” are imagined and legally constituted by proposing a dialectical conception of the knowledge/information dynamic.

CLS scholars argue that IP law fuels new forms of capital accumulation based upon marketable forms of informational goods by consolidating knowledge-based resources in the form of private properties (Drahos, 1995; Boyle 2008) which enable the collection of rents; such guaranteed revenue streams attract investors, creating industry concentrations, and coalitions of economic actors that recognize themselves as sharing interests based upon their reliance on informational assets, which creates new forms of transnational power. To what extent, I ask, does it also shape new forms of political opposition?

Within the existing literature I have identified four reoccurring themes: 1) the connection of the idea of a “knowledge-based economy,” with utilitarian and individualistic conceptions of authorship and innovation; 2) concern with how these principles are extended and “deepened” through international law and trade mechanisms that “universalize” ideas about the role of knowledge/information; 3) which, from a critical PEC framework, extends and entrenches political economic concentration; and 4) how pluralistic stakeholders simultaneously reinforce and resist these tendencies.

One objective of this dissertation is to critically analyze and “deconstruct” the political economy of informational capitalism using methods developed within CLS (eg: Peller, 1985; Gordon, 1987; Kennedy, 1991, 1978; Kelman, 1987) to highlight and examine the ideological structurations within liberal legal discourse to ascertain how knowledge and information are conceptualized as resources for human and economic development and to offer alternative formulations of this relationship.

This dissertation adopts a unique interdisciplinary framework to incorporate insights developed in other streams of critical scholarship into a PEC approach; PEC has recently recognized the importance of incorporating the work of related fields in order to ascertain the

myriad social, cultural, political, and economic influences that contribute to the structuration of capitalist systems (Mosco, 2009). These approaches pay attention to the ways that discourses create and support dominant ideologies, which maintain specific political and economic structures (Williams, 1985). Such structures are not static but alternately resisted and supported by other ideological discourses and movements (Stoddart, 2007). This project uses critical methods to deconstruct liberal legal ideologies to ascertain how these enable and constrain the ideological structures of informational capitalism and its political economic outcomes. This dissertation supplements the political economy approach with schools of thought focused on the socially constitutive and contested nature of law as well as development-oriented scholarship that explore how development projects and theories reinforce social and economic inequities (for example, Munck, 2010). It uniquely adapts the Polanyian perspective on the double movement of the commodity in a new era of informational capitalist accumulation in relation to social movement paradigms to identify the mobilization of counter-movements and the degree to which their own ideologies reject or mirror the ideology of *creative transformation* that subtends the forces with which they contend. To this end, it employs CDA of primary materials and important secondary sources relating to the A2K Movement to analyze if and how it serves as a counter-movement to *creative transformation*.

Structure of the Dissertation

The first chapter discusses contemporary political economic transformations facilitated by technological change. These “disruptions” of established modes of socio-economic orientation have been assigned categorical names and analyzed through various disciplinary lenses. These categorizations are now common place and range from the business and management scholarship

in the late 1960's imagining the emergence of an "age of discontinuity" (Drucker, 1969), through a phase of chronological progressions in the form of the "post-industrial society" (Bell, 1976) or the "postmodern culture" (Lyotard, 1984) celebrated and denigrated in the 1980s, to a renewed focus on capitalism's transformative characteristics in the forms of "late capitalism" (Jameson, 1991), "digital capitalism" (Schiller, 2000), "communicative capitalism" (Dean, 2005; 2009), and "cognitive capitalism" (Moulier-Boutang, 2011) during the transition to the 21st Century, and more socio-technological perspectives on the existence of a "network society" (Castells, 2010). This scholarship contributes to a greater understanding of the multiplicity of factors underlying recent and ongoing political economic transformations, which are demonstrated in the work of critical media and information scholars (cf. Fuchs, 2009; 2011; May, 2002; 2003) that highlight the complexity inherent in the dynamism of transnational informational capitalism.

As I will discuss, informational capitalism is both an analytical tool for describing current political economic processes and transformations as well as a means of labeling these ongoing transmutations amidst the proliferation of labels being propagated by mainstream techno-optimists and business consultants that are uncritically adopted by domestic governments and international organizations. Of these many labels, the idea of a "knowledge-based economy" (OECD, 1996) supported by ICTs has, perhaps, been most fully incorporated into the formal declarations, deliberations and policies of state governments and international organizations. This chapter analyzes the ways in which the conception of the knowledge-based economy is constructed and deployed to represent and reproduce technological, economic, political, social, and cultural understandings supportive of *creative transformation*. In this chapter, I argue that classifying the contemporary political economic situation as a "knowledge-based economy" works to reify the creation and circulation of knowledge-based resources through technological

media forms, divorcing them from both their social and cultural contexts: *creative transformation* focuses on the creation and exchange of “information,” without paying attention to the inherent socio-cultural basis of “knowledge” generation. Instead, the knowledge/information dialectic I propose recognizes and asserts contested socio-cultural and economic interconnections (including continuity and change, market and non-market interactions, and individuals and communities) inherent in contemporary informational capitalism. This chapter focuses on these dialectics through an extended exploration of Creative Transformation and informational capitalist activity to explain how critical political economy concerns are elided in liberal legal critiques (Lessig, 2008; Benkler, 2006a; Boyle, 2008; Wark, 2006) of the digital, knowledge-based economy. As I will argue, these liberal legal critiques reinforce a “Californian Ideology” (Barbrook and Cameron, 1996) that combines liberal, libertarian, and technologically determinist views of the role of technology in society and the economy. The PEC tradition problematizes these narrow and reductionist conceptions, demonstrating the inequitable tendencies of informational capitalism and *creative transformation*.

The second chapter of this dissertation contributes to critiques of the political economy of informational capitalism (cf. Fuchs and Winseck, 2011) and focuses on the role that IP law plays in the governance of the creation, circulation, and commodification of knowledge-based resources. I contend that the critical role this legal system plays in an informational economy is underexplored in comparison to other critiques that detail the transformations in labour and market relations inspired by classical Marxist theory. As legal scholar Chidi Oguamanam demonstrates, IP law is a critical component of the “global knowledge economy” and needs to be theorized further to demonstrate how IP law re-orientes various livelihood activities according to

an economic frame (2009; 2011). This chapter theorizes the role of IP law through the approach of a critical PEC study (Mosco, 2009), informed by other critical cultural and critical legal studies priorities.⁷ Using communication scholar Vincent Mosco's "amalgam"⁸ I analyze how IP law contributes to emerging political economic practices, which transform relationships of commodification, structuration, and spatialization. This approach provides insight into a fundamental contradiction of informational capitalism: why is it that the distributed and networked technologies that many believed would offer new avenues for democratization and political economic opportunity have resulted in a tendency towards a concentration of the commodities and assets driving Creative Transformation?

Legal reforms designed to address inequities of digital connectivity and development norms introduced at the behest of the United Nations (UN) and countries in the global South have brought alternative technological and political economic ideas into the consolidation and contestations of

⁷ Amin Alhassan argues that communication studies privileges a "repertoire of narratives" (citing Mitchell, 2005: 21) that provide the "conceptual grids, principles, texts, and iconic figures that serve to circumscribe, delineate, and inform the field" (Alhassan, 2007: 104). Debates between political economists of communication and cultural studies scholars during the early 1990s (see Garnham, 1995 and Grossberg, 1995) pitted these two areas of thought against one another. However, as Vincent Mosco (1996) demonstrates, political economy and cultural studies share similarities that need to be incorporated in order to renew both fields and provide broader perspectives on communications scholarship. Issues of power and alienation must be considered alongside considerations of agency and opposition. The political economy of communication must continue to draw from the so-called margins (Alhassan, 2007) of postcolonial, cultural, gender, race, and other such theories, which are attuned to reflexivity and agency as generative concepts crucial to the practice of critical communications scholarship (Grossberg, 2002) in order to avoid deterministic representations of complex political, economic, social, and cultural arrangements.

⁸ Vincent Mosco (2009) provides a theoretical amalgam (to borrow a term from Innis [as discussed in Babe, 2009: 34]) of processes – commodification, spatialization, and structuration – as an entry point for understanding how political-economic arrangements are constructed and reinforced and can be analyzed through the PEC perspective. In the narrow sense, these three processes are studied in order to examine the social relations – particularly power, control, and survival – that constitute the production, distribution, and consumption of resources as well as communicative goods and services (Mosco, 2009: 2). For Mosco, "commodification is the process of transforming things valued for their use into marketable products that are valued for what they can bring in exchange. ... Spatialization is the process of overcoming the constraints of geographical space with, among other things, mass media and communication technologies. ... [and] structuration is the process of creating social relations, mainly those organized around social class, gender, and race." (Mosco, 2009: 2; emphasis removed). Commodification, spatialization, and structuration operate as a set of mutually reinforcing and diverging processes that combine to organize and arrange the political economy in various ways. The effects of commodification do not work unidirectionally; interactions between the technologies, social, legal, political, and economic forces used to produce and transport commodified goods operate in spatial and structural relationships from which they cannot be divorced.

informational capitalism. As I argue in the third chapter, competing conceptions of, futures for, and means to govern knowledge/information under informational capitalism spur “informational politics”. I demonstrate how on one side of this double movement lies interest groups promoting and extending the IP-oriented characterization of knowledge/information as market-based goods and services. Conversely, civil society and peoples as well as governments from the global South resist this expansion, seeking to re-define knowledge/information in culturally specific and socially constituted terms. I argue that informational politics are at play in efforts to define the “knowledge-based” or “cultural commons” and IP law’s own concept of the “public domain”. I argue that the existence of IP ‘exceptions’, exemptions, and the rearticulation of community or publicly oriented concepts in liberal legal discourse tend to destabilize the normative basis for *creative transformation* and the privileging of private rights within the informational economy while implicitly bringing a human rights vocabulary back into normative play.

In chapter four, I examine three paradigmatic cases of struggle that seek to address the inequities of ICT and knowledge/information distribution. While diverse in their concerns, these struggles coalesce as counter-movements against political economic disparities in terms of access to essential technologies, knowledge/information, and life-saving goods and services. The three examples of counter-movement informational politics I discuss address a central question of transnational informational capitalism: how is it possible to construct or adapt a universalized legal regime governing knowledge/information in a real-world situation characterized by differing levels of economic and development opportunities? Alternatives to this diffusion of the means to access the tools and technologies of informational capitalism are then examined by way of a consideration of FLOSS and digital media and peer-production processes, ICT4D as means of addressing the so-called digital divide by enabling greater access to ICTs in remote locations

and developing states (Unwin, 2009), and the use of rights-based norms by access to medicine advocates. These counter-movements demonstrate the potentials offered by more socially oriented conceptions of knowledge/information management to redistribute critical knowledge/information in more co-operative environments framed by alternative norms and outcome-based paradigms. However, as I will demonstrate, these approaches do not give enough attention to issues of local specificity and overemphasize a ‘one-size-fits-all’ approach to informational capitalistic governance (Carroll, 2009), which often overlooks the fact that “access to the same commodity bundles does not guarantee equality” (Mukherjee Reed, 2008: 12) and presupposes that technological access will ultimately lead to increased human capabilities. The argument is made by recourse to criticisms of technological determinism.

The fifth and final chapter of this dissertation focuses on the idea of access to knowledge and its appropriation by an A2K Movement as a means of influencing debates over the direction of the international IP regime. The A2K Movement asserts principles of access to knowledge (Bannerman, 2016) against the universalizing and proprietary models of the international trade-based IP regime. I argue that the A2K Movement represents a counter-movement against one of the central legal regimes of *creative transformation*. However, as a counter-movement working in opposition to *creative transformation*, the A2K Movement simultaneously reflects aspects of informational capitalism – such as an entrepreneurial and innovative discourse surrounding human creativity – and demonstrates the limitations of and possibilities for enacting political economic change under Creative Transformation. As I will demonstrate, principles of access to knowledge are based on a long held belief that access to knowledge/information results in the growth of human capabilities. This belief has been adopted by the A2K Movement as a frame for resisting the expansion of the international IP regime while simultaneously advocating for

reforms designed to leverage knowledge/information to meet the specific realities of local communities and peoples. For example, I will demonstrate how the A2K Movement helped advance the idea of a Development Agenda for the WIPO so that the international IP regime would be forced to take health-related and educational concerns about the availability of affordable medicines, treatments, and educational materials into greater account, while remaining within the ideological confines of *creative transformation*.

To demonstrate the roots and beliefs of the A2K Movement, this concluding chapter traces the development of a concept of access to knowledge in relation to proprietary knowledge/information regimes and as a means of improving educational outcomes before its adoption by the A2K Movement. I demonstrate the specificity and locality of the genesis of access to knowledge as a concept and its adoption and appropriation during the emergence of the A2K Movement. This tracing is not intended to be an historical account of the emergence of a problematization of a concept, but an inquiry into the conditions present for giving rise to this form of “truth” (Foucault, 1993: 202) as a motivating principle. In order to deconstruct the discursive and ideological underpinnings of the A2K Movement, I also employ CDA and CLS perspectives.

As I will demonstrate, this deconstruction identifies the liberal legal assumptions behind the A2K Movement, providing space for reinterpreting and reimagining its aims to reflect alternative, more inclusive realities. As a counter-movement against the prevailing movement of Creative Transformation, I consider the A2K Movement in relation to existing and alternative informational capitalist structurations. By deconstructing the discourses and ideologies of the A2K Movement, I highlight similarities and discontinuities with *creative transformation* as well as alternative capitalist and development possibilities. I argue that the liberal legal roots of the

A2K Movement combine with the technologically utopian aspects of *creative transformation* to perpetuate political economic structurations, which concentrate control in the providers of access to technologies used to transmit knowledge/information in very particular ways. I conclude that as a counter-movement, the A2K Movement offers the greatest potential for reshaping dominant movements to better address specific economic and local circumstances to the extent that its discourses are rearticulated to account for human rights supportive of co-operative, communal, and development-focused alternatives to informational capitalist structurations.

CHAPTER ONE

A PERFECT STORM: INTELLECTUAL PROPERTY, INFORMATIONAL CAPITALISM AND THE MOVEMENT TOWARDS ‘CREATIVE TRANSFORMATION’

The shifting political economic structurations of Creative Transformation are complex and dynamic, consisting of interplay between formal and informal interactions among private, public, and institutional actors. The shifting relations between these actors and structural changes in technological circumstances are resulting in a reconfiguration of social, economic, cultural, and political environments. This chapter analyzes the political economy of the “knowledge-based economy” with particular reference to Polanyi’s double movement thesis regarding political economic transformations and how economic and social factors often contest and alter one another in a mutually constitutive fashion. It begins by arguing that Polanyi’s double movement thesis is a lens for analyzing ongoing contemporary political economic changes and the popularization of the “knowledge-based economy” thesis. The political economy of the knowledge-based economy is considered with reference to contemporary shifts enabled by new technological forms and argues that *creative transformation* serves as the orienting logic of informational capitalism. The international trade-based IP regime is then analyzed as an integral part of the rise of the knowledge-based economy, providing the governance and normative frameworks used to protect, incentivize, and commodify the production of knowledge-based resources in an informational economy. Using perspectives drawn from critical analysis of informational capitalism, this chapter problematizes the reductionist characterizations of “knowledge” and “information” as commodities by highlighting the existence of a knowledge/information dialectic, which demonstrates the interrelation between knowledge-based

resources and informational assets. Finally, Creative Transformation is presented as the catalyst for a contemporary double movement, within which competing stakeholder groups assert differing perspectives on *creative transformation* and informational capitalism based on economic and social concerns.

Framing the Political Economy of the Knowledge-Based Economy

Over seventy years ago economic historian Karl Polanyi (1944 [2001]) created a framework for analyzing shifting political economic arrangements. In *The Great Transformation*, Polanyi describes the construction of an economically determinist “market society” based on the appropriation of social resources as “fictitious commodities” used to generate capitalist accumulation (1944[2001]: 71-80). This “movement” away from a socially-embedded form of exchange towards economic determinism and a market-oriented system reified economic relations, disembedding the market from its social basis to the detriment of non-economically oriented ways of life and social relations (*Ibid.*, 48). Polanyi identified the rise of “counter-movements,” which sought to disrupt these reductionist political economic changes by asserting social interests and concerns that delegitimize economic determinism (Polanyi, 1947). The roots of contemporary Creative Transformation can be found in the ongoing (re)constitution of the primary forms of economic management in a transnational global economy: the shift from liberal, market-based capitalism to globalized neoliberalism. As the work of Polanyi (1944[2001]) and others (cf. Thompson, 1966; 1971) highlight, transitions between forms of capitalism involve protracted instances and periods of conflict and negotiation over how best to objectify and allocate previously non-commodified activities. Partially based on Marxist thought,

Polanyi's work demonstrates how competing interest groups influence each other as the bases of capitalist structures are reconstructed.

Polanyi's scholarship has received renewed attention in an era of political and economic transformation (Bugra and Agartan, 2007; Thomasberger, 2012), and is a means of understanding contemporary changes occurring in tandem with the maturing informational economy (Bugra, 2007; Fraser, 2014; Rogerson, 2003). In particular, by "decentering" the economic sphere (Fraser, 2014), Polanyi's framework argues against a presupposed natural law of "economic determinism" (Thomasberger, 2012: 17), and calls for the recognition of the socially embedded nature of economic systems. Rather than regarding the modern market system as outside of or distinct from society and politics, Polanyi's framework helps trace how economic and social institutions as well as ideas exist in a dialectical relationship that structure conditions of existence and ways of life. From a Polanyian position we are able to "problematize, challenge and re-imagine the very notion of 'economy' itself" (Holmes, 2014: 524) bringing to light the ways in which informational capitalist processes (re)shape political economic realities.

Decentering the economy and recognizing the necessarily social basis of economic interaction enables lines of inquiry into the ends that particular economic arrangements serve. The recognition that social and economic ideas, concepts, and beliefs are socially constructed and maintained works to deligitimize deterministic narratives (Thomasberger, 2012)—be they economic or technological. Polanyi's concept of the contingent and socially-embedded nature of economic structurations demonstrates how political economic arrangements are created and maintained to serve particular ends. How we conceptualize these changes is my fundamental concern.

In his analysis of the construction of the early modern-liberal economy, Polanyi finds that the idea of a “self-regulating market” is presented as a natural, inevitable, and ideal orientation for ensuring the functioning of domestic and international capitalism. The reification of this natural “law” of a self-regulating market allows the liberal economic order to subordinate social concerns at the service of the requirements of the economic and market-based system (Polanyi, 1944: 74). The economic realm is, therefore, disembedded from its social basis and their relationship is inverted as economic concerns are foregrounded. This uneven and disembedded political economic relationship works to construct, protect, and perpetuate an autonomous market system based on the appropriation of new economic resources as essential elements of industry and the economy (*Ibid.*: 75). Polanyi describes these new resources as “fictitious commodities,” which previously existed in social relationships outside of the economic system and were not necessarily created as goods for market exchange (*Ibid.*)

Polanyi argues that the commodification of previously social resources results in threats to, and the ultimate destruction of, the social and natural order (Block, 2001: xxv). Prior to the establishment of the self-regulating market system these resources were primarily social and provided the bases for social cooperation and non-economic ways of life. The appropriation of these resources from their social bases at the service of market-based economic exchange disrupts existing and traditional ways of life, threatening the life and security of now disadvantaged persons and communities. The resulting tensions between social and economic concerns are perfectly acceptable according to the economically deterministic logic of the self-regulating market system: the destruction of existing ways of life and standards of living will be ameliorated once a “utopian” state of affairs is realized (Polanyi, 1947).

In response, a “double movement” (Polanyi, 1944: 138) occurs as contesting social groups are formed based on their own institutional aims, which come to be asserted by oppositional social forces:

“[(1)] the **principle of economic liberalism**, aiming at the establishment of a self-regulating market, relying on the support of the trading classes and using laissez-faire and free trade as its methods; [and (2)] the **principle of social protection** aiming at the conservation of man and nature as well as productive organization, relying on varying support of those most immediately affected by the deleterious action of the market—primarily, but not exclusively, the working and landed classes—and using protective legislation, restrictive associations, and other instruments of intervention as its method” (*Ibid.*, 138-139; emphasis added).

Polanyi’s double movement is “a description of attempts to instantiate the self-regulating market idea upon an increasing number of different spheres of life, and the forms of social resistance that such a process has engendered” (Holmes, 2014: 527). However, as critical theorist Nancy Fraser demonstrates (2013; 2014), Polanyi’s double movement thesis fails to take into account the myriad concerns and interests of counter-movements working against the economic (re)orientation of the market movement. Polanyi’s two oppositional forces must be expanded to account for the pluralistic concerns of stake-holder groups working to advance and contest political economic transformations. As Fraser demonstrates, counter-movements develop in response to political economic crises and transformations in various ways: whereas some seek to assert “social protection,” others work to deconstruct and destabilize economically reductionist ideals and norms by seeking “emancipation” from domineering political economic structurations (Fraser, 2014).

By examining the diversity of such counter-movements, the fallacy of a self-regulating market becomes apparent: economic, social, and political forces actively intervene against and within the market system in order to protect their own interests. However, the self-interest ingrained in the market system “leads people to search for ways economic relations benefit only

them, not taking into consideration if or how those relations can be detrimental to others” (Rogerson, 2003: 135). In effect, the effort to create a self-regulating market system that privileges economic relations over social interaction creates the circumstances through which oppositional political economic structures are imagined and asserted.

The experiences described in Polanyi’s analysis of the creation of the early modern liberal market system have other historic corollaries. The work of Marxist historian E.P. Thompson demonstrates the agency of social groups (Thompson, 1966: 12) reacting against the economic (re)organization of social and cultural relationships. Thompson describes how a “working class” consciousness developed as a response to the inequities of modern political economic structurations and how social groups “formed a picture of the organisation of society, out of their own experience” (*Ibid.*, 712). For example, in his treatment of the Luddite movement – English textile artisans who protested against the introduction of new industrial technologies used to replace their own labour and techniques – of the early 1810s, Thompson looks beyond their “immediate economic and industrial grievances” (*Ibid.*, 484) and argues that Luddism is better described as a “*quasi-insurrectionary movement*, which continually trembled on the edge of ulterior revolutionary objectives” (*Ibid.*, 553; emphasis in original). Similarly, Thompson describes the food riots of eighteenth-century Britain as “a highly-complex form of direct popular action, disciplined and with clear objectives” (Thompson, 1971: 78). The co-ordinated actions of social groups coalescing around a class consciousness found “legitimation” in their belief “that they were defending traditional rights or customs; and, in general, that they were supported by the wider consensus of the community” (*Ibid.*). These groups were not merely reacting against the introduction of new technologies or economic practices; the responses of the working class – eg. the Luddites and food rioters – were “grounded upon a consistent traditional

view of social norms and obligations, of the proper economic functions of several parties within the community” (*Ibid.*, 79). “Moral economies,” therefore, exists and are embedded in socio-cultural terms, which cannot be reduced to a self-regulating and economically oriented market system. In such moral economies, counter-movements groups assert their social and cultural values and interests while seeking to ensure that political economic transformations are not oriented towards the market-based system alone. In Polanyian terms, the double movements exemplified by the Luddites as well as the food riots hinge on a belief that their social and cultural resources are being mis-appropriated as (fictitious) commodities for the expansion of the market economy. This mis-appropriation disembedded social and cultural resources from their social bases, threatening their subsistence and way(s) of life. Changes to the economic system were not the primary site of contestation: instead, ideas supporting the shifting relationships between social and economic interests were being called into question (Thomasberger, 2012).

In our contemporary situation, *creative transformation* is rooted in the shift from embedded forms of liberal economic integration to a disembedded and largely privatized neoliberal economic sphere. In particular, the shift from “embedded liberalism” (Ruggie, 1982) to a “neoliberal” form of political economic management and governance influences how the knowledge-based economy has been imagined, constructed, and diffused transnationally. According to sociologists Miguel Centeno and Joseph Cohen (2012: 318), there are “three substantively different vantage points from which to understand neoliberalism’s arc: (a) a technical policy debate regarding the best mode of operating an economy; (b) an institutionalized crisis containment strategy involving political choices and power; and (c) the rise of a hegemonic ideology or system of thought.” Neoliberalism is a political project seeking to re-posit economic

determinism as the orienting logic of political economy (Thomasberger, 2012) that has been incorporated into the knowledge-based economy and *creative transformation*.

Since the late 1970s and 1980s, this neoliberal arc has influenced political economic transformations and the spread of individualization and economic mentalities across the world. These transformations have occurred in tandem with so-called revolutionary changes in technological capacities. The rise of ICTs during the latter half of the 20th Century has spurred and facilitated the construction of new and expanded economic activity in knowledge-based and informational sectors. This informational capitalistic activity relies upon the creation, maintenance, and circulation of knowledge-based commodities and assets in order to extend capitalist activity into previously uncommodified areas of socio-cultural life. Through the force of trade agreements and legal regimes, new “fictitious commodities” are constructed through the appropriation of social and cultural knowledge-based resources to create value for market exchange. ICTs and digital technologies are created and deployed according to the logic of the market (Lessig, 2006), while creative spheres of social and cultural life are increasingly appropriated and transformed according to capitalist imperatives towards accumulation.

Driven by digital and globally networked technologies, contemporary political economic formations have been extended further into the social realms of others in new territories and across new frontiers. As discussed further below, the idea of a “knowledge-based economy” (OECD, 1996) is both an outcome of and catalyst for capitalist reinvention based on the commodification of knowledge-based resources. This political economic transformation is based on neoliberal economic restructuring and works to reorient social and economic practices established during the nineteenth and twentieth centuries (Wu, 2010).

As alluded to in the introduction, scholars in the social sciences and humanities have developed a number of theories for describing these transformative processes. Economist Kenneth Carlaw and colleagues demonstrate the breadth of this scholarship and locate its genesis in the works of Peter Drucker (1969) and the ‘futurist’ Alvin Tofler (1980), which looked at the role of so-called information and service workers at the end of the 1960s and 1970s (Carlaw, et al., 2006). By the 1980s and the beginnings of the neoliberal project, they found that this discourse had “shifted from information alone to a greater emphasis on knowledge” (Carlaw, et al., 2006: 649). Knowledge and/or information became the fictitious commodities driving technologically mediated political economic transformations. Each of these perspectives analyzes the ways in which emerging digital and networked technologies facilitate the socioeconomic transformations described as constituting the ‘information society’. However, as political economist Christopher May (2002) and Fuchs (2011) have pointed out, these perspectives fail to take into account the central role that (neoliberal) capitalism and market-based systems play in the (re)configurations and (re)structurations of the contemporary neoliberal economy. These considerations beg the question(s) posed by Mosco (2009: 3), who asks: “is ours a new kind of society, as was [industrial] capitalism, or is it just a form of capitalism, perhaps to be called informational capitalism?”

Through the critical lens of informational capitalism, the knowledge-based economy can be analyzed according to the ‘real-world’ practices being carried out in the ‘name’ of the so-called information society and knowledge-based economy. Informational capitalist critique allows us to move past the reification and limitations contained in the other terms and lenses listed above: informational capitalism, then, is a heuristic which enables a dialectical scholarly analysis of these practices in relation to other spheres of economic, cultural, social, and political

activity. Communications scholar Arun Kundani (1998/9) describes informational capitalism as a new form of economic organization and capitalist development facilitated by ICTs and the development of a global network for the exchange and communication of information.

Informational capitalism is based on the commodification and artificial scarcity of information, with three significant outcomes: 1) “informational and symbolic goods become one of the most dynamic and profitable areas of the world economy” (*Ibid.*, 50); 2) other economic and industrial sectors “come to rely for their competitiveness on the production of information, knowledge and symbols”; (*Ibid.*, 50) and, 3) “firms are forced to enter a state of perpetual technological innovation (of which automation is just one part) in order to remain competitive” (*Ibid.*, 50). The informational economy, therefore, relies upon knowledge-based resources, informational goods, as well as symbolic attachments to provide the raw materials and competitive advantages that locate and differentiate goods and services in knowledge-based economic sectors. This informational capitalist critique (cf. Kundnani, 1998/99; Fuchs, 2011, 2010) foregrounds the economic determinism of *creative transformation*, which orients the so-called knowledge-based economy along neoliberal lines via the appropriation and commodification of knowledge-based resources as informational assets.

The Rise of the Knowledge-Based Economy Under TRIPS and Beyond

The political economic arrangements of informational capitalism depend on universalist beliefs in *creative transformation* and the legal restructuring that promote and protect the commodification of knowledge-based resources to enable capitalist “progress”. In particular, the neoliberal economic restructuring of the Western, developed world that began in the 1980s and coincided with advances in ICTs helped expand industries focussed on the creation,

management, and commodification of knowledge-based resources across spatial and temporal boundaries. These economic activities are based on the “accumulation by dispossession” (Harvey, 2004) of knowledge-based resources by capital, inserting previously social and cultural resources into a new economically determinist logic to transcend geographic and temporal spaces. This transnational expansion of informational capitalism via accumulation by dispossession is idealized in *creative transformation* and the belief that Schumpeterian creative destruction (Schumpeter, 2003) will beneficially reform existing industrial and social activities, reshaping and replacing them with “improved” informational capitalist activities.

In line with the utopian ideal of the self-regulating market, the belief in *creative transformation* presupposes that economic “progress” is achieved through the use of creative acts, knowledge-based resources, and digital technologies as a means of “disrupting” and replacing established modes of practice. For example, technology critic Evgeny Morozov (2013) helps identify a prevailing sentiment that technologically-mediated “innovation” can reform everything from commerce, to health care, to government services. Through *creative transformation* a celebratory hegemony of disruption helps reify notions that discarding established institutions and practice is a sign of inevitable progress. The calls from venture-capitalists and technologists for the “Uberization of everything” (Lobel, 2016) demonstrates this hegemonic logic as well as the tensions created by these forms of technologically-facilitated political economic transformation.

Counter-movements appear as effected groups and individuals react against changing political, economic, and technological circumstances in light of inadequate attempts to ameliorate the resulting displacements of labour and established ways of life. In turn, human creativity and ingenuity are valorized as the means for overcoming the political economic

deficiencies that these counter-movements help highlight, as *creative transformation* contributes to the belief that “good and better” ideas will ultimately come to the foreground and replace deficient and traditional ways of life. This optimism surrounding *creative transformation* stems from a “Californian ideology,” which combines neoliberal and libertarian impulses and the privileging of the individualization and privatization of previously public resources (Barbrook and Cameron, 1996).

As media scholars Richard Barbrook and Andy Cameron argue, the proponents of the ICT-intensive industries and geographic regions where the technologies of informational capitalism have been historically created, have refined and diffused “a heterogeneous orthodoxy for the coming information age: the Californian Ideology” (Barbrook and Cameron, 1996: 44). This Californian ideology reifies the competitive ethos underlying information capitalism, arguing that through processes of creative destruction:

“each member of the ‘virtual class’ is promised the opportunity to become a successful hi-tech entrepreneur. Information technologies [...] empower the individual, enhance personal freedom, and radically reduce the power of the nation-state. Existing social, political and legal power structures will wither away to be replaced by unfettered interactions between autonomous individuals and their software” (*Ibid*, 53).

Fuelled by this Californian ideology, *creative transformation* comes to depend on an economic formulation of social and cultural life as the place(s) where knowledge-based resources exist and evolve so that they can become transformed and commodified as informational assets. Neoliberal and libertarian distrust of government or state-based regulation contributes to an orthodoxy promoting the further erosion of social protection mechanisms in favour of a technologically mediated “wild west” of competitive individualism and the marketing of entrepreneurial informational assets.

In particular, IP regimes – which govern how intangible resources operate under prevailing capitalist systems – have become a focal point for governing and expanding the economic activities of *creative transformation*. In order for informational capitalist accumulation to occur, knowledge-based resources must be appropriated and made artificially scarce so that rents and profits can be derived through the exchange of informational assets. As legal scholar Siva Vaidhyanathan argues, monopolies of knowledge/information are legally protected “by limiting access, fixing prices, restricting licensing, litigating, and intimidating potential competitors, misrepresenting the principles of the law, and claiming a measure of authenticity or romantic originality” (Vaidhyanathan, 2001: 24) through IP law. IP regimes have by-passed alternative ways of allocating and stewarding knowledge-based resources and have become a key component of the so-called innovation systems supporting the knowledge-based economy. IP law is the means through which knowledge-based resources are commodified and helps create economic “incentives to innovate by allowing innovators to restrict the use of the knowledge they produce by allowing the imposition of charges on the use of that knowledge, thereby obtaining a return on their investment” (Stiglitz, 2007-08: 1696). In doing so, IP law further disembeds knowledge-based resources from their social basis, allowing private monopolies of knowledge/information to be created and legally protected, which allow IP rights-holders to restrict access as they see fit.

Neoliberal governance institutions, such as WTO and its TRIPS Agreement, both established in 1994, help diffuse these purportedly universalized IP standards and regimes internationally. The proprietary and restrictive norms advanced via these policies have effectively globalized an IP regime based on the economic interests of developed states, particularly those of the United States (Drahos with Braithwaite, 2002). The linking of IP law

with international trade enabled IP-exporting countries in the developed world to advance an international trade-based IP regime focussed on “maximizing economic returns” (Tawfik, 2013: 300) through the private appropriation of knowledge-based resources at the service of informational capitalism. The TRIPS-based IP regime operates according to a neoliberal economic orthodoxy, which privileges the commodification of knowledge-based resources as primarily economic assets generated for their exchange value in market-based systems. This obscures the social, cultural, and political relationships that knowledge-based resources have in broader ecologies of life and information, delimiting their deployment at the service of capital impulses. The social, cultural, and political implications of IP law (Coombe and Turcotte, 2012a) are obscured by and subordinated to the economic rationalities of the neoliberal project. Two years after the establishment of the WTO and the TRIPS regime, the Organization for Economic Cooperation and Development (OECD) began discussing the idea of a “knowledge-based economy,” which described the emergence of an economic project in line with the rise of a so-called “information society” (OECD, 1996: 13). The knowledge-based economy and information society perspectives seek to leverage advances in ICTs by enabling informational economic activities facilitated by the creation and diffusion of digital and networked technologies.

In a 1996 report the OECD summarized the emergence of a globalized “knowledge-based economy” (OECD, 1996) reliant upon the appropriation and commodification of knowledge-based resources as factors for economic growth. The OECD asserted that “the existence of information technology and communications infrastructures gives a strong impetus to the process of codifying certain types of knowledge. [...] It is the increasing codification of some elements of knowledge which have led the current era to be characterised as ‘the information society’ – a society where a majority of workers will soon be producing, handling and distributing

information or codified knowledge” (*Ibid.*, 13). The further construction of a transnational “knowledge-based economy” within the global neoliberal market system envisioned by the OECD requires tools and technologies that accord to this program of informational capitalist accumulation.

The OECD has helped set out a system of indicators to measure, track, and assess the productivity of the knowledge-based economy. These “information technology indicators” focus on the diffusion as well as use of ICTs, and measure the factors facilitating or impeding “technology flows,” such as pricing, which indicate “the rapid growth of the information society” (*Ibid.*, 34). As well, these indicators measure knowledge inputs, knowledge outputs, so-called “knowledge networks,” and the ability to measure knowledge creation and the potentials associated with “learning” (*Ibid.*, 31). The OECD’s information technology indicators work to quantify the diffusion of ICTs, knowledge-based resources, and informational assets; the appropriation and commodification of knowledge-based resources as goods and services also, however, require legal and governance regimes that secure and incentivize the investment of economic actors to contribute to this economy’s expansion. These indicators further reify conditions of competitiveness between countries as well as subnational jurisdictions in terms of attracting, developing, and retaining human as well as economic investments to catalyze knowledge-based economic growth.

The size and scope of the knowledge-based economy are difficult to quantify due to the intangible and often complimentary role that knowledge/information plays in the production and provision of goods and services (cf. Fuchs, 2011). However, the knowledge-based economy is marked by:

“production and services based on knowledge-intensive activities that contribute to an accelerated pace of technological and scientific advance as well as equally

rapid obsolescence. The key components of the knowledge economy include a greater reliance on intellectual capabilities than on physical inputs or natural resources, combined with efforts to integrate improvements in every stage of the production process, from the [research and development] lab to the factory floor to the interface with customers” (Powell and Snellman, 2004: 201).

The knowledge-based economy depends on both high-tech manufacturing and exports as well as knowledge-intensive services (OECD, 1996: 9). At the time of the OECD’s *Knowledge-based Economy* report, over 50% of the gross domestic product (GDP) of major OECD member states was estimated to be based in the knowledge-based economy (*Ibid.*). The World Bank has created and tracked the knowledge-based economic indicators and performance of individual states using a Knowledge Economy Index and data dating back to 1995 (World Bank, 2012). The Knowledge Economy Index (KEI) rates and compares the productivity and competitiveness of countries according to four “pillars” of knowledge-based economic activity: Economic Incentive and Institutional Regime, Education, Innovation, and Information and Communications Technologies (*Ibid.*). The most recent report is dominated by developed countries (Table 1), while the United States and United Kingdom rank 12th and 14th (*Ibid.*) The KEI is based on criteria and institutions; developing countries as well as countries whose “pillars” do not cohere with the World Bank’s methodology are encouraged to align their law, policies, and practices with the assumptions of the KEI. These assumptions are based on *creative transformation* and the belief that knowledge/information can be leveraged to spur economic growth and human development through neoliberal, globalized, and privatized forms of knowledge-based resource appropriation.

The neoliberal knowledge-based economy relies upon the increased globalization of trade, finance, and market exchange, which require legal regimes that enable investor confidence as well as the security of private property. International trade and transactions are not new: forms

of globalization have occurred through antiquity (Moore and Lewis, 2009) and during the economic liberalism of pre-War times, international trade accounted for a similar proportion of total economic production in the global economy as during the 1980s (Bhaduri and Nayyar, 1996: 67). However, at the end of the 1970s and during the 1980s, the economic policies of large states began to be *themselves* exported to new states, in the hopes of facilitating and spurring increased integration and the acceleration of trade in goods and services.

Table 1: World Bank KEI Ranking of Top 10 Economies, 2012

Country/Economy	KEI Rank	KEI	EIR Rank	Economic Incentive Regime Index	Innovation Rank	Innovation Index	Education Rank	Education Index	ICT Rank	ICT Index
Sweden	1	9.43	4	9.58	2	9.74	6	8.92	2	9.49
Finland	2	9.33	2	9.65	3	9.66	11	8.77	6	9.22
Denmark	3	9.16	3	9.63	5	9.49	15	8.63	13	8.88
Netherlands	4	9.11	19	8.79	7	9.46	12	8.75	5	9.45
Norway	5	9.11	8	9.47	17	9.01	3	9.43	17	8.53
New Zealand	6	8.97	14	9.09	22	8.66	1	9.81	23	8.3
Canada	7	8.92	7	9.52	10	9.32	16	8.61	24	8.23
Germany	8	8.9	13	9.1	12	9.11	23	8.2	8	9.17
Australia	9	8.88	23	8.56	19	8.92	2	9.71	22	8.32
Switzerland	10	8.87	6	9.54	1	9.86	41	6.9	7	9.2

(World Bank, 2012)

These international, transnational, and global economic processes were enacted through domestic and international legal reforms – often through international trade agreements – administered by global international institutions according to the interests of dominant developed states, most notably the US and its allies. The aim has been to construct an “increasingly interlinked world based on networks of global finance, trade, and business, whose key pivot is the absolute mobility of capital, something that goes hand in hand with ever greater constraints on labour” (Heine and Thakur, 2011: 7). As a result, Western banks and national accounts benefited from the spread of neoliberal and market relations into regions such as Latin America,

Asia, and Africa; however, the growth and development promises used to entice the so-called developing states of these regions progressed very unevenly (Stiglitz, 2003: 7). The “uneven geographical development” (Harvey, 2006) of states within the system of global neoliberalism is maintained because “despite [global] inequalities, [states, actors, and institutions] must cooperate to create and maintain the current global order, with all of its internal divisions and hierarchies” (Hardt and Negri, 2004: xii) or risk creating domestic economic destabilization and insecurity. Neoliberal states and global institutions use economic and political power to maintain “a decentred and decentralizing apparatus of rule that progressively incorporates the whole global realm within its open, expanding frontiers” (Hardt and Negri, 2000: xii). Domestic and international law as well as supportive regulations and policies are reformed to facilitate and accommodate the needs of neoliberal capitalist exchange. At the spatial level, this extends the reach of neoliberal orthodoxy externally; at the temporal level, the processes and practices of neoliberalism become internalized within the state as well as its citizens, as the hegemonic rule of neoliberal orthodoxy structures – or governs – social, political, and economic life.

The OECD’s “knowledge-based economy” and the WTO’s TRIPS Agreement are premised upon *creative transformation* and the desire to advance and facilitate neoliberal policy making and governance techniques that “obscures questions of agency, obfuscates power relations, and masks crucial ideologically loaded assumptions about the nature of innovation in the information age” (McNally, 2014: 291). Sociologist Eran Fisher helps make this point explicit by demonstrating how discourses about technology and the information society structure social, cultural, political, and economic realities according to capitalist imperatives. Fisher argues that, “concurrent with the new regime of accumulation arose a form of social regulation, which encompasses not only the mode of production, but also ‘a facilitating shell’ of economic,

social, and political arrangements, cultural and artistic sensibilities, the world of ideas and bodies of knowledge, everyday life experiences, and the conception of the individual in this society” (Fisher, 2010: 233; citing Fraser, 2003). ICTs enable the seemingly instantaneous flow of knowledge-based resources and information across internationalized global networks. The codification of these resources and commodities into digital binary standardizes the ways in which communication takes place, helping to ensure that “all forms of cultural content can be compressed and made available through digital communications networks that create a world market conceived as a unified information system” (Coombe, Schnoor and Ahmed, 2006-07: 893). Digital codification and standardization accords with neoliberal spatio-temporal fixes and accumulation by dispossession (Dottridge, 2012) as industrial activities favouring differentiation and individualism purport to offer the opportunity for previously excluded individuals, communities, or states to benefit from the economic ‘progress’ of the information society (Kundnani, 1998/99: 66). Fisher argues that this serves to legitimate and reinforce “new realities and constellations of power entailed by this new mode of production, specifically regarding work, by emphasizing the capacity of network capitalism to alleviate alienation, while at the same time obliterating concerns and critiques centered on the mitigation of exploitation” (Fisher, 2010: 239).

The OECD and World Bank adopt the existing, and expanding, international trade-based IP regime to measure the productivity, competitiveness, and efficiency of states within the knowledge-based economy. In a report focused on the role of IP in the knowledge-based economy, the OECD states “IP rights support innovation by making it a more worthwhile investment and encouraging knowledge diffusion” (OECD, 2012: 8). As I discuss below, this is a problematic assumption as it obscures questions of whether existing IP law achieves a “balance”

between the economic rights of creators and the public concerns of citizens, consumers, and users of IP-protected goods and services. Through the TRIPS Agreement, the knowledge-based economy and international trade were linked, giving the WTO as well as the World Intellectual Property Organization (WIPO) considerable impact on how knowledge/information are governed and managed. WTO Director-General Roberto Azevêdo links the “evolving” global economy with the need to protect and facilitate the international trade of knowledge-based resources (Azevêdo, 2016). The TRIPS Agreement sets minimum IP regulations that WTO member states must adopt and enforce. The standards enforced through the WTO are premised on a belief that IP law incentivizes the private production of knowledge-based resources for commercial purposes, which will contribute to the public good. The WIPO has established “capacity building” programs to encourage countries to build “their IP infrastructure to increase their capacity to participate in the knowledge economy” (WIPO, 2016). Together, the WTO and the WIPO work to diffuse norms surrounding the private appropriation and control of knowledge/information internationally. This normative diffusion advances *creative transformation* and the belief that the knowledge-based economy is best served by an international trade-based IP regime that protects and incentivizes knowledge/information governance systems based on neoliberal ideals. For example, the WIPO’s “Internet Treaties,” which include the *WIPO Copyright Treaty* and the *WIPO Performances and Phonogram Treaty*, require

“countries to provide a framework of basic rights, allowing creators to control and/or be compensated for the various ways in which their creations are used and enjoyed by others. Most importantly, the treaties ensure that the owners of those rights will continue to be adequately and effectively protected when their works are disseminated through new technologies and communications systems such as the Internet” (WIPO, 2002).

Within these treaties, knowledge-based resources are presented as commodities that need to be protected and governed for informational capitalist purposes.

Polanyi argued that modern industry, modern economies, and the modern market society require that land, labour, and money be cast as (fictitious) commodities in a liberal economic system with laws and governance mechanisms protecting and serving capital accumulation. In the contemporary situation, industries require that “knowledge” and “information” should be similarly recast in order to serve the increasingly “self-regulated” principles of neoliberal economic systems. In turn, laws and regulations are extended, created, and entrenched to protect and deploy knowledge-based commodities in the service of capital.

The reification of knowledge-based resources as informational assets protected by IP law obscures their dialectical nature and further disembeds the economy from its social circumstances. As political economist Bob Jessop (2007: 117) notes, discussions of the information society and knowledge-based economy:

“often treat knowledge as a factor of production similar to land, capital, enterprise, or labor. This informs a common periodization in which there is a transition from agriculture (land) through industrialism (capital and manual labor) to ‘informationalism’ (information and communication technologies—or ICTs—and intellectual labor).”

Appropriating knowledge as a fictitious commodity reinscribes the historical and fundamental contradictions of capitalism identified by Marx, Polanyi, and Harvey. In fact, the movement towards a knowledge-based economy may exacerbate these contradictions. The dynamic and circular nature of knowledge production—in which “knowledge” is required to generate further “knowledge”—results in an increasingly competitive political economic ecosystem wherein firms, industries, states, communities, and individuals seek to accentuate their differences in the hopes of securing a competitive advantage for attracting capital investment, accumulation, and growth. So-called innovation economics (Atkinson and Ezell, 2012) reinterpret neoliberal economic orthodoxy for knowledge-based economic expansion through “the development and

widespread adoption of new kinds of products, production processes, services, and business and organizational models” (*Ibid.*, 8-9). Through *creative transformation* and the neoliberal individualism of the Californian ideology, the knowledge-based economy comes to depend on a competitive ethos based on creative destruction and the opportunities afforded by creativity, innovation, and the commodification of knowledge-based resources. However, this competitive ethos, “underlines the self-defeating character of the informational revolution from capital’s viewpoint insofar as each new round of innovation is prone to ever more rapid devalorization” (Jessop, 2007: 127). *Creative transformation* necessitates continual competition and economic insecurity, which magnifies the occurrences and consequences of creative destruction: rapid technological and economic restructuring outpaces social and political attempts to mitigate the effects of disembedding the economy from the social.

If, as Harvey argues (2014), economic inequality is a fundamental consequence of capitalist activity, there should be little surprise that economic inequality has accompanied the construction and extension of neoliberal economic orthodoxy during a time of ICT-facilitated Creative Transformation. Economist Thomas Piketty’s study of the dynamics and characteristics of the distribution of wealth and income since the eighteenth century coheres with Polanyi’s earlier work on the limits and consequences of unregulated market systems. Piketty (2014) argues “that a market economy based on private property, if left to itself, contains powerful forces of convergence – [the reduction and compression of inequalities (*Ibid.*, 21)] – associated in particular with the diffusion of knowledge and skills; but it also contains powerful forces of divergence – [in the distribution of wealth (*Ibid.*, 7)] – which are potentially threatening to democratic societies and to the values of social justice on which they are based” (Piketty, 2014: 571). The discourses and norms of contemporary ICT-enabled capitalism work to normalize and

naturalize a conception of knowledge-based resources as the proper functioning and outputs of economic agents, which should necessarily be commodified and exchanged within the market system. It is therefore necessary to move beyond the technological determinism or economically reductionist accounts of *creative transformation* facilitated by the neoliberal, knowledge-based economy by employing an analytical frame that accounts for the dialectical nature of knowledge production.

Knowledge/Information: A Dialectical Account of Informational Capitalism

Critical theories of informational capitalism recognize the dialectical nature of knowledge-based economic practices under conditions of neoliberal governmentality and global economic restructuring. Shifts towards knowledge-based informational assets occur in tandem with the expansion of transnational ICT networks, which facilitate increased expansion of economic markets and rationales (Castells, 2010). Informational capitalist critique recognizes the roles that ICTs and digital networks play in contemporary economic and social formations and seeks to avoid technologically deterministic evaluations of the impacts of these networks on the political economic as well as socio-cultural structures of the contemporary transnational economy. Networks are technological, political, economic, and socio-cultural assemblages based on particular hierarchies of power and concentration. Sociologist Manuel Castells notes this “communication power” (2009) and the ways in which the presumed democratizing and horizontal “nature” of networks extend and obfuscate historic forms of power, subordination, authority, and concentration. Rooted in the tradition of the PEC, informational capitalist critique extends this analysis of communication power, enabling consideration of the ways that the structures, processes, ownership and legal regimes, and tools and techniques of capitalism

support and maintain control structures based on dialectic conceptions of the interrelatedness of knowledge and information (Fuchs, 2009a).

Non-critical and non-dialectical accounts of the knowledge-based economy overlook informational capitalism's continuities with previous capitalist structures. As legal anthropologist Rosemary Coombe argues, "the realities of economic exploitation have simply moved to spaces in which their grim costs are less evident and less easily measured" (Coombe, 1996: 242). Instead, it is necessary to recognize how the material and historically contingent processes of Creative Transformation reorient the structurations and spatialization of political economic arrangements according to a transnational neoliberal economic logic, which, as Fuchs argues, has led to increasing levels of economic polarization and precarity (Fuchs, 2011). Informational capitalist critique illuminates the dialectical relationship between knowledge-based resources and informational assets in a knowledge-based or informational economy facilitated by technological and social changes (*Ibid.*). By doing so, informational capitalism critique helps foreground the ways that *creative transformation* alters how resources are governed and power is structured via the commodification and privatization of informational goods and assets.

The knowledge-based resources and informational assets that the knowledge-based economy depends upon cannot be abstracted from their socio-cultural base and interconnected relationship. As Fuchs argues,

"the notion of transnational informational capitalism grasps this subject-object-dialectic, it conceptualizes contemporary capitalism based on the rise of cognitive, communicative and co-operative labour that is interconnected with the rise of technologies and goods that objectify human cognition, communication and co-operation. Informational capitalism is based on the dialectical interconnection of subjective knowledge and knowledge objectified in information" (*Ibid.*, 128).

“Knowledge” itself must be theorized according to its subjective as well as objective characteristics. For Fuchs, this subjective knowledge is derived from social and cultural relationships and interactions (via communication) and is dependent upon the cognitive capabilities of human beings to appropriate, synthesize, and manipulate already existing knowledge in novel ways. Knowledge must, therefore, be codified to be communicated across spatial and temporal boundaries. Codified knowledge “is a set of significant signs that has the ability to create knowledge” (Zins, 2007: 480) and is always-already derived from socio-cultural knowledge-based resources; this codified knowledge is best understood as “information,” as knowledge-based resources can only be communicated and understood if they are made digestible and transferable. In turn, “knowledge is information that has been appropriated by the user. When information is adequately assimilated, it produces knowledge, modifies the individual’s mental store of information and benefits his development and that of the society in which he lives” (*Ibid.*). This dialectical relationship leads to an knowledge/information dynamic, in which the informational assets driving the informational economy always-already consist of subjective, knowledge-based resources *as well as* objectified information that is codified and can be made artificially scarce via neoliberal governmental tools and technologies, such as IP, in order to be commodified and exchanged.⁹

From a Polanyian perspective, knowledge and information are the “land,” “labour,” and “natural resources” of informational capitalism. *Creative transformation* promotes the appropriation and commodification of knowledge-based resources to function as informational

⁹ In chapter three I further explain my theorization of knowledge/information and its implications for informational capitalism from the perspectives of critical media and CLS, extending my political economic critique to account for its legal, governmental, and socio-cultural construction as well as its implications. For now, it is necessary to show how the *creative transformation* works to disembed knowledge-based resources from their social and cultural roots and appropriate and commodify them as informational assets that are exchanged in markets for the collection of royalties or rents (Harvey, 2010) as the basis for new forms of accumulation.

assets in the pursuit of capital accumulation. Control over or access to IP-protected knowledge/information is both a source of revenue and a means to secure competitive advantage within the marketplace. IP law facilitates the commodification of knowledge/information and the leveraging of knowledge/information as an asset for securing further investment, crucial to the success of business in the informational economy (Arvidsson and Colleoni, 2012). For example, expressions of knowledge/information in the form of books, songs, and films are protected through copyright law, which affixes their tangible and material forms with state-sanctioned monopoly privileges. Yet, knowledge-based resources are embedded within social and cultural relationships, which must be maintained in order to generate further knowledge. The books, songs, and films that copyright law protects are always-already social and cultural expressions that inhabit and contribute to cultural realms of meaning (Coombe, 1996). Through IP law, informational capitalism disembeds the knowledge-based aspects of knowledge/information, reconstructing their social and cultural roots as economic goods and services. That “knowledge production is in many cases a cooperative and networked process” (Fuchs, 2009: 116) accords with Creative Transformation and contributes to informational capitalism’s dependence on networked ICTs to generate and circulate knowledge/information. However, the proprietary rights established through IP law foreclose the socio-cultural basis of knowledge/information by privileging the individuated and economic rights of *creative transformation* and informational capitalism.

The reliance of informational capitalist production on informational assets results in a “crisis of knowledge” (Willke, 2002; Schmiede, 2007; Fuchs, 2009), wherein the disembedding of knowledge/information from social and cultural contexts threatens the preservation of existing knowledge-based resources as well as the generation of future “reserves”. A dialectical

understanding of knowledge/information is necessary to foreground how “knowledge derives from information as information derives from data” (Davenport and Prusak, 1998: 6)¹⁰ in order to analyze the ways in which *creative transformation* enables and forecloses how knowledge/information is created, maintained, and deployed. In particular, digital technologies disembed “information” from the communicative aspects of knowledge/information production, while simulatenously maintaining the communicative aspects of “knowledge” necessary for the future production of knowledge/information. The binary and codified form of digitized knowledge/information means that knowledge-based resources and informational assets can be easily manipulated, “cut,” “pasted,” and “re-mixed” (Lessig, 2008) to create new expressions of knowledge/information. For example, once digitized, books, songs, and films can be manipulated and converged into one another—text from the book and a sample of the song can be removed from its original expressive form and both can be overlaid onto a scene from a film as a recombinant expression of socially-constituted production, which can be circulated further. However, through the use of copyright protections or digital rights management technologies, these creative acts and the potentials digital technologies offer for knowledge/information production are impaired as “the marginalization of recombinant creativity, the potential criminalization of new forms of expressive play, and the extension of corporate control over digital creative work [...] illustrate [a] tendency to control and contain culture” (Coombe,

¹⁰ For this purposes of this dissertation I focus on conceptions of “knowledge” and “information” due to their social usages and legal affirmations. “Data” as a component of knowledge/information is not addressed and is understood as a form of ‘raw material,’ which “is a symbol set that is quantified and/or qualified” (Zins, 2007: 480) but has not necessarily received examination or (re)appropriation. However, the rise of “big data” (Mosco, 2016) and the “Internet of things” (Xia, et al, 2012) point to emerging scenarios where the dialectic nature of knowledge/information will be foregrounded. For example, so-called big data analytics offer the potential to derive new knowledge-based resources and informational assets from knowledge/information generated and manipulated by algorithms (Pasquale, 2015) without relying on direct human interventions. The conceptual category of “data” highlights how unprocessed knowledge/information can exist or be created in order to further speculative valuations without demonstrated use values.

Wershler, and Zeilinger, 2014: 38) at the service of IP rights holders and the economic imperatives of *creative transformation*.

The social production and circulation necessary for the generation of new knowledge/information in digital environments and for exchange in informational capitalist markets problematizes the totalizing and exclusionary practices of proprietary commodity exchange. In dialectic terms, knowledge/information production requires interplay between ideas in order to stimulate the generation of derivative knowledge-based resources that can then be codified and exchanged as knowledge/information in informational capitalist markets. Therefore, despite its tendency to appropriate socio-cultural resources through processes of accumulation by dispossession, informational capitalism depends on the maintenance and perpetuation of commonly available and communally accessible materials. Political economist Massimo De Angelis describes this as a relationship between two self-reproducing systems that are mutually interdependent and, therefore, reliant upon and regulated by each other (De Angelis, 2013: 610). However, the monopoly rights granted via IP law over expressions of knowledge/information distorts, weakens, and threatens the existence of the resources it seeks to protect, particularly in the digital environments driving informational capitalist expansion.

Market processes focused on the appropriation and commodification of communicative and cultural practices are increasingly complementing and supplementing traditional manufacturing and natural resource-based economic activities. The commodification of communicative and cultural practices (or knowledge-based resources) embeds social and cultural practices in the economic realm. However, the processes and relationships that are commodified as informational capital are necessarily human acts and lie, at least in part, outside of purely economic calculations. The calculus of informational capitalism and the privileging of

knowledge/information as capitalist and market-based creations increasingly diminish the social and cultural aspects of knowledge-based resources. In this sense, “what is happening under neoliberalism [and informational capitalism] is the dispossession of the commons in order to generate new spaces of accumulation and an intensified dispossession of income and wealth in order to raise profits” (Fuchs, 2009: 109). Informational capitalism, therefore, depends on the existence of knowledge in “informational commons” (Boyle, 2003: 41-42)¹¹ – where knowledge-based resources are socially, cooperatively, and historically constructed – to serve as a source of resources that are appropriated and transformed into goods and services for the accumulation of capital and profit.

The disembedding of the economy from its social basis through *creative transformation* contributes to a convergence of the various forms of IP law under informational capitalism as a means of privileging private proprietary and economic rights. Economic actors and corporations use various aspects of copyright, patent, and trademark law – as well as a host of emerging IP forms – to create comparative advantage to attract consumers, users, and investors alike, while discouraging ‘unauthorized’ uses of IP-protected knowledge/information. Under Creative Transformation, IP law provides the legal tools necessary to support a political economic system based on commodification (e.g. in the form of “content” such as music or films), informationalization (e.g. in the form of audience data that can be “mined” for profit-oriented purposes), and an interplay between the two (e.g. in the case of goods or services derived from

¹¹ However, it is important to note the limits of the idea of a singular “informational” or “digital” commons. The pluralistic concerns of members of society and societies in diverse cultural settings necessitate the recognition of multiple commons, or we risk advancing the totalizing and universalistic tendencies of informational capitalism. The idea of a singular commons from which knowledge/information can be freely appropriated adheres to *creative transformation* by imagining creativity as the actions of individual creators empowered by individual freedoms but not necessarily dependent upon social obligations (Coombe and Herman, 2004: 569-570). As I will discuss later in this dissertation, the singular informational or digital commons has helped inspire and legitimate counter-movement activities of groups such as the FLOSS community, however, such efforts do not reflect the pluralistic concerns or rights of multiple stakeholders working against Creative Transformation.

the “mined” data), based on the marketing of knowledge/information in order to drive adoption of proprietary goods and services. Knowledge/information is thus dispossessed from the socio-cultural circumstances of its creation to serve as a tool for informational capitalism accumulation. In effect, “accumulation by dispossession” (Harvey, 2004; Dottridge, 2012) occurs by appropriating knowledge-based resources from a social community and its cultural or communicative activities. International IP law and trade regimes ensure that this dispossession is done in accordance with the individualized and privatized market-based orientation of *creative transformation*. However, alternative conceptions recognizing the multiplicity of socio-culturally oriented “knowledge commons” (Hess and Ostrom, 2007) point to alternative management systems, which may be used to govern knowledge/information according to different logics.

‘Creative Transformation’s’ Counter-Movements: Deconstructing the “Californian Ideology”

The expansion of informational capitalism results in economic and social Creative Transformation. Economically, Schumpeterian creative destruction is mediated by technology and emboldened as emerging technological forms and economic practices disrupt, transform, and usurp existing economic and industrial models through the creation of new business practices and forms of accumulation by dispossession. Socially, creative and knowledge-based resources are appropriated as informational assets maintained and marketed by competitive entrepreneurial actors—be they states, corporations, communities, or individuals. Creative Transformation disembeds economic markets from their social and cultural bases, resulting in another stage of Polanyian double movement. From a Polanyian perspective, “the (re)structuring of the economy, and society more generally, based on the ideals of the self-regulating or free market, inevitably leads society to reassert itself against the commodification of land, labour and money”

(Maertens, 2008: 130). The political and economic restructuring of Creative Transformation and informational capitalist expansion give rise to informational politics, within which the nature and use of knowledge-based resources and informational assets is supported, contested, and negotiated by various interest groups. As Fuchs argues,

“the central conflicts and struggles of modern society (on property, power, and skills) have been transformed in the Information Age; transnational networks and knowledge have become strategic resources in these struggles. Network commons challenges network capitalism, networked control is challenged by networked participation, and networked manipulation is challenged by networked wisdom. The dialectical antagonism between cooperation and competition lies at the heart of informational capitalism” (Fuchs, 2009: 120).

Creative transformation is resisted as the socio-cultural basis of knowledge/information are reasserted against the individualizing and proprietary tendencies of informational capitalism.

Neoliberal market rationalities, *creative transformation*, and the Californian ideology, I have suggested, contribute to restructuring governance regimes and relationships between “public” and “private” realms of social life. Public regarding governance techniques are increasingly replaced by economic and market-oriented mechanisms that (re)shape political, social, and cultural worlds according to market efficiencies and cost-benefit analyses. The Californian ideology’s neoliberalism, libertarianism, and technological determinism work to reshape existing and historic balances between private individuals and the broader society. *Creative transformation* rationalizes these changes as natural “evolutions” of the political economy in support of informational capitalist expansion. The traditional public-private divide(s) of embedded liberalism are further dissolved as the economic and technological spheres come to regulate areas of human and environmental activity that had previously been grounded in a balance of social and economic concerns. Accordingly, in the contemporary situation, counter-movement descriptions of the public interest must take into account “the societal conditions in

which the public interest emerges” and “the knowledge needed for the public to envision alternative futures” (Box, 2007: 596).

Description of the “public interest” should appreciate the interconnectedness of social and economic forces – their embeddedness, in Polanyian terms: Double movements occur when

“the interests of those with significant influence in public affairs and individuals and groups in the public at large are brought into the open and addressed in a process of imagining possibilities for the future. The end result is a public (not necessarily everyone, but that portion who wish to be involved in public affairs) that is knowledgeable about alternative scenarios for the future” (*Ibid.*, 597).

The market-based dominance of *creative transformation*, the political economy of informational capitalism, and the Californian ideology are counteracted by encouraging social participation in market reforms (Bugřa, 2007: 176-177). For example, civil society groups such as the Electronic Frontier Foundation (EFF) and Knowledge Ecology International (KEI) have been critical of the recently concluded Trans-Pacific Partnership (TPP) trade agreement negotiations (Heine and Turcotte, forthcoming). The EFF and KEI, argue that the TPP is another attempt to extend and embed the international IP regime “deeper” into social life, and is fundamentally flawed due to the involvement of corporate lobbyists and the exclusion of social participation, civil society negotiation, or public oversight. However, the social participation these groups propose – often in the form of interest groups from so-called civil society – aligns with the economic interests of informational capitalism, as these new public interest groups are not empowered through the same representational and accountability mechanisms employed during embedded liberalism (Bugřa, 2007: 178). Transnational networks and associations are used to individualize the public interest around concern for *homo oeconomicus* but not as the basis for state or community-based interventions. Neoliberalism and *creative transformation* privilege “voluntary gift giving, civil

initiatives, and romantic notions of civil society [, which] are used to hide the reality of an unprecedented commodification of life and livelihood on a global scale” (*Ibid.*).

Dialectical understandings of the role of individuals and the social, knowledge/information, and a re-positing of the economy within social spheres is necessary to recalibrate public interests and private rights and resist *creative transformation*. As discussed above, the idea of an informational or digital commons appears to resist and reorient *creative transformation*. However, a singular informational commons fails to take into account the the plurality of concerns held by multiple stakeholder groups existing in diverse socio-cultural realities. A singular informational commons coheres with the neoliberalism and libertarianism of the Californian ideology by appealing to individuated and potentially, if not explicit, economic forms of creativity and knowledge/information production. As well, through technological determinism, individuated forms of creativity further exacerbate *creative transformation* and the Californian ideology by enmeshing technological progress within a neoliberal guise.

The neoliberal project is an utopian endeavour based on the premise that self-regulating markets will result in the ideal distribution and governance of social and economic resources (Harvey, 2005). The neoliberalism underlying informational capitalism appropriates this utopian promise and weds it to a belief in the transformative and beneficial powers offered by technological “advances” promoted by *creative transformation*. As others have demonstrated, optimistic beliefs in the power of technological “progress” have “been central to the political discourse of technology for centuries” (May, 2003: 9). However, under informational capitalism, the emergence and evolution of “new” media technologies is heralded by techno-optimists as the means of transcending historic problems, thus ushering in a “new” and “better” situation through *creative transformation*. This belief that technological and economic changes will generate

beneficial social, political, and cultural outcomes “den[ies] (or ignore[s]) the role of social and political choice, thereby obscuring the social embeddedness of technology” (*Ibid.*, 3). By deconstructing the Californian ideology, it is apparent that like “the economy,” technology is best understood as embedded in social and economic structures (*Ibid.*, 10). Technology, like the economy, must not be divorced from the social and political circumstances of its creation.

Creative transformation works to obscure these relations and proposes that the technological advances emanating in developed centres of the world will inevitably have positive transformative effects for individuals, communities, states, and, ultimately, the world. ICTs and informational capitalist industries are, therefore, discursively constructed as utopian technologies and practices, which promise that increased access to information will enable:

“people to transform their lives, allowing them to improve their economic condition, educate their children, increase literacy and the levels of education and spread democracy in their countries. Despite years of research that tells us that information is necessary but insufficient to bring about this change, ICTs have become the most recent iteration of the holy grail for development” (Ogan, et al., 2009: 667).

The utopian promises offered by informational capitalism are increasingly criticized for their lack of attention to social embeddedness as well as the tendency to universalize Western ideals and norms (cf. Morozov, 2013; Chan, 2013). The deconstruction of the technological determinism of the Californian ideology provides opportunities for understanding the socially, economically, politically, and culturally contingent role of technology under informational capitalism and the ideological blindspots of *creative transformation*.

As media law scholar Angela Daly points out, “rather than a wholesale surrender to technodeterminism, it is humans (albeit perhaps not being as autonomous as the Western liberal tradition would have us believe) who have the power to control the outcomes and consequences of technological developments, for law as much as for any other area of human life and activity”

(Daly, 2014: 441). The legal regimes employed to secure, maintain, and advance informational capitalism are, therefore, a source of struggle between counter-movements comprised of various stakeholders and interest groups attempting to (re)arrange the social and economic relationships of Creative Transformation, while, nonetheless and to various degrees, implicated in the *creative transformation* they react against.

The proprietary basis of informational capitalism advanced through the international trade-based IP regime, for instance, is opposed by alternative knowledge/information governance regimes which seek to (re)assert more socio-cultural forms of collaboration and production. As I will discuss further in Chapter Four, a prominent example of this is advanced and promoted by groups creating software – itself a fundamental component of informational capitalism – using and protecting collaborative and communal norms and forms of production. The FLOSS movement has become a prominent counterpoint to corporate and proprietary-based models for technological innovation and advancement (Raymond, 1999; Stallman, 2009; Torvalds in Moon and Sproull, 2000) through its use of public licensing regimes that use copyright law to enhance sharing and collaboration by freely licensing derivative works (Kelty, 2008) and encouraging recombinant creativity. According to legal scholar Yochai Benkler, FLOSS represents “an oasis of anarchist production” (2003: 1246) and a “collaborative peer-based production model” (2006: 63). Social scientists have developed a broad literature analyzing the possibilities created by the FLOSS movement, its internal cultural and ideological perspectives, and the activities and interests of specific groups in developed and developing countries (Balkin, 1998; Benkler, 2003, 2006; Kelty, 2008; Berry, 2008; Chan, 2008, 2013; Takhteyez, 2012; Coleman, 2013). From these perspectives, FLOSS can be seen as constructed in opposition to the privatized logic of *creative transformation* and represents a successful counter-movement that proposes and enacts

alternative ways of managing knowledge/information (Benkler, 2006a) within the informational economy.

From a critical political economy of communication perspective, however, media scholar Benjamin J. Birkinbine (2015) demonstrates how FLOSS norms and their radical potential conflict with and are co-opted by corporate actors seeking to leverage this alternative form of productive labour for private ends. For example, Birkinbine details how corporations such as Red Hat, Intel, Texas Instruments, Samsung, Google, and Oracle have become the largest contributors to the Linux kernel and argues that this corporate involvement undermines the radical potential of FLOSS by facilitating the incorporation of open source code into the proprietary offerings of corporations, “which enables the corporation to appropriate the commons-based peer production” into their business strategies (Birkinbine, 2015: 14). In many ways, the ideological basis of FLOSS absorbs and reflects the Californian ideology, helping advance *creative transformation* and the expansion of informational capitalism by individualizing the authorship of “code” – albeit in cooperative and relational settings – as private, individual knowledge/information, which can be freely licensed and “shared” according to the wishes of the “author”. When proprietary rights over peer-produced code is granted to corporate actors, the counter-movement potential of FLOSS is undermined as socially and collaboratively created knowledge/information is appropriated for private economic ends.¹² This should not be surprising, given that the discourse behind FLOSS is based on liberal legal

¹² In such cases:

“Corporations either design unique intellectual property licenses to assign to the code, which enables the corporation to appropriate the commons-based peer production into their proprietary offerings, or they control the types of licenses that can be assigned to the contributor’s code through the use of contributor licensing agreements (CLAs). The CLAs function similarly to End User Licensing Agreements (EULAs) in the sense that they are non-negotiable contracts to which the contributor must agree in order to participate in a corporately sponsored FLOSS project.” (Birkinbine, 2015: 15).

conceptions about copyright law in the digital era, which emanate from legal scholarly debates in the US that “presuppose the American constitutional tradition, which, in terms of the limits it poses to copyright’s reach, privileges freedom of speech” (Coombe, Wershler & Zeilinger 2014). The potential limits of IP law are imagined from the perspective of a liberal subject whose social responsibilities and obligations are based on individuated needs, desires, and calculations.

Legal scholar Lawrence Lessig’s (2008) influential “remix culture” thesis has been conceptually central to many counter-movements working to assert a socially oriented opposition to the transnational IP regime.¹³ Remix or “free culture” groups that resist the corporate control of socially constituted knowledge-based resources also base their critiques on arguments that IP overreach impairs individual expressive freedoms (Coombe, Wershler and Zeilinger, 2014: 8), not because *creative transformation* and the international trade-based IP regime are fundamentally at odds with the knowledge/information dialect and the socially-constituted nature of knowledge-based resources. *Creative transformation* helps obscure social interconnections behind individual right and opportunities, failing to account for socially mediated forms of non-market creative activity and the socio-cultural production of knowledge-based resources.

Other counter-movements problematize economically deterministic conceptions of IP law and focus on the unequal development impacts of informational capitalism by advancing alternative non-market and non-liberal ideals. The development impacts of IP law are a growing area of concern (Wong and Dutfield, 2011) in the context of a knowledge-based economy. For

¹³ This is, perhaps, ironic given that Lessig’s critique stems from a liberal legal interpretation of the need for IP law reform. This critique locates the source of concern squarely on an individualistic level, presupposing that greater individual expressive freedoms will necessarily serve social ends. In doing so, “remix culture” does not attend to structural conditions and inequities that circumscribe the capabilities of individuals based on their inability to access or re-appropriate knowledge-based resources in ways that resist the biases of Creative Transformation. In fact, Lessig’s recent scholarly and activist transition to opposing the influence of corporate and private money in American politics (Lessig, 2016) can be seen as a recognition of the limits of not addressing structural issues within counter-movement activities.

example, the United Nations Development Programme (UNDP) is seeking to link ICT availability with human development objectives (UNDP, 2001) and forms of IP law more attentive to traditional knowledge production and maintenance that have historically fallen outside of the liberal legal framework (Dagne, 2015: 102). Economist Amartya Sen's (1985, 1987, 1999) theory of a "capability approach" to development has shaped many of these initiatives (Benkler, 2010: 223; Krikorian, 2010: 93fn53). Central to Sen's capability approach is the view that "well-being in terms of enhancing capabilities, in lieu of other concepts of well-being such as utility (happiness, desire fulfillment) or opulence (income, commodity command)" (Wong, 2011: 27) must be fostered for development to occur. Sen's work also foregrounds the dialectic of knowledge/information, as "the capability approach views knowledge as an ongoing and emergent process, where the capability to leverage, develop, and change intangible assets is important" (Smedlund and Pöyhönen, 2005: 228-229). Counter-movements such as FLOSS and "remix" communities fail to fully account for the dialectical nature of knowledge/information; by focusing on intangible assets as means to individualistic economic ends, FLOSS advances the neoliberal, liberal, and technologically determinist "progress" and "innovation" imagined by *creative transformation*.

Development programs that focus on the capability approach and human rights-based norms demonstrate the inadequacies of resistance strategies focused solely on individuated and expressive grounds. The liberal individuated subject rationalized through for IP law is criticized for its inattention to the socially constitutive nature of knowledge/information creation and circulation (Amani, 1999a; 1999b; Woodmansee and Jaszi, 1994), while human rights concerns are asserted as counter-points to the economically reductionist conceptions advanced through the international trade-based IP regime (Matthews, 2011). These counter-movements bring attention

to the ways that the internationally diffused norms supporting the transnational IP regime obscure and ignore fundamental forms of social creativity (Coombe, 2004: 382) and entrench unequal bargaining and political economic arrangements (Coombe and Turcotte, 2012a: n.p.). The double movement of Creative Transformation includes counter-movement activities that deconstruct dominant modes of practice and assert alternative ways of life.

The market imperatives of *creative transformation* sidelines issues such as human rights, cultural and environmental conservation, development, and human health in favour of the economic concerns of IP exporting countries and their constituencies. The United Nations Educational, Scientific and Cultural Organization (UNESCO) has become an active participant in IP-related debates, seeking to redress this imbalance by bringing attention to the cultural and social impacts of the global economy (Coombe, 2009). In response, civil society and NGO actors as well as governments of developing countries have looked to human rights frameworks and UNESCO to assert non-economic and development-oriented concerns. For example, as Rosemary Coombe and I argue elsewhere, “international intangible cultural heritage protection has evolved over the last sixty years in a fashion that has brought it progressively more in line with human rights principles and indigenous interests in self-determination” (Coombe with Turcotte, 2012b: 304). As well, coalitions of developing states have used the WIPO as a forum for establishing a Development Agenda (WIPO-DA), which recognizes the distinct needs of individual states when formulating domestic IP laws in relation to their socio-economic circumstances (cf. de Beer, 2009). Counter-movements working within UNESCO and WIPO have helped to foreground the myriad concerns posed by IP for developing countries as well as for non-dominant actors within the IP system.

The increasing assertiveness of this coalition complicates the supposed universality of *creative transformation* and the international trade-based IP regime. From a critical perspective, these counter-movement actors resist the further expansion and embedding of international IP law, rejecting the modern Anglo-American premises of the regime and the Western, (neo)liberal forms of economic and social development it presupposes, which do not coincide with their particular situations (Tucker, 1999). These non-Western perspectives stand in contrast to the narrative of *creative transformation* and the view that Western-styled IP law is necessary for securing and motivating further economic and social growth. In this emerging scenario, developing and non-state actors including indigenous peoples argue that the focus on economic imperatives overshadows social and collective interests and does not attend to alternative economic or development models. The capability approach to development as well as successful efforts to link human rights norms with intangible cultural heritage protection for indigenous peoples comment upon the ways in which Creative Transformation ignores the social and cultural concerns of pluralistic stakeholders. For its critics, the current expansion and deepening of the international trade-based IP regime only benefits countries and corporations that maintain dominant positions in industries based on exporting knowledge and information-based goods as services. It is important, then, to frame current debates about IP expansion (Natanel, 2009; Gervais, 2009; Deere, 2008) and Creative Transformation to recognize when and where the interests of established industries override alternative social, cultural, *and* economic modes of practice and contribute to inequitable political economic outcomes.

CHAPTER TWO

COMMUNICATION THEORIES AND INTELLECTUAL PROPERTY: A CONTRIBUTION TO “THE CRITIQUE OF THE POLITICAL ECONOMY OF INFORMATIONAL CAPITALISM”

Polanyian analysis of double movement activities relating to political economic shifts demonstrates the contested nature of broader macro-level changes occurring during the emergence of informational capitalism. Informational capitalist transitions are occurring at a time of general economic stagnation in Western, developed countries (IMF, 2016), which since the 1970s has been partially offset by growth advances in the fields of “entertainment, communications, and the collection and processing of information” (Gordon, 2016: 2). However, the creation of new markets and forms of commodification facilitating further economic growth through the knowledge-based economy are slowing. Economist Robert J. Gordon demonstrates how the economic gains of the mid-to-late 20th Century associated with the rise of ICTs and digital technologies peaked between 1996-2004 and is unlikely to be repeated (Gordon, 2014; 2016). Gordon also notes the existence of a “paradox,” where knowledge-based economic development is valorized and promoted but does not necessarily result in overall economic growth, productivity, or distributed wealth (Gordon, 2016). Others have described this as a “contradiction of informational capitalism,” as informational capitalism has a tendency to promote increasing returns for the holders of proprietary knowledge/information while generating economic and technological divides for people unable to afford access to these informational assets (Parayil, 2005). Gordon’s “paradox” (Gordon, 2016: 2) and Parayil’s “contradiction of informational capitalism” (Parayil, 2005) provide impetus for analyzing how

proprietary and monopolistic forms of knowledge/information management and IP law impact the subsequent creation and circulation of knowledge-based resources and informational assets under Creative Transformation.

The chapter begins by demonstrating how IP law enables the private appropriation of knowledge/information for economic purposes as well as how this contrasts with “commons”-based conceptions of the management of knowledge-based resources. I highlight this contrast by describing the emergence and politics of the international trade-based IP regime and how a universalist legal regime and normative framework about private control of knowledge/information have been diffused internationally through international trade-based IP law. The diffusion of individualistic and economically oriented forms of IP law is shown to result in changing political economic arrangements based on *creative transformation* and to facilitate the centralization of control over informational goods. In doing so, Creative Transformation dispossesses knowledge/information from commonses enabled by digital technologies, precluding alternative socio-cultural uses of knowledge-based resources in order to advance informational capitalist accumulation.

The chapter moves on to consider how informational capitalism manifests concentrations of capital and power resulting in human and economic development inequities. This critique contributes to the critical analysis of informational capitalism by employing a PEC approach to uncover power relations and highlight “the unity of the political and economic by accounting for their mutual influence and for their relationship to wider social and symbolic spheres of activity” (Mosco, 2009: 4). Using Mosco’s theoretical amalgam for describing the PEC, I examine the commodification, structuration, and spatialization processes resulting from informational capitalist expansion. I analyze how informational capitalist processes lead to specific forms of

commodification (via IP and the appropriation of knowledge/information), structuration (in the form of concentrated monopolies of knowledge/information), and spatialization (based on centripetal regional and transnational relationships focused on informational capitalist power centres), which exacerbate informational and political economic inequality.

Intellectual Property and the Appropriation of Knowledge-based Resources in an Informational Economy

As Kundani notes (1998/99), informational capitalist practices emerged at a time when advances in ICTs helped transcend previous temporal and spatial boundaries for transnational communication and economic exchange. These changing technological circumstances have contributed to the global political economic shift towards Creative Transformation.

Technological and political economic developments have evolved in ways based on *creative transformation* and are conducive to the expansion of a global economic market-based system based on developing new strategies for capitalist accumulation. This transformation results in a “restructuring of capitalism that is characterized by the emergence of transnational, networked spaces in the economic, political, and cultural system [that] has been mediated by cyberspace as a tool of global coordination and communication” (Fuchs, 2009: 119). Meanwhile, informational capitalist processes compliment and drive other historic forms and facets of capitalist accumulation – such as financialization, globalization, hyper-industrialism, and imperialism (Fuchs, 2010: 180). In line with *creative transformation*, legal and governance regimes have been recast to facilitate globalized technologically mediated and information based market processes. The appropriation of knowledge/information into primarily economic terms results in a situation where “competition dominates cooperation. Global network capitalism is characterized by an economic antagonism between proprietary and open space, a political

antagonism between dominated and participatory space, and a cultural antagonism” (*Ibid.*, 120; internal citation omitted) between individuated and communal production practices.

This competition is a hallmark of the optimistic belief in creative destruction that is advanced through *creative transformation* and takes place between states, firms, industries, *and* individuals as well as communities. As political scientist Kean Birch notes, “it is especially crucial to note that markets are based on the relationship between people rather than people and resources, which means that scarcity and therefore market value is manufactured through the acquisition of a resource by a person(s) and the exclusion from the same resource for other people” (Birch, 2006: 3). Therefore, the processes of economic restructuring under informational capitalism adhere and contribute to neoliberal governmental projects which position individuals and communities as economic agents interacting as competitors in the knowledge-based economy. For example, state-sponsored rural development regimes in South America have promised economic growth and human development but have, however, transformed communities so that they can be more easily integrated into neoliberal markets of exchange. Efforts to increase the efficiency and productivity of local producers to meet the demands of export partners contribute to increasingly competitive relations between community members who previously shared knowledge/information in the form of techniques and best practices (Chan, 2013: 107). As I have argued elsewhere, such “intra-communal competition helps to drive down the prices exporters are willing to pay for products, helping to establish—or re-assert—a dependence on foreign networks and transnational political economic realities” (Turcotte, 2016b: 3). *Creative transformation* diffuses neoliberal norms that recast socio-cultural relationships in order to use knowledge/information to expand informational capitalist expansion.

Critical analyses of informational capitalism stem from the PEC tradition that purports to chronicle the burgeoning of a more beneficial “information age” (Bell, 1976) or “network society” (Castells, 2010). However, informational capitalist critique does not assume that contemporary and emerging political economic arrangements are radically transformed by the deployment of ICTs; instead, this critical framework highlights how shifting market and economic processes extend historical forms of capitalism and entrench inequitable political economic structures (Fuchs, 2013; 2011). As Christopher May (2002: 43) argues, “while the technologies and practices of capitalism in the market have changed in form, the underlying property relations – those between labour owning and capital-owning groups – remain in substance unaltered”. The relationships that these knowledge/information-based property regimes have between the commodification, structuration, and spatialization undergirding the political economy of communication (Mosco, 2009; 2011) must be analyzed to highlight the shifts taking place under Creative Transformation.

The legal regime encompassing IP law is a central component of informational capitalism, as it allows for the legal control and private governance of knowledge/information. Creative Transformation depends on the creation of “new enclosures” (May, 2010) that facilitate the propertization, control, commodification, and artificial scarcity of knowledge-based resources. Knowledge-based resources are transformed, controlled, and governed as rent-seeking information via IP. The transnational nature of informational capitalism requires that these legal mechanisms be extended internationally in order to facilitate the concentration of ownership and control over informational goods. This has been accomplished by linking IP law with international trade negotiations and agreements such as the TRIPS Agreement and subsequent bilateral and plurilateral trade agreements. The linking of IP with international trade has been

criticized for privileging the interests of rights-holders and their home countries – particularly the US, Western Europe, and Japan – at the expense of other interest groups and stakeholders (Draho and Braithwaite, 2002; Draho, 1995). Furthermore, inserting IP law into the realm of international trade via the WTO system “overlook[s] the cultural, social, and political implications of these rights, as well as the consequences they may yield” (Coombe and Turcotte, 2012a: n.p.).

The international trade-based IP regime appropriates and individuates knowledge/information from its social basis, repositioning it as resources and assets for private individuals to develop, protect, and leverage in knowledge-based and informational markets. The competition within social and cultural life necessary for the circulation and generation of knowledge/information further disembeds these aspects of human life from their cooperative dynamics, leading to a dual process where competition is used as a means to encourage and promote “innovation” and “progress,” while naturalizing and reifying purportedly “inherent” forms of endogenous competitive advantage that help locate and differentiate possibilities of economic growth. To restate material I presented in Chapter One, through Creative Transformation, the Schumpeterian creative destruction melds with a neoliberal market rationality and socio-cultural relationships are recast in antagonistic and competitive terms. *Creative transformation* fuses neoliberal and libertarian preconceptions with technologically deterministic beliefs that technological changes and development will necessarily bring about progress, growth, and increase the “value” of human life and activity.

Informational assets are the basis for informational capitalist exchange, which contrasts with the physical commodity-based processes of previous forms of production and labour (Birch and Tyfield, 2012: 301). As mentioned above, informational capitalism relies on the

commodification and artificial scarcity of knowledge/information to generate financial assets and informational commodities. While knowledge-based resources can be commodified and exchanged in the form of informational goods and services, informational capitalism further depends on the asset-value of knowledge/information to secure and perpetuate speculative financial investments used to finance technological developments and informational capitalist business practices. Birch and David Tyfield note that “the key difference between an asset and a commodity is that the former is a tangible or intangible resource that can be used to produce value and, at the same time, has value as property. In contrast, a commodity is an object produced for exchange” (*Ibid.*, 302). The knowledge-based resources available to firms, industries, states, communities, and individuals are appropriated and become assets used to secure investment in the hope of spurring economic growth within the global, neoliberal market. This move “demands the atomization of workers, their adaptability and flexibility, their entrepreneurship, and so forth” (Fisher, 2010: 240) so that knowledge/information becomes independent of labourers as it is appropriated and controlled by the IP-rights holding entity. *Creative transformation* re-imagines individuals and communities as potential sources of distinctive knowledge-based resources, which can be leveraged to accumulate capital and material wealth if they are properly standardized, codified, and deployed.

Domestic IP law and the international trade-based IP regime play fundamental roles in the political economic structurations and possibilities of informational capitalism. The proprietization of information through IP leads to concentrated political economic arrangements based upon the ownership and control of informational goods and services (May, 2010; Drahos, 1995; Boyle, 2008; Bettig, 1996). In order for the commodification of information to drive capitalist accumulation in a globalized network environment (Stiglitz, 2007-08), IP law that

supports the private interests of rights holders – particularly those in developed and influential IP-exporting states – must be extended internationally and subjectively internalized and advance Creative Transformation. The international spread of IP laws via their inclusion in the WTO system and through the TRIPS Agreement as well as via more recent bilateral and plurilateral ‘TRIPS-plus’ (Sell, 2007) trade agreements is a means of globalizing Western-oriented legal regimes to facilitate informational capitalism in an internationally networked environment (Drahos, 2005a; Drahos and Braithwaite, 2002; Sell, 2010; Berry, 2008). Normative campaigns by industry advocates and like-minded state or transnational governance institutions help to reify the belief in the primacy of private property and individual ability.¹⁴ For example, legal scholar Jessica Silbey demonstrates how the “origin myths” of American IP law depend on the valorization of individual creativity, authorship, and authenticity (Silbey, 2008). These origin myths have been diffused transnationally due to the US’s influence in creating the TRIPS Agreement and making it the basis of the international trade-based IP regime (Drahos and Braithwaite, 2002). The WTO along with the WIPO and IP-related industry associations work to diffuse norms of individual creativity and authorship rights domestically and internationally (Lee, 2012), promoting a form of IP essentialism that privileges authorial categories of innovator’s rights at the expense of social, cultural and political-economic interests. For example, so-called anti-piracy campaigns are directed against developing countries as well as

¹⁴ The Californian ideology Barbrook and Cameron describe valorizes the existence of “individual” freedom, autonomy, creativity, and genius (Barbrook and Cameron, 1996: 44). This idealization reifies the “lone genius myth” (Montuori and Purser, 1995), overlooking the contextual and relational aspects of creativity and invention (Craig, Turcotte and Coombe, 2011). Psychologists Alfonso Montuori and Ronal Purser demonstrate “how even relatively isolated creative persons ... operate within an historical context and a domain that establishes which are the burning disciplinary issues that need to be addressed, how they can be addressed, and so forth” (Montuori and Purser, 1995: 105). Elsewhere, legal scholars Carys Craig, Rosemary Coombe, and I offer a relational feminist perspective on creativity, challenging the ideologies inherent in copyright law and beliefs about authorship that prioritize individuality by foregrounding the “dialogic nature of creative expression” (Craig, Turcotte and Coombe, 2011: 15; see also Woodmansee, 1984; Craig, 2011).

vulnerable groups, including school children, to “encode capitalist and individualist conceptions of property, creativity and rights” (Yar, 2008: 605). These campaigns serve as a movement that advances *creative transformation* by extending the norms of the international trade-based IP regime outside of the legal sphere and into the “hearts and minds” of people across the world to stabilize and protect knowledge-based industries and economic expansion by delegitimizing alternative conceptions of knowledge/information production and management.

However, the purported benefits of a harmonized international IP regime have yet to be realized for developing states (Correa, 2005; Drahos, 2007; Maskus, 1998) and is leading to precarious political economic realities for individuals and peoples at the margins of informational capitalism. For example, during the negotiation of the TRIPS Agreement the development concerns of developing country negotiators were addressed through the inclusion of “TRIPS flexibilities,” which allowed for the use of compulsory licenses and parallel importation of generic goods to address domestic public policy concerns, particularly in the case of public health (Drahos, 2007) as well as transition periods for developing and least-developed countries to align their domestic law and practices with the Agreement. However, through the threat of US trade sanctions as well as the shifting of IP negotiations and law into TRIPS-plus contexts, the use of such “flexibilities” were discouraged and their implementation threatened with sanctions (Ruse-Kahn, 2011). The commodification of knowledge/information through Western-styled IP law and the political economic advantages enjoyed by US government representatives and private industry actors, leads to the centralization and control of resources largely in the hands of transnational corporations (TNCs) based primarily in developed states (Drahos and Braithwaite, 2002). Purportedly universal IP standards lead to different political economic and development arrangements depending upon the local situations in which they are introduced (Wong, 2011). In

particular, in countries where the ability to pay for proprietary knowledge/information as well as informational goods is low, IP law becomes a barrier against accessing the technologies and commodities of informational capitalism (Okediji, 2015).

Framing knowledge/information as the result of individuated activity provides a moralistic rationale for providing proprietary controls of IP-protected goods. However, the “origin myths” of Western-styled IP law do not easily translate into situations where knowledge/management regimes have been developed according to non-individuated or non-proprietary notions of creativity and control (Boateng, 2011). The international trade-based IP regime thus contributes to the creation of a ‘digital divide’, as the costs of the technologies and informational assets necessary to engage in informational capitalism are increasingly prohibitory for a large number of people in developed as well as developing countries (Parayil, 2005; Wade, 2002). The international trade-based IP regimes, therefore, serves to exacerbate the political economic inequities of informational capitalism.

Political economist Bob Jessop applies a Polanyian lens to the role of IP and knowledge/information, further demonstrating how neoliberal and informational capitalist practices legitimate and reify “the idea that each factor of production is entitled to its own share in the distribution of the total income and/or wealth of society” (Jessop, 2007: 119). The individuated author is, therefore, justified in holding and exercising proprietary control over knowledge/information. These beliefs naturalize the fact that informational capitalism “is based on structural inequalities; it is made up of segmented spaces in which central hubs (transnational corporations, certain political actors, regions, countries, Western lifestyles, and worldviews) centralize the production, control, and flows of economic, political, and cultural capital (property, power, definition capacities)” (Fuchs, 2009: 119). As Polanyi’s historical political

economic analysis suggests, social and political struggle occurs when the market and economy become disembedded from the social and cultural aspects of human life. Under contemporary informational capitalism, informational political struggles emerge as actors and interest groups engage in a Polaynian double movement within which the role and treatment of knowledge/information in economic *and* social life is (re)negotiated and (re)fashioned.

Technological advances are facilitating new organizational systems and production processes that facilitate the transnational circulation and manufacturing of commodities as well as the ‘out-sourcing’ of production and service support. By commodifying knowledge-based resources, IP extends exclusionary property relations into the immaterial and intangible realms, which enables the marketization necessary for informational capitalism while threatening social and cultural relationships to knowledge/information. Attaching market-based incentives and economic rationalism to knowledge/information through IP law, creates artificial scarcity and exclusivity, to knowledge-based resources previously managed through more socio-cultural means and have not been reduced to economic and market-based considerations.

Creative transformation is presented as a universalized ideal, which necessitates the individualization and propertization of knowledge/information. Through the international trade-based regime, IP law is legally constructed and internationally diffused as a fundamental element of informational capitalism that enables the commodification and exchange of informational assets. Copyright, trademark, and patent rights – as well as related areas such as trade secrets, geographical indications, rights of publicity, and protections for industrial designs, plant varieties, databases, and integrated circuit topography – attach exclusive private property mechanisms to intangible or immaterial goods. This facilitates the generation and maintenance of

“monopolies of knowledge”¹⁵ whereby IP rights-holders are able to control access to and the use of knowledge-based resources. IP law acts to facilitate forms of accumulation as dispossession, as intangible and immaterial resources that were previously available for use and appropriation in socio-cultural contexts are commodified and deployed in market-based relations (Coombe and Turcotte, 2012a) depending on the desires of IP rights holders. In turn, informational capitalist arrangements are restructured to adapt to changing social, technological, economic, and political forces by appropriating these previously social and communal resources, which results in tensions between private interests focused on the ability to own and control informational goods and public-regarding considerations of the circulation of knowledge in and between groups (Sell and May, 2001: 474).

Positivist and realist schools of thought regard IP as a necessary evolution of private property rights by extending individuated relationships of ownership and control into the realm of intangible goods and services. The diffusion of such norms and regulatory mechanisms through *creative transformation* contributes to a political economy conducive to informational economic activities. Critics of IP regimes contend that these rights are potentially unjust and afford legally sanctioned and protected monopolies over knowledge/information and cultural expressions. From this perspective, informational capitalist accumulation by dispossession supports and entrenches existing hierarchical power relationships that disadvantage marginalized and developing peoples who operate and exist at the margins of global informational economic processes. The cultural, social, political, economic, and developmental impacts of IP law yield

¹⁵ Innis’ work on “monopolies of knowledge” (Innis [1951] 1995) extends economic – and political economic – attention to how monopoly control in the realms of knowledge, communication, ideas, and information reinforce existing power relations.

different consequences for geographically and economically distinct peoples, communities, and states (Coombe and Turcotte, 2012a).

Under informational capitalism, conceptions of IP law tend to be constructed according to purely economic considerations and extend historic property relations at the disservice of excluded and marginalized peoples and ways of life. For example, Rosemary Coombe and Andrew Herman (2004) detail the LEGO Corporation's appropriation and use of Maori and other Polynesian cultures' symbolic and cultural heritage to develop the *BIONICLE* line of toys. Indigenous NGOs and Maori groups reacted against this misappropriation, objecting to "the futuristic hybridization of living cultural traditions and to inappropriate use of religious and spiritual terms" (Coombe and Herman, 2004: 563). More recently Air Pacific, the national airline of Fiji, re-branded itself as Fiji Airways and adopted *masi* symbols in its corporate designs (Forsyth and Farran, 2015). Miranda Forsyth and Sue Farran detail the socio-cultural importance of these symbols, highlighting how *masi* "has a deep cultural significance for many Fijians and plays an important part in cultural exchanges that reinforce relationships between individuals, families, and other groups" (Forsyth and Farran, 2015: 211). In this case, Fiji Airways contracted a local Fijian *masi* master to produce the designs for the airline, which the airline attempted to trademark. This legal move resulted in "furious public debate, in which outrage was expressed that anyone, particularly a corporate entity, could attempt to claim ownership over such Fijian cultural heritage" (*Ibid.*, 212). In both of these cases, corporate attempts to appropriate and privatize cultural heritage demonstrate how the knowledge-based resources of historically marginalized groups are perceived to be 'fair game' for informational capitalist appropriation and profit seeking. Through IP law, these socio-cultural resources are appropriated and

transformed into legally protected informational assets, which are controlled by private corporations.

Dispossessing Knowledge-based Resources from the Commons

The communal or collective management of knowledge-based resources has been crucial to the functioning of both non-capitalist and capitalist ways of life. So-called traditional knowledge has been cultivated and used to maintain societies, communities, customs, and peoples for centuries (cf. Boateng, 2011), long-before capitalist forms of economic management, production, and exchange circulated globally. Similarly, knowledge/information has been central to the functioning of industrial economies: labourers must *know* how to perform the tasks they are expected to perform, be it on an assembly line or behind a computer screen. Capital's reliance on knowledge-based work is not novel.

Under informational capitalism, however, knowledge-workers are increasingly alienated from their labour and knowledge/information by legal and contractual means (Stahl, 2010). Copyright law's work-for-hire doctrine and similar contractual arrangements ensure that the knowledge produced by labourers in the form of information is increasingly alienated as a corporate asset. The informational assets produced by workers while under such contracts become the (intellectual) property of the firm. While informational workers are able to leave these situations – and are formally free not to subject themselves to such working conditions – through such contracts, their knowledge/information becomes the property of those they labour for, even after their contracts are complete. It is increasingly difficult to find employment in many information-based industries without adhering to such contracts, which also limit workers' capacities to build upon the knowledge gleaned in one context when moving to another.

Computer-mediated industries are increasingly able to capture the knowledge/information of labour, systematically alienating workers from the value they generate during the production process: “Counter-intuitively, IP allows for the dispossession of the products of creative labour by providing a legal mechanism for taking the ‘stuff’ that IP is meant to protect away from the person or people who made it” (Dottridge, 2012: 43).

The knowledge/information formulation advanced in this dissertation recognizes the interrelated material and immaterial construction of ‘information’. Immaterialist and materialist views are deterministic and fail to account for the contingent nature of the knowledge/information dialectic. Communications scholar Robert Babe (2009: 169) refers to the “dialectic of information,” which was integral to the work of figures such as Raymond Williams as well as Harold Innis, Theodor Adorno, and E.P. Thompson, who ground the respective traditions of cultural studies and the PEC. Babe argues that the dialectic of information helps bridge cultural studies and political economy (*Ibid.*: 171; see also, Fuchs, 2011) and accounts for how knowledge and information circulate in counterbalancing ways in social, cultural, political, and economic realms. The knowledge/information dialectic recognizes and conceptualizes this nature of ‘information’: knowledge as the immaterial, signification process(es) and information as its material, codified form. The knowledge/information dialectic also demonstrates the problematically reductionist ways that IP law governs the use of knowledge-based resources under informational capitalism.

IP law privileges the material aspects of knowledge/information in order to codify knowledge-based resources in rent-seeking ways. Ascribing private property relations to material expressions of knowledge – especially prevalent in copyright law – enables these resources to be commodified and linked to value and market calculations to form the basis of informational

capitalist exchange. As mentioned above, this entails the dispossession of knowledge/information from labourers, as the informational assets become the private property of the firm. Information, as a commodity, is divorced from its knowledge-based, immaterial form leading to economically determinist (*Ibid.*, 161) reductions which elide the ways that knowledge/information operate in cultural and social realms as well as their interrelated relationship with respect to the generation of subsequent knowledge/information. The monopolies of knowledge¹⁶ afforded by IP law shape the production, distribution, and use of codified information according to market concerns, delimiting spaces for alternative political economic arrangements.

Advocates for greater access to generic or affordable medicines have long argued that pharmaceutical companies are more concerned with creating “lifestyle” drugs to serve the needs of affluent consumers in developed countries, which results in less research and development investment in medicines that treat the diseases and health issues of people in the developing world (Stiglitz, 2007-08; Trouiller, et al., 2001). Venture capital investment and private support for companies in the technology industries are similarly geared towards the creation and diffusion of goods and services that can be leveraged for maximum capital accumulation—leaving the public sector and governments to invest in areas where capital gain is less easily imagined (Mazzucato, 2011; 2015). In such instances, publicly funded infrastructure is captured by private informational capitalist industries, such as with the development and subsequent

¹⁶ For Innis, control over knowledge contributes both to the concentration of ownership by the owners of media production and distribution outlets as well as the ability to influence how knowledge/information circulates and impacts the perceptions and understandings of individuals and communities (Babe, 2009: 21). The ongoing ‘industrialization’ of knowledge and information creation, therefore, requires particular political economic arrangements, which are constructed and advanced by dominant interest groups.

popularization of the Internet and the World Wide Web, representing another form of accumulation by dispossession.

In an informational economy, IP laws proliferate and give rise to private property ‘rights’ over both the immaterial and material aspects of knowledge/information. The biases of these political economic arrangements purport to overlook cultural norms, conventions, and alternative modes of social arrangement that do not cohere with the economically reductionist perspectives engrained in IP law’s treatment of knowledge-based resources and the informational assets that are produced from them. As Harvey (2007) notes, neoliberal political and economic policies have worked to concentrate wealth and capital in the hands of the ‘elite’ through processes of accumulation by dispossession in which previously communal, collective, or state-controlled resources are transformed into exclusive private property right arrangements that serve *creative transformation*. In doing so, commons-based ways of life are suppressed and informational labour and knowledge are commodified in order to support power arrangements that work against alternative forms of production and consumption (Harvey, 2007: 34-35; see also, Harvey, 2002). The privatization of knowledge/information enables “the extraction of rents from patents and intellectual property rights and the diminution or erasure of various forms of communal property rights ... won through generations or more of social democratic struggles” (Harvey, 2007: 35). These processes serve to remove (often) hard-won rights from the public and citizens and transfer them to emboldened private actors.

The economically reductionist treatment of knowledge/information under informational capitalism is does not align with other already existing ways of treating, preserving, and expanding the base of knowledge-based resources. Political scientists Charlotte Hess and Elinor Ostrom (2007: 8) demonstrate the cumulative nature of knowledge and argue “the discovery of

future knowledge is a common good and a treasure we owe to future generations”. Hess and Ostrom demonstrate how “ensuring access to knowledge is made easier by examining the nature of knowledge and identifying the ways in which it is a commons” (*Ibid.*). Economic theory has embraced the notion that knowledge as a commons is a “global public good”: “a public good has two critical properties: nonrivalrous consumption—the consumption of one individual does not detract from that of another—and nonexcludability—it is difficult if not impossible to exclude an individual from enjoying the good” (Stiglitz, 1999: 308). “Knowledge” is essentially nonrivalrous and nonexcludable in that the “consumption” of knowledge-based resources does not detract from other possible uses and that once knowledge/information is shared and accessible it becomes difficult to prevent its further diffusion.

However, governance technologies such as proprietary legal systems, including IP law, make it possible to exclude knowledge/information, as rights holders are able to determine how and when proprietary assets and resources are legally accessible. These proprietary arrangements align with *creative transformation* and efforts to base informational capitalist growth in the knowledge-based economy. Yet, IP law and other proprietary governance techniques based on private rights can lead to deleterious effects when the capture and commodification of knowledge-based resources detracts from the public interest in maintaining a so-called global knowledge commons (*Ibid.*, 320-221). Legally, this tension has been reconciled by the construction of a “public domain ... in which contents are free from intellectual property rights, either because we have agreed that some things are unprotectable to begin with (not even Einstein owned the theory of relativity) or because the temporal protection granted by these rights has expired” (Hemmungs Wirtén, 2007: 113; internal citation omitted). The legally constructed public domain has received renewed attention with the popularization of digital

technologies, which allow knowledge/information to be created and distributed more easily than previously possible. As Coombe, Weshler, and Zeilinger state:

“the public domain has variously been characterized as those intangible goods and forms that lack IP protection (Boyle, 2003), equated with a cultural “commons” (Gross, 2006; Lessig, 2001; Starr, 2000) or a commonwealth (Bollier, 2002), described as a realm of socially shared informational goods lacking commodity status (Therien, 2001), or defined by gift relations (Frow, 1996), and is occasionally considered a dimension of the public sphere (Halbert, 2005)” (Coombe, et al., 2014: 15-16).

Scholars now argue that under informational capitalism, the public domain and commons require sustainable forms of use rights in order to encourage access to and the recirculation as well as generation of knowledge/information (Hemmungs Wirtén, 2007: 119). Such an endeavour “must critically consider the relationship between law, culture, and the politics of commodifying cultural forms” (Coombe, 1998a: 86) and recognize the culturally constituted and dialectic nature of knowledge/information.

The expansion of informational capitalism has often overlooked the interrelations between knowledge-based resources and informational assets by asserting a monological situation where “the proprietary rights of industrial authors have completely eclipsed other rights – rights of cultural self-determination, rights of creators to their moral interests, rights of access to information, rights of citizen access to media and communications forums, and rights to pursue independent national cultural policies” (Coombe, 2003: 1177. In order to preserve the self-sustaining characteristics of knowledge/information, private rights and the public interest must be reconciled so that “private power [becomes] more publicly accountable” (Macmillan, 2006: 64) and is (re)embedded within the social and cultural realms.

The Politics of Intellectual Property Law: (Anglo) American and Alternative Perspectives

Historically, the underlying goal of modern IP law has been to reward inventors and creators in order to stimulate further development and benefit the public (Hettinger, 1989: 50). From this utilitarian and Anglo-American perspective, IP law has been designed to include restrictions against processes that may be detrimental to the public good: “one of the restrictions is that you cannot engage in abusive, anticompetitive behavior. The rights of governments to issue compulsory licenses form another important part of the patent regime” (Stiglitz, 2007-08: 1699). The role of IP is to construct and legitimate artificial scarcity over knowledge/information (Sell and May, 2001: 472) to spur development based on the public interest while protecting the creative endeavours of individuals. These processes were historically based in legislative desires to create a “balance” between public and private interests by simultaneously attending to issues about moral rights, innovation, creativity, and incentives necessary for continued development. Under informational capitalism, IP law must serve to enhance these public interest concerns and be based on the willingness to reform laws and practices rendered outdated or ill suited to contemporary realities and future possibilities (Daly, 2014: 441). Instead, it would appear that IP is evolving merely to protect investment and promote *creative transformation*.

The diffusion of IP law from Western, developed states via the TRIPS Agreement and other trade-based agreements entails that knowledge-based resources are governed according to economic neoliberalism, which alters the ways that these resources operate in communicative and social processes. Knowledge/information is, therefore, further subsumed by an economic logic by being characterized as commodities intended to be circulated and sold for capitalist purposes. The social and cultural basis of knowledge/information is altered to cohere with a market-based logic that downplays non-economic considerations. In turn, not only have the

public domain and knowledge commons been appropriated and diminished under Creative Transformation, but individuals and society “have also been led to believe that only the profit motive inspires humans to think and create” (Brown-Keyder, 2007: 165). Economically oriented IP law does not encompass the myriad ways that intangible and cultural expressions operate in social circumstances.

Through the international trade-based IP regime, private economic rights become the dominant frame for how intangible and cultural expressions are perceived and considered in official debates surrounding knowledge/information management. Knowledge/information is recast as an economic good that can be deployed for capitalist purposes. The transnational nature of informational capitalism requires that the governance mechanisms operate across national boundaries. Having implemented these proprietary rights at home, domestic governments of developed and IP-exporting countries worked to further these objectives by extending this neoliberal imperative into a greater number of international forums. The governments of countries whose economies and corporate interests depend on IP protected good and services have, therefore, advanced an agenda to expand and strengthen the international trade-based IP regime geographically, temporally, and in terms of the subject matter that can be protected (Sell, 2010; 2003; Drahos and Braithwaite, 2002). To contextualize how IP law operates in the contemporary informational economy it is important to understand how these legal vehicles have been created and evolved throughout history, leading to an international IP regime supportive of *creative transformation*.

In Anglo-American contexts, early IP law was designed in response to economic pressures relating to technological changes and the subsequent diffusion of previously protected goods (May and Sell, 2005). IP law was based upon capitalist and Romantic conceptions of the role of

commodities in a marketplace and the presumed nature of individuated creative activities and authors or creators. Romantic presuppositions characterized the emergence of IP law, privileging ‘authorial genius’ and the primacy of the ‘individual author’ (Woodmansee, 1984; Woodmansee and Jaszi, 1994; see also, Coombe, 2003; 1995) to protect and benefit from his or her creative works. Mixing both moral and utilitarian perspectives, IP law is used to incentivize creative production by securing limited-term monopoly rights for the creator of a work or invention (May, 2010: 7-8)—rights that were often assigned to intermediaries such as book publishers or corporations. For the purposes of facilitating market-based transactions, IP law characterized the material expressions of knowledge as being similar to physical property. Rights were therefore bestowed upon the author – or the author’s designate – to determine how their creations could be commodified, controlled, and exchanged. This authorial property regime “deepened and extend[ed] the principle [of intangible property] across time and space” (Johns, 2010: 325). The ease of reproducibility and transport facilitated by technological changes including the printing press and intercontinental travel required the coordination of IP law across the boundaries of nation-states. The history of copyright law is instructive for demonstrating how commercial interests have been privileged through reforms to IP law.

In Western Europe, the popularization of the printing press made it easier to reproduce and disseminate copyright protected works in illicit markets within and across domestic borders. In particular, the colonial and post-colonial US became home to domestic industries based on reprinting unlicensed works from Britain. Authors and, more specifically, book publishers regarded these actions as a form of ‘piracy’ that diluted the markets where they could sell their own authorized and licensed goods. Copyright law reforms sought to prevent the unauthorized duplication of European works domestically and in the continents. Tellingly, the US resisted

these moves and largely disregarded European IP law to create its own domestic industries (Johns, 2010: 179-212). Once its domestic industries had matured, the US looked to these same governance mechanisms to secure and reinforce its economic advantages. Appropriating and adapting knowledge/information generated in Europe, the US was able to move from a revolutionary and developing state to become one of the world's economic leaders and ultimately a global superpower (Dutfield, 2006).

In the post-war era, as the US became an economic and cultural (industry) leader, American domestic industries became threatened by the ability of foreign firms to appropriate their products and undermine profit maximization. Existing international bodies and agreements, such as the WIPO and the Berne Convention (1886), were regarded as ineffective. Tellingly, the US had first-hand experience with the weakness of international IP mechanisms, having refused to ratify the Berne Convention for nearly a century. The US and its IP allies worked to forge a link between IP governance and international institutions that could effectively enforce 'acceptable' standards via the WTO and the TRIPS Agreement. This objective was pursued by including IP provisions in the international trade regime: "Combining trade with intellectual property gave the US what it had lacked to deal with the problem of copying: leverage" (Drahos, 1996: 49).

Power inequities in domestic and international institutions complicate attempts to negotiate exceptions and alternative arrangements that are deemed to threaten the economic imperatives of the existing order. Peter Drahos' account of the TRIPS negotiation process shows that "the intellectual property story is one of [economic] coercion" (Drahos, 1996: 58). The US and its allies used a comprehensive and sophisticated network to create normative conditions that made adopting TRIPS a palatable option despite associated drawbacks. Tellingly, TRIPS

proponents got their opponents to agree to a system that prevents “developing countries from adopting appropriate patent and copyright standards for their levels of development, a freedom today’s rich countries made sure not to deny themselves when they were developing countries” (Dutfield, 2006: 11). However, as Drahos further explains, it is important to note that the negotiating strategies are employed in international-trade based IP debates are not “simple act[s] of power and domination. Intellectual property practitioners from developed countries were part of a centuries old tradition of intellectual property consciousness, doctrinal knowledge and the juristic and judicial refashioning of that knowledge” (Drahos, 1996: 57). Their negotiating partners in the global South had no such expertise, but a dire need for foreign markets for other goods, putting them at a great disadvantage.

In line with domestic developments of IP law, this international shift focused on promoting and protecting liberal economic principles. Facing (both legal and ‘pirate’) international economic competition, US businesses and lawmakers adopted the position that “stronger property rights were needed to protect American ideas and industry” (Drahos, 1996: 52). Domestic economic concerns were pursued internationally by characterizing stronger international IP provisions as a globally universal good that would stimulate the growth of domestic industries in countries across the world. Economic liberalism was trumpeted as a means for ensuring economic development for all members of the international community. As Peter Drahos (2005b: 140) puts it, “intellectual property rights have a fundamental and catalyzing role in a knowledge economy”. However, cultural, social, environmental, ecological, health, security, and heritage needs and interests would be affected by recognizing IP rights, which were held primarily in industrialised economies.

International trade agreements and treaties focusing on IP have expanded and accelerated in the latter half of the twentieth century as the global knowledge economy has intensified. Within WIPO, TRIPS and the WTO, as well as a host of bilateral, regional, and plurilateral trade agreements, IP has become a “pervasive feature of modern economies” (Drahos, 2005b: 142). With governments across the globe seeking to advance the growth of knowledge-based economies and utilize IP-based industries as a way of creating and sustaining economic growth according to *creative transformation*, disagreements over the breadth, scope, and appropriate features of these rights have become increasingly common. In the early 1990s, economist Arvind Subramanian demonstrated through economic analysis the likelihood for conflicts between states that are net importers of IP protected goods and the net exporters of those works (Subramanian, 1991). The expansion of the international trade-based IP regime in the late-20th and early 21st Centuries has been largely driven by efforts from developed countries; however, as developing countries – such as China, India, and Brazil – came to assert themselves on the global stage they also began “to push for intellectual property standards of interest to them” (Drahos, 2005b: 140).

The increasingly interconnected nature of transnational informational capitalism has resulted in a wave of attempts to internationally coordinate and respond to the changes associated with *creative transformation*. In terms of international IP policy, international organizations (IOs), especially the WTO and WIPO, have taken lead roles in the development and enforcement of globalized IP standards. As described above, the widespread social impacts of IP ensures that various negotiating parties will have disparate interests and areas of concerns in an international environment. At the WTO, though, “TRIPS effectively globalizes the set of intellectual property principles it contains, because most states of the world are members of the WTO (Drahos, 2005b: 147).” Negotiations to update or interpret the TRIPS Agreement, then, become

increasingly complicated as divergent actors seek beneficial results for their own domestic stakeholders. In response, countries seeking to advance a more robust IP agenda by extending the provisions of the TRIPS Agreement have begun to move towards bilateral and plurilateral trade agreements to address their domestic concerns and reach favourable agreements abroad (Braithwaite and Drahos, 2000). The international diffusion of economically oriented IP law disembeds informational capitalism from the socio-cultural basis of knowledge/information.

For example, the deepening of IP law to cover genetic materials as well as the lengthening of term protections for patented inventions has resulted in health crises for people in low-income and developing states. The health and security of people is impaired by IP protections geared towards private accumulation of capital. Perhaps the most prominent example of this involves the case of the pharmaceutical industry and access to medicine in developing and least-developed countries. An analysis by Joan-Ramon Borrell and Jayashree Watal (2002) of access to unsubsidized pharmaceuticals and treatments for HIV/AIDS in middle-income countries found that patent rights had negative effects on access to medicine. The international trade-based IP regime threatens the physical, social, and cultural well being of people unable to afford proprietary goods and services by commodifying and monopolizing the knowledge/information used to create medicines or perform medical treatments. Furthermore, the existence of patents on human and non-human life forms as well as genetic codes can deter future innovation and research into advances in medicine and treatments (Drahos with Braithwaite, 2002: 3-4; Coombe and Amani, 2005). Domestic agriculture and farming industries are also hampered by restrictive patents, which disadvantage farmers in developing countries where food is scarce (Verzola, 2010; Sell, 2010). The proprietary basis of the international trade-

based IP regime effectively excludes marginalized peoples from benefitting from many knowledge-based economic activities.

However, the intangible nature of these activities means that they cannot be entirely controlled by capitalist interests as they continue to operate in a recursive and communicative relationship with the social and cultural environments in which they are embedded. The dialectic nature of knowledge/information means that knowledge-based resources and informational assets are not entirely excludable from the social situations in which they circulate. The governance of intangible and cultural expressions according to liberal and economically determinist presuppositions alters the ways that these articulations operate in communicative and social processes (Coombe, 1998a). Legal scholar Fiona Macmillan argues that, “the ability to control speech, arguably objectionable in its own right, facilitates a form of cultural domination by private interests. This may, for example, take the subtle form of control exercised over the ways we construct images of our society and ourselves” (Macmillan, 2007: 317). IP regimes govern how these processes may be legally undertaken, shaping the ways in which social actors function in relation to the environments they encounter. Public rights, including cultural and human rights to communication and expression, are subsumed by an economic logic that works to characterize these acts as commodities intended to be circulated and sold for capitalist purposes. Social and cultural relationships are altered according to market-based logic that downplays non-economic considerations (Coombe, 1998a).

The economically determinist argument presented by trade negotiators and advanced through international law and *creative transformation* overlooks the social, cultural, and political implications of enforcing ‘universal’ IP standards in countries with varying levels of development and differing historic relationships with intangible and cultural expressions. Non-

Western conceptions of intangible and cultural management, including those in China (Alford, 1995) and those held by indigenous peoples (Bowery and Anderson, 2009), were discredited as viable forms of IP governance in a liberal economic order advanced through the TRIPS Agreement (Drahos and Braithwaite, 2002; Parry, 2002) and the creation of a globalized set of norms and regulations surrounding the control of knowledge/information. In international forums, concerns that Anglo-American styled IP serve as barriers “for leapfrogging by developing nations” (Srinivas, 2010: 36) and are detrimental to cultural rights claims or counterproductive for the realization of the goals of marginalized peoples (Verzola, 2010) were downplayed in favour of the economic rights-based claims of businesses in developed nations.

Privileging corporate commercial rights means that social, cultural, and political claims meet resistance from policymakers in domestic and international contexts. Skeptical positions regarding the role of IP in diminishing the spaces and resources necessary for a “vigorous public domain” (Macmillan, 2007) that fosters social, cultural, *and* economic innovation was relegated to a subservient position. Competing claims against this rhetoric focused on the distinct positions of diverse global actors. Critics argued that placing the governance of intangible and cultural expressions in the hands of international trade experts would also overlook the distinct characteristics and aspirations of historically “balanced” forms of IP law. Approaching knowledge/information as primarily economic goods overlooks the social and communicative aspects of knowledge creation and management: “Culture considered as a resource encompasses a wider range of values than the purely economic emphasis that culture conceived of as an asset tends to project. These values include social cohesion, community autonomy, political recognition, and concerns about inappropriate forms of cultural appropriation, misrepresentation, and loss of languages and local knowledge” (Coombe, 2009: 394). Critics identified the “need to

find some bulwark against the domination of intellectual space by private corporate interests that have now acquired so much power that they are able to shape intellectual property law and its range of exceptions and defences, for their own benefit” (Macmillan, 2007: 117). During global IP negotiations, private economic interests were supposedly balanced by the inclusion of “flexibilities” available to account for differing domestic needs; however, these proved to be “inflexibilities” as they were designed in such a way that accessing these proved difficult for developing states (Stiglitz, 2007-08: 1717) particularly when the process shifted to new arenas.

Peter Drahos (2007) describes the process changes as a form of “forum shifting” done to bypass stalled multilateral forums by securing agreements in smaller, more like-minded groups of states. Moving to more exclusionary international forums diminishes double movement and counter-movement resistance to the extension of economically oriented IP law. When viewed in this context, forum shifting can be seen as an attempt by TRIPS-plus countries, specifically the US and European Union (EU) member states, to “ratchet-up” (Sell, 2010) IP regulations and set even more stringent standards that benefit their domestic constituents and ignore uneven global development outcomes (cf. Chimni, 1999). Proponents of *creative transformation* and the international IP regime maintain that the shift towards bilateral and plurilateral initiatives does not mark the abandonment of multilateral initiatives. Instead, they argue, forum shifting is a means to help the multilateral process succeed:

“The US interest in bilateralism and regionalism does not mean abandoning the multilateral approach. According to the United States Trade Representative [USTR], Robert Zoellick, the idea is not to put all America’s eggs in one basket: ... ‘Having a strong bilateral or subregional option helps spur progress in the larger negotiations’” (Dutfield, 2006: 6).

Smaller free trade agreements (FTAs), then, are a means of gaining consensus amongst smaller groups of like-minded countries that can then be brought to the multilateral arena

in order to move negotiations along. In such scenarios, “inner circle consensus [is] expanded to create larger circles of consensus until the goals of the inner circle [have] been met” (Drahos with Braithwaite, 2002: 137). Counter-movements are weakened or coopted to advance the commodification of knowledge/information and *creative transformation*.

However, arguments for forum shifting and consensus building exercises do not account for the unequal footing that countries negotiating in bilateral and plurilateral situations face. In particular, the US has a history of using its USTR’s 301 process¹⁷ as a means of ‘motivating’ reluctant countries to adopt the IP measures preferred by US trade representatives through the threat of trade sanctions. The history of the TRIPS negotiations demonstrates this, as the 301 process has been used to coerce developing countries, most notably Brazil, to comply with and enforce the terms of the TRIPS Agreement as these are interpreted by the US or face the possibility of trade sanctions (Drahos, 1999). If the history of the TRIPS Agreement is any indication, the use of consensus building within smaller groups and blocs means that once the formal multilateral negotiating process begins, the negotiations are largely pre-ordained as countries have come to terms on basic issues (Drahos with Braithwaite, 2002: 136). While efficient, such actions call into question the legitimacy of the exercise as excluded parties face increased pressure to adhere to the terms set by the dominant group. The legitimacy of forum shifting and TRIPS-plus advancement is increasingly questionable for those actors whose interests are not represented or supported at the bargaining table.

¹⁷ The 301 process is a three-stage process in which the USTR ranks countries by their commitment to the IP interests preferred by the US. Countries that consistently fail to meet the expectations and requirements of the US can face trade sanctions in the form of increased tariffs, lost access to US markets or the withdrawal of development assistance.

To address such concerns, rights-based networks of state representatives from developing countries, NGO, and civil society activists have worked to move development issues to the forefront of WTO discussions since the late 1990s. The stagnant Doha Round of trade talks has seen developing countries, notably Brazil and India, align “themselves as a negotiation strategy along common interests and objectives to protect public health and domestic regulatory diversity not to the extent *permissible* under TRIPS but rather in *priority* of it” (Amani, 2009: 223). Claims to the human rights of security and health have added normative force to arguments against overly broad interpretations of TRIPS provisions. As I will discuss later in Chapter Four, development and human rights frameworks contributed to the creation of the Doha Ministerial Declaration on Public Health (Doha Declaration), which reaffirms the legality of the TRIPS flexibilities and supports both “social and economic rights by locating the trade imperative within the objectives of maximizing welfare through more equitable distribution of benefits” (*Ibid.*, 225). The Doha Declaration represents the leverage that developing states still have to influence international forums to address domestic issues.

The Doha Declaration is a political win for developing states; however, it faces legal and operational obstacles. As a political declaration it is not legally binding upon states. It does, however, compel parties to engage in negotiations over the principles and effects of the TRIPS Agreement itself (*Ibid.*: 228). The “quasi-judicial WTO dispute settlement mechanism[s]” allows for room to maneuver and contest engrained IP rationale by presenting different perspectives on IP based upon “public-regarding intent[s]” (Sell and May, 2001: 493). Using the example of the Doha Declaration as a model, counter-movements can use WTO mechanisms to negotiate new priorities for the international IP regime, such as ones more equitable and attuned to development-related purposes (Correa, 2005: 228). Such counter-movements against Creative

Transformation can be seen as reacting against inequitable political economic processes based on the concentration of knowledge/information through IP law.

Intellectual Property and the Critical Political Economy of Informational Capitalism: Commodification, Structuration, and Spatialization According to Creative Transformation

The political economy of informational capitalism depends on processes of commodification, structuration, and spatialization that serve to concentrate knowledge/information and foreclose alternative possibilities. As Mosco demonstrates, these three processes “make up the main starting points for a political economy of communication” and “that reality is established or constituted by many sources and cannot be reduced to the essentialism of either economics ... or culture” (Mosco, 2009: 1). By analyzing informational capitalism using Mosco’s amalgam, this section demonstrates how the international trade-based IP regime accords with *creative transformation* and the desire to appropriate knowledge/information for economic purposes. Informational capitalism has emerged and expanded as a globalized market structured according to the logic of historic forms of capitalism. Private and digitized knowledge/information forms the basis of these transactions. The commodification of knowledge/information takes place according to Creative Transformation and results in structural and spatial arrangements concentrated by the control of knowledge/information. *Creative transformation* reifies informational and symbolic goods as the primary means of capitalist accumulation: knowledge/information itself is transformed into a commodity and is deployed in other capitalist sectors to enhance efficiency and profit maximization, resulting in a state of constant ‘innovation’ wherein economic actors as well as the public compete to develop, protect, and implement new technologies and processes to distinguish themselves in the marketplace (Kundnani, 1998/99: 50). Creative Transformation entails that emerging political economic

processes are developing at a time of extreme economic concentration and economic inequality (Piketty, 2013). While informational capitalism is not the sole cause of these forces and arrangements, it is a manifestation and driver of these broader political economic circumstances and aligns with other legal and regulatory changes that serve to concentrate capital and power.

Under informational capitalism, ICTs are deployed in order to facilitate various forms of capital accumulation. In particular, and as discussed in chapter two, informational capitalism is based upon the commodification of knowledge/information as a means to: a) facilitate greater efficiencies by leveraging informational assets in order to coordinate flows of materials and resources in associated economic sectors including financial capital, manufacturing, natural resource extraction, and other long-standing economic activities (May, 1998); b) by commodifying knowledge/information as a rent-seeking asset in and of itself, such as in the so-called culture industries (Kundnani, 1998/99); and, c) by accumulating knowledge/information reserves – such as so-called big data as well as the online activities of individuals and groups – so that these can be deployed to facilitate forms of online advertising and other web-based informational capitalist activities dependent on charting and indexing already existing knowledge/information including the communicative practices of users (Jakobsson and Stiernstedt, 2010a). Information capitalism facilitates the maintenance and entrenchment of political economic arrangements that contribute to increased concentration—economically and, perhaps paradoxically, spatially.

Mosco's amalgam provides a theoretical framework for analyzing Creative Transformation and how the commodification of knowledge/information leads to concentrated structurations – in the form of social relations organized around access to knowledge/information – and spatializations, which seek to create centralizing networks to produce, manage, and protect

knowledge/information. In particular, this theorization allows for substantive and dialectical understandings of particular social fields and political economic arrangements. In capitalist, market-based economies commodity production is undertaken to add value, which is then transferrable between and captured by particular informational capitalists. Informational commodities are created in order to extract exchange value from various 'raw' knowledge-based resources and services. Various technologies and organizational systems are employed to make this value-extraction efficient and to increase the profit maximization of various activities. These technologies and organizational systems work to eliminate or transcend temporal and spatial barriers that can have negative impacts on profit growth. In the communicative and cultural realms, knowledge-based resources and informational goods and assets are approached as units of production, distribution, and exchange. Through the international trade-based IP regime, knowledge/information are commodified and controlled in ways that serve value production and capitalist exchange. Monopolies of knowledge are generated and maintained as interest groups and actors gain control over knowledge/information by alienating other groups from their ability to maximize their own profit maximization.

Commodification: Privatized Monopolies of Knowledge/Information

Creative transformation is based on the use of IP and proprietary knowledge/information management regimes to commodify intangible knowledge-based resources into rent-seeking assets that are exchanged and incentive the creation of 'new' informational assets or business practices to support informational capitalism (Kundnani, 1998/99: 60). This 'creative' and 'innovative' activity relies on financial investment and productive efforts geared towards generating and disseminating informational commodities as well as activities geared to

maximizing the use of technological networks by individuals and other corporations, which provides the knowledge/information ‘inputs’ necessary to spur informational economic exchange (David and Foray, 2002: 10). The commodified ‘outputs’ of these processes are informational assets based on production and consumption, or a combination of the two (Kundnani, 1998/99: 53). The value of informational commodities results from their symbolic construction, as symbolic meanings are attached to knowledge/information that are valued and consumed (*Ibid.*). Under informational capitalism, the recursive nature of communication via digital technologies lends itself to the commodification of the communication processes themselves (Mosco, 2003: 32).

The interplay between the symbolic construction and symbolic characteristics of informational commodities contributes to the social, cultural, and economic valuations that drive informational economic exchanges. For example, the favourable perceptions that the public as consumers have towards the providers of informational goods and services through “goodwill” (Coombe, Herman, and Kaye, 2007) as an effect of brand management, impacts consumer decision making, which contributes to the valuation of corporations and, in turn, their ability to influence governmental reforms. Informational capitalist firms often operate in emerging and unregulated spaces and appeal directly to the public as consumers, challenging the ability of policymakers to enact regulations that protect established industries or public interests. The rise of the so-called sharing economy is a case in point. Companies such as Uber and AirBnB offer inexpensive services that are attractive and convenient to consumers. However, these services also threaten long-standing industries, such as taxi providers and the hotel industry, as well as the stability of jobs offered in these industries. Public support of inexpensive and convenient services makes it difficult for policymakers to regulate these emerging goods and services

according to existing policies. *Creative transformation* provides normative support for the creative destruction caused by these emerging business models and proprietary regimes of knowledge/information management offer legal means for protecting the commodities and services they generate so that they can operate in the informational capitalist marketplace. In particular, the framing of these companies as technology companies that facilitate connections between individuals through sophisticated knowledge/information, such as the peer-generated credibility or rating of service providers, relies on the Californian ideology and *creative transformation*'s valorization of libertarian individualism and (neo)liberal economics to position these emerging industries as inevitable evolutions of technologically-facilitated capitalist progress.

Christopher May (1998: 250) argues that the emergence of knowledge/information as an economic resource transforms the nature of both 'knowledge' and capitalism. The commodification of knowledge transforms knowledge-based resources into an "intellectual technology" (Bell, 1976), which organizes socio-economic activities according to instrumentalized logics designed to compete and accumulate within the broader informational economy. The commodification of knowledge/information into an informational asset allows for greater control over these resources by rights holders and overrides public as well as socio-cultural concerns (Trosow, 2014/2015). Creative Transformation comes to depend on organizational structures that are built to maximize efficiency based upon the control of these resources, leading to new divisions of labour within the production and dissemination of informational capitalist activities. As May argues (1998: 259), "tasks may emerge and be subdivided or aggregated with the aid of new technologies, however, the underlying power relations of capitalism remain remarkably familiar". IP law and the proprietary control of

knowledge/information helps fix how knowledge-based resources and informational assets can be legally accessed and manipulated as well as how it circulates in social, cultural, and economic spheres. For example, the knowledge/information that companies such as Uber have relating to transit and transportation are valuable to public officials seeking to better understand and address congestion issues (cf. Morozov, 2013). However, these resources and assets are controlled by the firm, which can use this information to offer complimentary services such as food or package delivery. Knowledge-based resources about the transportation and traffic patterns of the public are therefore appropriated for private economic purposes.

Creative transformation constructs knowledge/information as a capitalist commodity in order to maintain the ‘proper’ functioning of informational capitalism and its political economic structurations. Decentralized, networked organizational forms and production structures privilege knowledge/information as the primary unit for capitalist accumulation. The labour of any individual becomes subordinate to the total knowledge/information of the network, organization, or production team. The dialectical nature of knowledge/information still requires the participation and information-production of users, producers, or so-called prosumers, however, ownership of these knowledge-based resources is lost and appropriated by those who control how this knowledge/information is created and traded for capitalist purposes (Jakobsson and Stiernstedt, 2010b). For example, the commodification of knowledge-based resources under informational capitalism leads to the accumulation of knowledge/information by informational industry actors through its dispossession from the actual users of these technologies and consumers of its services. Online search engines, such as Google, and social networks, such as Facebook, best exemplify this form of appropriation. The actions of users are facilitated and encouraged by these service providers, which then record, track, and contextualize user

behaviours to improve the company's services and market the accumulated knowledge/information to third parties, such as advertisers. Other online companies, such as Amazon, do similar things by using knowledge/information about users' past purchases to tailor recommendations about future purchases—all the while serving as the purveyor of these exchanges.¹⁸ For users themselves, entry into the networks and services offered by these companies requires the production of knowledge/information about themselves and their consumption habits. The act of purchasing and consuming informational goods remains a prominent aspect of capitalist activities and is supplemented by other methods of extracting informational value from the participation of users (Fuchs, 2011; Arvidsson and Colleoni, 2012). Media scholars Peter Jakobsson and Fredrik Stiernstedt (2010b) point out that whether through active, conscious, or participatory production – as in the case of uploading 'content' to websites or social networking sites – or through passive, automatic, or involuntary production – such as when data about users as well as use are recorded and indexed – participation in online communicative practices results in perpetual contributions of knowledge/information to support informational capitalist activity.

Furthermore, attempts to categorize and disseminate knowledge/information, and, more slowly, evolving IP law combine to facilitate an environment where the legal dispossession of knowledge-based resources as informational assets is tacitly, formally, and economically encouraged. As Jakobsson and Stiernstedt (2010b) rightly point out, the legal and policy frameworks supporting informational capitalism are devised so that the shifting nature of

¹⁸ Countries in the EU, while having their own particular interests in IP, have been largely supportive of the international diffusion of trade-based IP but are increasingly concerned by the concentration of the informational economy within US-based firms – specifically, Google, Amazon, Facebook, and Apple – leading to a belief that “it is certainly in the interest of the European Union to repatriate regulation of Internet services to UN agencies” (Thiec, 2014: 104).

contemporary capitalist activities are not impeded, as the basis for law and policy has shifted towards the economic interests of informational capitalism, presupposing its maintenance and perpetuation as the primary goal. The rights of users, *et al*, are increasingly ignored as the ‘right’ to generate profit and (seemingly) contribute to the macro-economy is prioritized. The one-sidedness of these arrangements is evident when one considers how class and cultural divisions contribute to and are implicated within uneven socio-economic structurations. The diffusion of *creative transformation* internationally highlights the fault lines created by the political economic restructuring of Creative Transformation.

In continental Europe, these informational capitalist transformations have given rise to counter-movements that assert cultural concerns as well as public and individual rights about knowledge/information controls. In 2004 Google announced plans to digitize and distribute over a 15 million books through its “Google Library” project. Historian Jean-Noël Jeanneney argues that this project relies on both cultural and commercial impulses to determine what works are significant enough to be added to the digital archive; however, in Europe many critics “refuse to accept that a cultural work might be considered and treated as just another piece of merchandise” (Jeanneney, 2008: 6). They fear that Anglo-Saxon culture from the US and the United Kingdom (UK) will be privileged because the commercial interests of American or British publishers will dominate Google’s mission to “organize the world’s information” (cited in Jeanneney, 2008: 25) at the expense of other cultural heritages. The organization of “universal knowledge” through technological means and for market-based ends downplays efforts to contextualize, classify, and weigh publically oriented cultural objectives such as maintaining national cultures or preserving cultural diversity. As Jeanney argues, “unless a culture organizes that information, society is condemned to accept the mere dissemination of information, harmful to intellectual clarity and to

a rich and harmonious public life” (*Ibid.*, 87). In response to Google’s efforts, the Federal Republic of Germany argued that the Google Library project “results in a de facto monopoly on information and an intensification of media concentration in Google. As a result, the right of free access to information as well as the existing cultural diversity in both Germany and Europe, will be usurped” (Federal Republic of Germany, 2009). The commodification of knowledge/information through *creative transformation* means that knowledge-based resources increasingly become the purview of the market. Informational capitalist efforts to leverage knowledge-based resources and informational assets to generate profit, therefore, threaten the socio-cultural characteristics of knowledge-based resources.

Legal scholar Lea Shaver (2014) highlights how copyright law, in particular, disproportionately favours supply-side economic calculations. Shaver demonstrates that the creation of artificial scarcity via copyright law results in higher prices for cultural and creative goods. Moreover, the incentives offered via copyright law make it economically *irrational* to produce and market goods that are available to the larger population groups. Instead, under informational capitalism, the more viable strategy is to target specific demographics that provide a greater return on investment via their larger purchasing power. As a result, “the advantages of copyright protection [and IP more generally] are reaped primarily by those already privileged: affluent consumers, the most successful creations, and major publishing houses and other copyright holders located in industrialized countries” (*Ibid.*, 27). In the case of the Google Library, copyright holders will be able to influence which materials are available to the project based on calculations about the economic value of works. Research suggests that the Google Library project has resulted in increased profits for publishers involved in the project (2010). As well, legal scholar Pamela Samuelson argues that activities such as this disrupt established IP

law and regulations by creating new rights for informational capitalist firms, such as Google, while not necessarily attending to the broader public rights at stake (Samuelson, 2011). The commodification and private management of knowledge/information provides political economic power for informational capitalists to advance legal and industrial changes for their own benefit.

Creative transformation assumes that via the commodification of knowledge-based resources, issues of inequality and selectivity of markets are irrelevant because greater amounts of and access to knowledge/information will inevitably result in a “digital utopia” where “everybody will be both hip and rich” (Barbrook and Cameron, 1996: 44). This belief fits conveniently within the ideological paradigms that have contributed to the historic development of informational capitalism. In reality, these commodification processes depend on and further exacerbate the structural concentration of knowledge-based resources and the companies that facilitate access to informational assets. Markets based on knowledge/information tend to consolidate as powerful actors use market advantages to gain control and influence (Winseck, 2008; Winseck and Pike, 2007). Legal scholar Timothy Wu has described this as a general tendency of media and information-based industries to switch from disaggregated and relatively open industrial forms to concentrated monopolies or oligopolies (Wu, 2010). For example, ICT industries, based on patent protection, are “strongly centralized and dominated by a small number of powerful corporations,” such as IBM, Samsung, Microsoft, Canon, Panasonic, and Toshiba (Haunss, 2013: 244). As well, under informational capitalism, further concentration is facilitated by market-oriented and neoliberal governance reforms that allow for the merger and acquisition of media, content, and information companies, resulting in horizontally and vertically integrated informational conglomerates. In Canada, the Canadian Media Concentration Research Project (CMCRCP) has tracked this concentration. The CMCRP has found that since 1984,

“concentration levels have taken a significant step up in several sectors of the telecoms, media, and Internet industries and across the mediascape [...] in recent years, especially since 2010” (CMCRCP, 2015: ii), with the top five corporations¹⁹ controlling over 73% of the “entire media economy” (*Ibid.*, 5). Despite the optimism surrounding decentralization and political economic equity surrounding the knowledge-based economy and *creative transformation*, the Creative Transformation is based on increasing political economic concentration, resulting in structural inequality and inaccessibility of knowledge/information for human development purposes.

Structuration: Structuring Concentration and Inequality

The purportedly decentralizing nature of ICTs remains one of the central tenets of research into the knowledge-based economy. This makes sense when viewing contemporary, digitally mediated practices through a technologically determinist lens. Legal scholar Yochai Benkler (2010: 75) characterizes the “networked information environment” as representing a “radical decentralization of the capital structure of information, knowledge, and production.” For Benkler, the technological characteristics of networked ICTs enable greater access to knowledge-based resources. In *The Wealth of Networks* (2006) he describes contemporary practices as shifting away from an “industrial information economy” based upon the control of media and cultural expressions to a “networked information economy,” which allows for expanded access to information, knowledge, and other communicative and cultural expressions. In this networked information economy the high costs of producing and circulating informational goods is democratized as greater numbers of individuals are able to increasingly create, share, or sell their goods via digital means. However, Benkler’s portrayal of the revolutionary ‘nature’ of digital

¹⁹ These informational conglomerates are BCE, Rogers, Telus, Shaw, and Quebecor.

and networked technologies overlooks the ways in which broader political economic structurations influence economic and technological transformations. The networked information environment thesis fails to account for the ways that informational capitalism co-opts ICTs and alternative production models according to the interests of the system itself (Berry, 2008).

For example, the economic nature of the ICT industries requires a return on investment for firms and their shareholders. In turn, these actors need to maximize revenue while minimizing costs. During the mid-1990s, Bob Metcalfe, an electrical engineer associated with the invention of Ethernet technologies, created a ‘sales tool’ for marketing Ethernet products. This rationale has become known as “Metcalfe’s Law” and states that “if a network is too small, its cost exceeds its value; but if a network gets large enough to achieve critical mass, then the sky’s the limit” (Metcalfe, 2013: 28). As Metcalfe points out, this is not a new idea and has its origins in the advent of the printing press in Western Europe (Metcalfe, 1995: 53) and the hypothesis that value increases for users as well as the network itself – and its owners – as the user base expands. Subsequent research demonstrates that this intuition holds (Hendler and Golbeck, 2008: 14) and results in a “self-fulfilling prophecy” (Metcalfe, 2013: 31), wherein network creators seek to expand their user bases in order to increase their valuation and the potential for return on investments. The simplicity of Metcalfe’s Law has been criticized for presuming that all connections are equal (Briscoe, Odlyzko and Tilly, 2006; 2010). However, observed behaviour of actual practice demonstrates that this is not necessarily the case; competing networks and networks of various sizes have different incentives or disincentives for seeking interconnection and interoperability (Van Hove, 2014). Large and dominant networks, therefore, work to entrench their control and user bases by preventing interoperability and excluding competitors.

The economic logic behind these efforts contradicts Metcalfe's Law and accords with informational capitalism. These large networks are not "irrational" (*Ibid.*, 2) for excluding possible partners as well as potential users. By doing so, these actors create a comparative advantage by concentrating their resources and restricting external access to their own network's users so that the company can accumulate and appropriate user-generated knowledge/information and usage patterns as commodities and assets. The business practices of Apple Corporation (Apple) and their creation of a "cult of Macintosh" (Belk and Tumbat, 2005) demonstrate this. Despite controlling a relatively small share of the computer hardware market, Apple has generated strong goodwill with consumers that have helped differentiate its product offerings from its competitors. This goodwill has transformed into loyalty, as devout Apple users hold an "extreme belief" in the company's "corporate mythology" and superiority over other brands (*Ibid.*, 216), which has helped its iPhone become a global success and market leader. Apple's use of proprietary technologies and closed ecosystems, such as its App Store and associated user accounts, contrasts with more open source alternatives, offered by Google's Android platform (Butler, 2011), and results in a strong degree of monopoly control over user-generated knowledge/information through design, production, and marketing strategies, which allow the corporation to benefit from supply chain 'efficiencies' (Clelland, 2014; Trosow, 2014). At the same time, Apple is able to use user-generated knowledge/information to generate profits through rent-seeking activities while redesigning its products to meet consumer tastes and shape consumer trends. Through these business practices, the decentralizing tendency posited by Benkler gives way to informational capitalist processes that concentrate knowledge-based resources generated by users, which can be commodified and controlled, primarily for the purposes of the network and its owners. Metcalfe recognizes this, stating that "Metcalfe's Law is

premised on maintaining installed bases and leveraging the network effect, not starting network growth all over again with each new generation” (Metcalf, 2013: 31).

The commercialization of ICTs as well as digital and ‘social’ media results in and depends on the creation of competitive advantage via investments in hardware and software production (Corrado, 2011). These advantages do not necessarily accord to the users of these technologies and are concentrated in the control of the owners of the networks themselves (*Ibid.*, 22). Control over knowledge/information can contribute to inequities based on income and job opportunities, particularly for historically marginalized peoples based on wealth and gender who do not already have access to informational capitalist networks (Shade and Jacobson, 2015). The application of Metcalfe's Law within informational capitalism via the commodification of knowledge/information results in centralized control over who can access or manage the network(s). While a network(s) may have many users, access to the commodity form of these knowledge-based resources and informational goods are centralized in the control of service/network/platform providers. However, proprietary legal and governance mechanisms work to support accumulation via the dispossession of users’ abilities to control their inputs into the system, which limit network users’ social and political economic standing. As scientists Stephen Friend and Thea Norman argue, in scientific communities and pharmaceutical industries, “siloes institutions flourish and compete for government funding, data are controlled by companies to protect intellectual property and by individual researchers to protect publication and grant-raising ability, and regulators in partnership with the pharmaceutical industry persist in treating clinical study reports as confidential documents” (Friend and Norman, 2013: 299). The competitive advantages created by these practices results in substantial “costs of network exclusion” (Tongia and Wilson, 2011) and work to perpetuate existing socio-economic, political,

and cultural divides. This might be viewed as evidence for Manuel Castells (2009) argument that the economic logic behind network dynamics under informational capitalism results in the concentration of both value and power.

The primary resource of informational capitalism – knowledge/information – becomes increasingly centralized (May, 1998: 250), dividing society at large into groups of information haves and have-nots (Wresch, 1996). Informational capitalism’s reliance upon the commodification of knowledge/information entails political pressure to protect IP in similar ways to other forms of (material) property, resulting in increasing demands for IP protections as well as extralegal mechanism to support and protect so-called IP-intensive industries. IP law is, therefore, consistently and constantly recast in order to strengthen the ability of rights-holders to benefit from their informational assets. Economist Suresh Naidu (2014) argues that overly excessive forms of property protections result in inequitable political economic structurations, which disproportionately advantage the owners and holders of these rights. Drahos and Braithwaite (2002) have described this situation as the rise of “information feudalism” based on the private appropriation and control of knowledge-based resources, which results in “biogopolies” and “infogopolies” as well as new and reinforced forms of political economic inequality. The international trade-based IP regime has been used to advance the legal regime for knowledge/information governance, as a system “used to achieve massive wealth transfers to a small group of developed nations at the expense of other nations” (*Ibid.*, 16). Legal scholar James Boyle’s positing of a “second enclosure movement” (2003; 2008) theorizes along similar lines.

Mosco’s amalgam allows the political economy of communication to incorporate scholarly ideas and analysis that traditionally lies outside of the political and economic traditions

of inquiry. However, the underlying preoccupation on the effects of political economic conditions in fashioning specific structurations needs to be supplemented in order to avoid falling into reductionist or deterministic conclusions, which presuppose political economy as a singular driving force behind social transformation. Fuchs' (2011) work developing a "critical media and information studies" provides a desirable counterweight to such tendencies by foregrounding the dialectical nature of social, political, and economic life. In so far as legal regimes and systems of governmentality work to structure outcomes and agency in particular ways, the work of Mosco and Fuchs parallel insights derived from the tradition of critical legal studies and an emphasis on the need to transcend structuralist accounts of the role(s) that law plays in society (Heller, 1984; Savelsberg and Cleveland, 2013).

The Creative Transformation of informational capitalism relies upon and supports legal and governance mechanisms privileging the 'holders' and 'creators' of existing capital. Informational capitalism's reliance upon the commodification of knowledge/information amidst continuing global economic uncertainty and stagnation results in malleable legal regimes and a situation where corporate and industry lobbyists advocate reforms designed to uphold recent 'advancements', 'gains', and 'innovations'. The uncertain nature of the global economy, generally, and the shifting technological terrain of informational capitalism, in particular, contributes to a situation where the "protection of property rights and efforts to secure distributional advantage where contracts are absent or incomplete" (Jayadev and Bowles, 2006: 330) serves to legitimize and reinforce the 'inevitability' of informational capitalism, its processes, legal regimes, and, ultimately, inequitable political economic outcomes. Political economic structurations and processes dependent upon the control and surveillance of

informational goods usurp the decentralizing promise of digital and networked technologies and mirror previous eras of capitalism.

The historic construction and evolution of liberal democracies as well as social-democratic societies evolved along lines that expanded political agency according to the vested interests of the ruling elites and capitalist classes (Louw, 2010: 40-42). In *Empire and Communication* Harold Innis describes how the technological characteristics of media entail biases towards the centralization and decentralization of the control over information flows (Innis, 2007: 27). However, due to the political economic structurations of informational capitalism, increased centralization of knowledge/information and informational goods results in geographic spatializations working to limit the negative externalities associated with the geographic, networked, legal, or technological diffusion of access to and control over knowledge-based resources. Advocates of *creative transformation* purport that these changes will generate economic growth and opportunity for all. However, the structural realities of Creative Transformation concentrates capital accumulation in the hands of dominant corporations focused on knowledge/information appropriation. This concentration of political economic power delimits the possibilities of users to enhance their own capabilities in ways that may materially improve their way of life—apart from such actions that can be appropriated and commodified by the goods and service providers.

Spatialization (and its Materialities): Informational Labour in Regional and Transnational Relationships

Broader political and economic structures impact the ways in which ICTs and other technologies are deployed and impact distinct societies. While networked and information technologies provide the technical capacities for the decentralization of work and dissemination of

knowledge-based resources, the economic priorities of informational capitalism leads to the concentration of these resources in space. For example, due to the increased speed of interaction, communication, and exchange, the concentration and centralization of knowledge-based resources is required in order to arrange the human capacities to fulfill particular functions in local as well as transnational spatial circumstances. The technologies and organizational structures deployed within firms work to harness the knowledge-based skills of employees for the betterment of the company and its shareholders. Management techniques in the informational economy allow for “pervasive surveillance and monitoring capabilities, [depriving] employees of control [and enabling the] subdividing and routinizing [of] tasks” (McNally, 2010: 369). The productive capacities of individual employees are reduced to particular data and information inputs that contribute to the informational reserves of the firm, which are manipulated and controlled according to the desired outputs and commodification processes. Creativity and knowledge-based labour are reduced to inputs for informational capitalist appropriation, resulting in a situation where the physical location of employees (or contract workers) is structured so the firm benefits from economies of scale and comparative advantage. Accordingly, the outsourcing of labour and relocation of offices and factories to locations with cheaper human costs becomes an economic calculation regardless of the firm’s historical or social attachments. An essential feature of informational capitalism is the resulting “technological and informational vertigo” (Wyly, 2013: 389), which results in an informationalization of labour.

The move towards rent-seeking forms of knowledge/information exchange as the basis of capitalist accumulation entails an informationalization of the necessary labour inputs. Instead of the production of material goods and assets, informational capitalism shifts towards intangible and digitized knowledge/information resulting in productive relationships premised on capturing

the benefits of a “long tail” of productive capacities and market opportunities in order to aggregate and concentrate the economic benefits offered by relatively minor production, research and development, and reproduction costs (Lessig, 2008). Labour is, therefore, informationalized in its relationship with capital, as the former becomes more flexible, intangible, and (often) unrecognizable. The desire of informational capitalists is to use this increasingly precarious relationship to benefit from the efficiencies offered by a reserve – and often unpaid – group of informational labourers who constitute a surplus of both producers and consumers who contribute valuable knowledge/information used to either tailor specific goods and services or develop “innovative” means of leveraging informational assets to further reduce transaction costs and build more efficient means of producing and providing the goods and services consumers desire. Through informationalization, labour is no longer physically dependent on proximity to informational capitalist; ICTs and digital networks allow work to be performed in various locations while knowledge/information is transmitted and centralized by the network or platform operators.

Companies and services at the forefront of the so-called sharing economy or platform economy, such as Uber and Airbnb for example, leverage the distributed potentials of informationalization by commercializing the material goods and services of individuals as entrepreneurs – in the form of their automobiles, time, or dwellings – as a means of creating digital networks, platforms, or applications that harvest knowledge/information from individual activities as a resource for developing other marketable or more efficient goods and services— while also leveraging these informational assets to attract investment finance and capital. These practices concentrate the economic gains offered by “sharing” or “platform” economics, and informational capitalism more generally, for the proprietors of and financiers of the platforms,

networks, or applications. The goods produced and services provided by labourers – in a classic Marxist sense – serve to disproportionately benefit the informational capitalists, those owning and economically benefiting from the “means of connection,” as individual inputs of knowledge/information are only important in so far as they can be aggregated and marketed for economic gain. Forms of labour – such as the production and provision of goods and services – are, therefore, informationalized; platform and application owners are able to amass knowledge/information about consumer habits and preferences as well as local trends, adding informational assets that can be used to improve or create new services and attract investment. The goods and services produced by informational labourers are ancillary to the generation of exploitable knowledge/information, in and of itself.

In general, informational capitalism is relatively agnostic with respect to *who or what* is creating this codifiable and commodifiable knowledge/information, as long as these assets can be used to generate capital accumulation in various ways. At a base level, the generation and circulation of knowledge/information is the primary concern of informational capitalistic expansion through the marketing and exchange of informational commodities and assets for rent-extraction and capital accumulation in consumer or financial contexts. The dialectic nature of knowledge/information, however, ensures that informational capitalist activities remain dependent on a replenishing reservoir of accessible and appropriable knowledge-based resources—or a “commons” or “public domain” from which knowledge-based resources can be drawn and transformed into informational assets. *Creative transformation*, therefore, contributes to the informationalization of labour and concentration of informational assets under the control of corporations and financiers supplying the platforms for (prod)usage,

Library and information studies scholar Michael McNally (2010) argues that this process serves to delimit spaces for resistance and the scope of control that informational labourers hold with respect to the knowledge/information they create and manipulate: technological systems restrict the ways in which individuals and groups contribute to the informational economy and, in tandem with IP law, concentrate surplus profits and possibilities of use in the control of proprietary rights holders. In this sense, “a form of capital has emerged that is ruthlessly dynamic in the field of technological changes and in the globalization of social relations, yet which not only pays no mind to the conditions under which social labour produces but even seems not to care too much whether production takes place at all” (Harvey, 2014: 179). The limits placed on access and control under the auspices of *creative transformation*, therefore, impact the ways in which the productive capacities and uses of “labour” are imagined and compensated with respect to knowledge/information production. From the perspective of informational politics, informational production engenders the possibility of a double movement, within which the informationalization of labour facilitates the concentration of accumulated capital while simultaneously illuminating paths towards achieving non-economic benefits and alternative means of production, collaboration, and value distribution.

The non-economically compensated labour produced in online social networks such as Facebook and Twitter exemplifies this reconceptualization of productive labour in digital, networked environments. Social networks such as Facebook and Twitter operate by appropriating the “immaterial” (Lazzarato, 1996) and “free” labour (Terranova, 2000) of the platforms’ users to generate revenue through advertising, the sale or exploitation of knowledge/information generated by users’ for commercial ends, and the marketing of their platforms’ informational assets – in the form of the size and activity of its user base – as data for

commercial ends while the marketing the economic potential of their business methods to venture capitalists and other investors. This relationship seems to exploit users by alienating them from their productive labour without economic reward (Fuchs, 2013). However, as Lazzarato's conception of immaterial labour suggests, under these conditions informational labourers become "'active subjects' able to coordinate and control their own productive activities instead of being subject to informational capitalist exploitation as a result of 'simple command'" (Lazzarato, 1996: 134). Commodified knowledge/information is appropriated from communal sites of generative activities where competing goals subvert the unidimensional characteristics of proprietary knowledge-management regimes (Coleman and Dyer-Witthford, 2007; Dyer-Witthford, 2001a; 2001b; 1999b). In this "informational mode of development" users are engaged in "communicative and co-operative labour" (Fuchs, 2011: 128), wherein their affective attachments to goods and services contribute to the production of new knowledge/information based on their habits of use, which can then be used to perpetuate the system as a whole. This informational labour becomes a form of "free labour ... where this knowledgeable consumption of culture is translated into productive activities that are pleasurably embraced and at the same time often shamelessly exploited" (Terranova, 2000: 37). The double movement of Creative Transformation demonstrates both the potential means of transcending the alienating aspects of informational capitalism, while further enmeshing socio-cultural and alternative political economic relations within the market-based and proprietary terms of *creative transformation*.

The communicative processes and relationships that these informational capitalist platforms enable provide their users with social and cultural attachments, which are irreducible to solely economic considerations. The incorporation of free labour into the business models of social networks and sharing economy platforms is largely "part of a process of economic

experimentation with the creation of monetary value out of knowledge/culture/affect” (Terranova, 2000: 38). Informational capitalism depends on the commodification of human interactions, which were previously largely free from capitalist imperatives. From the perspective of business interests, “to maintain the market value of information products, elites must find ways to create artificial scarcity and restrict flows of information” (Vaidhyathan, 2004: 127). Scholars of political economy continue to seek ways of theorizing these ongoing shifts in capitalist accumulation. Recent debates have approached the topic using the Marxist “value theory of labour” (Fuchs, 2010; 2012) or an “affective 'law' of value” (Arvidson and Colleoni, 2012). The existence of large informational conglomerates as well as the relative youth and novelty of these informational capitalist industries means that their longevity and potential return on investments made in new firms are largely speculative and based on a belief that aggregating knowledge/information assets will ultimately provide the resources necessary for delivering economic reward to shareholders and investors.

Access to and control of knowledge/information are, therefore, balanced to provide (prod)users with the means for generating and reinforcing social and cultural relationships while user-dependent revenue is created for the platform providers that is (partly) channeled back into the services themselves. From this perspective:

“Rather than capital ‘incorporating’ from the outside the authentic fruits of the collective imagination, it seems more reasonable to think of cultural flows as originating within a field that is always and already capitalism. Incorporation is not about capital descending on authentic culture but a more immanent process of channeling collective labor (even as cultural labor) into monetary flows and its structuration within capitalist business practices” (Terranova, 2000: 38-39).

The productive capacity of individuals and communities as informational labourers supports “the production of surplus value and the general extension and intensification of capitalist markets into everyday life” (Coté and Pybus, 2011: 183). Tellingly, “the

management of creative workers is widely recognized as a challenge for capital” (Huws, 2010: 517). Workers must be afforded the ability to control their labour processes, but this must occur in a way that transfers the surplus value of these operations to the capitalist class.

Marx recognized this tension and contemporary Marxist theorists argue that the logic of capital still works to transform labourers in the ways he delineated:

“In a capitalist society, workers can never become autonomous, self-realized human beings in any significant sense, except in the way the ruling class wants the workers to be realized. They can only express this fundamentally social aspect of individuality through a production system that is not publicly social, but privately owned; a system for which each individual functions as an instrument, not as a social being” (Marx as discussed in Giritli Nygren and Gidlund, 2012: 513).

For cultural workers, this transformation serves to alienate individuals from their social character. Cultural products are commodified and employed in market-based relationships that are separated from their socio-cultural creation and existence: “Where once the worker employed the instruments of production, now the instruments of production employ the worker” (*Ibid.*, 15). Digital environments make the erroneous binary between production and consumption explicit: “the role of ‘consumer’ and even that of ‘end user’ have long disappeared, and the distinctions between producers and users of content have faded into comparative insignificance. ... they have become a new, hybrid, produser” (Bruns, 2008: 2). Bruns’ ‘produser’ demonstrates the necessity of balancing access and control. The recursive and dialogical nature of communicative processes depends on shared and negotiated understandings of cultural expressions. Capitalist accumulation relies upon these relationships for the preservation of its historic economic arrangements: “In phases of capitalism’s development and in particular sectors, the knowledge and skills of workers have been encouraged (and even relied upon) – from the artisan-based

factories of the eighteenth century to software companies in the twenty-first” (Comor, 2010: 443). Producers appropriate information, knowledge, and cultural expressions and disseminate them in a digital, networked environment.

Digital gaming and social network businesses depend on the incorporation of these cultural forms as well as the interactions of individuals and the expanded circulation that cooperative competitive relationships entail. In *Digital Play* Stephen Kline, Nick Dyer-Witherford and Greig de Peuter argue that interactive games are the ideal commodity for contemporary capitalism. This “‘ideal commodity form’ embodies the most powerful economic, technological, social, and cultural forces at work in a regime” (Kline, Dyer-Witherford and de Peuter, 2003: 74). Digital gaming appropriates the logic of neoliberal capitalism in corporate production, consumption, promotion, and dissemination of knowledge/information (*Ibid.*, 75). This ‘ideal commodity form’ is not the “trouble-free answer to the problems and controversies of digital capitalism” (*Ibid.*, 76), but is an example of an alternative socio-economic arrangement based on balancing access and control. For example, digital gaming companies such as Linden Labs have adopted novel approaches to the ownership of cultural expressions produced in online environments: “Rather than ignoring the issue of player authorship, exploiting the creative labor of prosumer communities by seizing their innovations and banning player disposition of online possessions, they have embraced the idea of player-generated intellectual property” (Herman, Coombe and Kaye, 2006: 196). *Creative transformation* privileges control that is based in the hands of culture industry elites. In such digital gaming environments, this is disrupted by the recognition that users’ creativity and authorial recognition can play a role in generating mutually beneficial transactions (*Ibid.*, 197) that are based in cooperative-competition—as producers actively work with one another while working to differentiate themselves for social and

economic benefit. The importance of this alternative conception of access and control lies in the rights-based claims that these relationships afford. ‘Value’ is based upon the reciprocity of benefits for the company and its users and results in a more egalitarian relationship between game publishers and producers. However, as Herman, *et al.* (2006) point out, the benefits that the (prod)users accrue are limited by their lack of democratic or representative input in decision making processes.

Informational labourers, and the digitized “commons” of knowledge/information appropriated by informational capitalist activities, are not exploited in the traditional Marxist sense; these users contribute to and negotiate the socio-economic relationships with which they engage. The needs of the user as well as the producer are met, albeit on uneven terrain. Under informational capitalism, the logic of proprietary and monopoly-oriented knowledge managements is simultaneously reinforced through legal and economic means and subverted by socio-cultural practices reflective of the necessarily dialectic relationship between knowledge/information generation and diffusion.

In local and regional contexts, spaces are (re)designed to capitalize on the immaterial knowledge-based resources offered by informational labourers. The dialectical and relational nature of knowledge/information highlights how ‘creativity’ is a result of the mental capacities and skills of individuals as well as the social contexts working to shape these abilities and how knowledge is created and diffused. The ongoing informationalization of labour is occurring in tandem with the changing social-spatial segmentations, which are reshaping how neighbourhoods, cities, and regions are regulated and developed (Scott, 2014: 573). These spatial transformation mirror similar concentrations occurring in industrial cities, such as Detroit; industry clusters – be they in industrial Detroit or post-industrial Silicon Valley – are created to

benefit from spinoff economic activities as firms in related industries are founded to benefit from organizational (re)production as well as the existence of profitable firms (Klepper, 2010). In the so-called innovation, creative, and high-tech hubs, physical resources and the spatial arrangements of labourers are irrelevant unless they accord with the economic imperatives of Creative Transformation. Ironically, Richard Florida, who championed “creative cities” (2005) as a means to drive economic growth in line with *creative transformation*, has since turned his attention to the associated concentration of resources and economic polarization of these clustering patterns (Florida, 2015).

In response to these political economic concentrations that are creating higher rent prices, property values, and the displacement of poor and historically marginalized communities, some policymakers in and around these informational capitalist clusters, such as San Francisco, are working to re-embed the economic aspects of Creative Transformation within their social bases and alleviate inequality (Brescia and Marshall, 2016). Polanyian counter-movements respond to the inequities associated with spatial concentration and the economic focus of Creative Transformation, which pull knowledge-based resources towards the physical and digital orbit of informational capitalist firms.

The purportedly decentralizing logic of digital and networked technologies works to reinforce and recreate sites of labour (and informational exchange), exhibiting dialectical centripetal and centrifugal forces. The success of Google as an exemplar of informational capitalist achievement is indicative of this relationship. Google and other dominant actors within informational capitalist industries depend on their ability to transform knowledge-based resources into information; however, “how this is accomplished is indeed decentralized, but only with the effect of increasing Google’s gravitational pull” (Jakobsson and Stiernstedt, 2010a:

112). The physical and informational resources of Google are organized to ensure that its activities remain at the center of the networks of information exchange and production. The company's Googleplex headquarters demonstrate this. Google's comparative advantages rely on its ability to be a receiver, processor, and (re)creator of large amounts of data and information (*Ibid.*, 125). User activities provide the informational resources that are then commodified as knowledge/information in the form of advertisements or other related goods and services. The company's headquarters in California is therefore networked through an array of large data processing and hosting sites across the globe. These data centres provide the necessary hardware and processing power to circulate knowledge/information throughout the company's transnational network. Seemingly decentralized, this network of data centres, receiving and processing hubs, and the Googleplex headquarters combine to create "a more centralizing force than any of the old mass media companies could ever hope [for]" (*Ibid.*, 130). The "rampant impulse to commodification" (Schiller, 2011: 928) undergirding informational capitalism and the activities of corporations such as Google depend on the convergence and concentration of data and information across geographic boundaries. Informational capitalist logic seeks out new and favourable geographic places conducive to accumulation and the minimization of externalities, while also working to maintain the characteristics and structures that support its perpetuation (Harvey, 2010: 215-16). New geographic hubs and centres of exchange emerge; however, these remain locked into a subordinate position to network actors with dominant market-positions and user bases.

The US and the TNCs domiciled within its borders remain at the forefront of these economic activities. Political scientist Sean A. Starrs' (2013) empirical research into the relative standing of TNCs refutes popular conceptions of American economic decline. Starrs' research

finds that TNCs from the US dominate the largest range of economic sectors, including those focused on technology, information, and knowledge-based resources (*Ibid.*, 818). The American financial class also holds a predominant number of assets in Europe and elsewhere.

Decentralizing business practices and organizational methods such as outsourcing contribute to the centralization of economic assets and resources for financiers and TNCs based in the US.

Starrs' research supports the arguments made by social scientists Adam Arvidsson and Eleanor Colleoni (2012) about where and how value is located and accumulated in informational capitalist activities. Their work takes into account the central role private financial capital plays in informational capitalism which exacerbates broader political economic trends including labour market insecurity and the externalization as well as internationalization of labour (Thompson, 2013) that is digitally connected to informational capitalist centres of accumulation in order to increase shareholder value and attract future investments. Arvidsson and Colleoni argue "the appropriation and realization of value in informational capitalism needs to be understood as part of an extended, society-wide process of finance-centered accumulation, where the link between reputational (or affective) value and access to financial rent becomes fundamental" (2012: 136). The informational resources contributing to financial speculation and investment exist in a competitive regional and transnational circumstance where those with greater knowledge about market factors maintain a competitive advantage. This transnational financial network is located in "global city" (Sassen, 1991) centres such as New York, London, and Tokyo, within which competition over resources and the most up-to-date information is externally and internally fierce.

In large part, the software and digital technology industries that undergird as well as drive informational capitalism and the informational economy rely upon venture capital in order to

fund risky investments. The entrepreneurial ethos of industries and corporations in – or emulating – Silicon Valley are premised on a belief that individual efforts will be validated and rewarded through venture capitalization or the absorption into larger corporations and conglomerates. The speculative nature of these endeavours handsomely rewards the winners while casting aside the losers, whose precarity is magnified by the lack of social and public support mechanisms necessary for dealing with lost jobs or wages. As Harvey argues, “uneven geographical developments become even more pronounced as capital searches out and moves to newer and lower-cost locations. The pressure asserted by finance ‘drives investment towards ever more-short term profits and undercuts long-term and deeper growth. It also produces speculative bubbles and busts’” (2014: 178). For historically disadvantaged peoples and states as well as those excluded from network participation throughout the world, informational capitalism exacerbates existing inequalities and entrenches the negative affects of the ‘digital divide’.

Conclusion – Informational Capitalism, IP, and Concentration: Generating a Digital Divide and Means of Confronting It

The amalgam of commodification, spatialization, and structuration provides a theoretical framework for understanding that capitalist processes as well as technological changes must be understood within the context of their social-economic uses. Monopolies of knowledge are extended and challenged by shifting circumstances; These processes are dynamic and ever changing as agency is exerted within and against predominant structures and organizations. Technological as well as economically deterministic accounts of the political economy of communication fail to account for competition within and between conflicting points of view.

Mosco's amalgam provides a theoretical framework for recognizing the shifting and countervailing aspects of political economic arrangements.

Under Creative Transformation, IP law plays a central role in the commodification of knowledge-based resources and their transformation into rent-seeking informational goods and assets. IP provides the legal and governance mechanisms necessary for capitalist actors to operate in an increasingly digital and transnational economic system. Through their inclusion in the international trade regime, purportedly universal forms of IP law have diffused globally. These 'universals' have been created in and for the benefit of primarily Western and developed states. Alternative and development-oriented concerns are largely disregarded or minimized in favour of neoliberal economic principles. The economically deterministic nature of IP law, in domestic and international contexts, restricts and elides the social, political, cultural, and alternative economic possibilities that knowledge-based resources as well as informational goods may afford. This chapter has analyzed these arrangements through the lens of Mosco's amalgam by recognizing the interrelated relationships between processes of commodification, structuration, and spatialization under informational capitalism.

It argues that informational capitalism generates and maintains centripetal and centrifugal forces that capitalize upon the supposedly decentralizing nature of ICTs while concentrating power and wealth under the control of large, dominant market players. Spatial and temporal biases are managed in order to accumulate knowledge-based resources and informational assets for market actors. The political economic inequities contained in these arrangements are clear. Users are brought into the 'network' as data and information inputs that contribute to the assets and resources of the owners and operators of the systems. From this subservient position, users as well as labourers are dispossessed from their knowledge-based resources, which become the

informational assets of owners, shareholders, and service providers. This structural concentration exacerbates the disadvantages associated with being left out of the network or being unable to afford entry. Affluent demographic groups are privileged over counterparts deemed undesirable or inefficient for profit maximization. The so-called digital divide is, therefore, both a symptom and feature of informational capitalism.

The economically and technologically deterministic characteristics of Creative Transformation and the Californian Ideology assume that greater connectivity and access will necessarily solve the problems associated with being on the digital peripheries. However, as my application of Mosco's amalgam to informational capitalism demonstrates, in reality, the expansion of informational capitalism results in a tendency towards the informationalization of labour through the appropriation of knowledge-based resources. Alternative, non-economic lenses are necessary for interpreting and rectifying these arrangements. Critics of these inequitable informational capitalistic outcomes are increasingly deploying various development-oriented and human rights-based norms, criteria, and principles to destabilize the economic and technological orthodoxy of informational capitalism and its reliance on IP law and commodification of knowledge-based resources. These criticisms represent a counter-movement against Creative Transformation and the disembedding of knowledge/information from its socio-cultural bases.

CHAPTER THREE

THE MOVEMENT'S REIGN: CREATIVE TRANSFORMATION AND POLITICS OF INFORMATIONAL CAPITALISM

Under Creative Transformation, political economic relationships are being recast and modeled on neoliberal economic principles. The *creative transformation* that rhetorically supports and advances informational capitalist expansion envisions knowledge/information in economically reductionist terms which conflict with the socio-cultural practices and communicative activities that nonetheless, as we have seen, subtend knowledge economy industries. In line with Polanyi's description of a "double movement" occurring at the time of liberal economic and market expansion during the early 20th Century, political counter-movements seeking to re-embed the informational economy within its social bases similarly contest the knowledge-based economy. These "informational political" counter-movements problematize proprietary and individualistic forms of knowledge/information management, and IP law, highlighting the existence of alternative social and public oriented regimes as well as the possibilities that digital technologies afford to disrupt the political economic concentration associated with informational capitalism in its current form.

This chapter introduces the concept of informational politics as a Polanyian expression of socio-cultural contestation over how knowledge/information is legally, technologically, and economically reframed in the service of informational capitalism. It begins by describing the dialectic nature of knowledge/information and describes the ways that ICT engineering theories and IP law obscure the socio-cultural basis of knowledge/information by reducing and affirming

informational outputs according to an economically motivated preoccupation with codified and exchangeable “information”. The chapter argues that longstanding concerns over an appropriate “balance” within IP law for promoting economic and technological “progress,” while maintaining social, cultural, and political activity reflects tensions within liberal legal doctrine between economical and socio-cultural conceptions of the role knowledge/information plays in pluralistic liberal democracies. Legal and social norms regarding the “public domain” and “commons” influence the exceptions to and limitations of the purportedly universalized and international trade-based IP regime and represent areas for existing and possible counter-movement activity to occur against *creative transformation*’s economically reductionist conception of knowledge/information. Creative Transformation’s informational politics open opportunities to insist upon alternatives to international IP law and informational capitalism that are attentive to specific socio-cultural and development-oriented concerns. This chapter examines the prevailing counter-movements of informational capitalism and their focus on challenging existing IP law and norms on the basis of a potential abundance of knowledge/information in various forms of digital commons. It concludes by linking informational political counter-movements and human development concerns, demonstrating how concerns for alternative economic and non-economic issues and human rights-based claims highlight the fragility of Creative Transformation.

Characterizing Intellectual Property’s Affirmations: Governing “Knowledge and Information” or “Knowledge/Information”?

Informational capitalist activity and the expansion of transnational markets for exchange and investment necessitate legal protection for knowledge-based resources so they can be appropriated and controlled as commodities and assets. Through IP law, artificial scarcity over

knowledge/information is created, contributing to the monopolization of how knowledge-based resources can legally circulate and be re-appropriated. Once knowledge-based resources are codified as informational commodities or assets, knowledge/information can be transmitted through digital communication technologies for a variety of purposes. In other words, knowledge-based resources must be mediated through a communication channel in order to be intelligible as a form of transmittable ‘information’, which can then be appropriated and commodified to serve informational capitalist purposes. This mediated codification does not, however, remove the socio-cultural characteristics of knowledge-based resources from the attendant informational assets: ‘information’ always already consists of knowledge-based resources, which can be further refined, manipulated, and codified to produce ‘new’ knowledge/information.

The embedded and dialectic nature of knowledge/information exists within a reciprocal circuit, system, or flow, wherein knowledge-based inputs are continuously (re)negotiated and (re)interpreted in order to fashion informational outputs—which are always already knowledge-based inputs. Digital technologies and the Internet, which informational capitalism depends upon, demonstrate this: codified knowledge/information is ‘inputted’ and copies are created locally and throughout the network; a local ‘copy’ of knowledge/information always-already exists on the network and networked ‘copies’ only become apparent once downloaded to the local level. This mutually constitutive relationship exists due in part to the ways that knowledge/information is defined and employed in particular socio-cultural and political economic contexts. In the remainder of this section I will demonstrate how knowledge/information is constructed with a particular focus on its role(s) in an informational economy. The social and economic framing of the knowledge/information dialectic I introduced

in Chapter 1, frames the double movement issues at play in the counter-movements of informational political struggles.

IP law – in particular copyright and patent law – attach to the expressions or physical embodiment of ideas, and not the ideas themselves. Ideas, which I describe as tacit forms of ‘knowledge’, are therefore not protectable via IP law as such; instead, it is the expression – or codification – of these ideas as informational outputs that are given legal protection through the assignment of private property rights over the material expressions of knowledge/information. Historically, this distinction between ideas and their expressions as well as embodiments has been central to the so-called balancing that IP law seeks to achieve. The generation of ‘new’ knowledge/information rests upon the ability of users and creators to interact with already existing knowledge/information in order to refine, counter, and reformulate already existing ideas in novel ways. Knowledge and information, therefore, exist in a dialectical relationship within which creative activities are brought to bear on existing ideas to address problems identified by individuals and communities of creators. Copying, or the re-appropriation of knowledge-based resources, is crucial to this dialectic: ‘copying’ enables existing ideas and knowledge to be tested and re-expressed or re-applied in different ways (cf. Barthes, 1968[1977]; Boon, 2010; Lametti, 2011; Madison, 2010; Hyde, 2010). The production of knowledge-based resources and acts of creativity are, therefore, relational, which creates tension between liberal individualistic legal structures, such as IP law, and the socially constructed realities of social life and creative activity (Craig, Turcotte, and Coombe, 2011).

According to *creative transformation* the economic importance of knowledge-based resources is characterized as a form of “human capital,” which is embodied in human beings and codified, manipulated, and delivered through ICTs (OECD, 1996: 9). The basis of the

“knowledge-based” theory and *creative transformation* derives from the work of economists in the field of “new growth theory.” New growth theory asserts that endogenous growth in firms and states is premised upon the creation and diffusion of knowledge-based resources, which then “spill over” to the other firms, industries, and society at large (Ruttan, 1998). New growth theory argues that production of knowledge/information and the generation of human capital occur due to “market opportunities” and that the creation of these resources enables “persistent spillovers to other agents in the economy” (Braunerhjelm, *et al.*, 2010: 105). The idea that knowledge/information is an essential component of economic growth is not novel, as these links have been presented in various economic and socio-economic theories (for a summary, see OECD, 1996: 11). The novelty of the knowledge-based economy thesis is found in the fact that via *creative transformation* it has been deployed as a means of describing economic and industrial changes amidst shifting political economic and technological circumstances as a way of capitalizing on capitalism’s tendency towards creative destruction. The emergence of networked ICTs facilitates transnational and global expansion, which is presumed to lead to gains in productivity and efficiency for firms and industries involved in the knowledge-based economy. The combination of new technologies with “knowledge workers” seemingly able to exploit their own knowledge-based resources, or human capital, is therefore envisioned as a catalyst for economic growth and development: “The use of new technologies, which are the engine of longer-term gains in productivity and employment, generally improves the ‘skills base’ of the labour force in both manufacturing and services. And it is largely because of technology that employers now pay more for knowledge than for manual work” (*Ibid.*, 10). Knowledge-based resources, then, become a factor and input of production for driving new industries and opportunities according to *creative transformation*.

In its fixed and codified form, knowledge/information is comprised of intangible knowledge-based resources, which can be deployed in various ways in order to meet particular circumstances and goals, as well as informational outputs that can be communicated and exchanged. The material basis of informational capitalism relies on this knowledge/information dialectic (Fuchs, 2010). As I described in Chapter 2, informational capitalism depends on transforming knowledge-based resources into informational commodities and assets by capturing and codifying the intangible knowledge of workers and users. Therefore, according to the economically reductionist and technologically determinist logic of *creative transformation*, the informational components of the knowledge/information dialectic are privileged via IP law designed to meet the political economic calculations of creators, producers, firms, industries, and the knowledge-based economy.

This instrumental, if not economic, conception of knowledge/information has developed in tandem with the emergence of computerization and ICTs. The Shannon-Weaver “mathematical theory of communication” model (Shannon and Weaver, 1964) is regarded as the formative work in information theory, leading to a focus on the creation of media technologies capable of reaching “perfect” communication where the message (or ‘information’) is transmitted completely and accurately. Holistic alternatives to this so-called mathematical model have been developed and bring greater attention to how discursive and socio-cultural interactions as well as power relationships impact the communication of knowledge/information. However, Shannon and Weaver’s concepts continue to hold considerable influence in information theory, engineering, and ICT development industries (Geoghegan, 2008). The Shannon-Weaver model has even been described as “the Magna Carta of the information age” for its formative contributions to information theory, which “continues to set the stage for the development of

communications, data storage and processing, and other information technologies” (Verdú, 1998: 2057). How the production, maintenance, and use of knowledge/information are legally constructed and sanctioned under informational capitalism is, therefore, important for recognizing how the informational economy works within a Polanyian framework of “movement” and “counter-movement(s)”.

The Socio-Cultural Basis of Knowledge/Information: Exceptions to and Limitations of the TRIPS-plus Regime

The informational reductionism of the Shannon-Weaver model contributes to *creative transformation*'s preoccupation with incentivizing and protecting informational outputs. However, informational politics have emerged in response to the extension of privatized and economically-oriented forms of IP law (cf. Haunss, 2013; Turcotte and Coombe, 2013) used to govern knowledge/information. These counter-movements reassert the socio-cultural aspects of knowledge/information through the discursive construction of theories about ‘knowledge’ or ‘cultural’ commons and the necessity of maintaining robust public domains. As Kathy Bowery and Jane Anderson argue, “a decade of intellectual property rights (IP) maximization has invigorated a global counter-movement in support of open-knowledge communities, the public domain, creative commons, and public policies protecting the global sharing of information and resources” (Bowery and Anderson, 2009: 480). These efforts seek to establish and police “the thresholds and boundaries between differing versions and visions of the past, of ‘us’ and ‘them’ and of what is available to be claimed for use and by whom” (Flessas, 2008: 394). Political counter-movements have arisen responding to this perceived overreach and dispossession of knowledge-based resources, which seek to restructure how knowledge/information are governed under informational capitalism. For example, hacktivist groups (Coleman, 2013) such as

Anonymous (Coleman, 2014; Mikhaylova, 2014) and Wikileaks as well as members of international ‘Pirate Party’ political parties represent an “emergent freedom of information movement” (Beyer, 2014). These groups resist corporate and governmental control over knowledge/information and assert individualized conceptions about controlling one’s own knowledge/information.²⁰ Such efforts are also indicative of a broader trend towards countering the movement towards the “economicization” (Gorz, 1989: 3-4) of socio-cultural life under informational capitalism and neoliberalism. Bowery and Anderson’s work and the activities of informational political movements such as Anonymous, Wikileaks, and the Pirate Party International remind us that knowledge/information is culturally contingent and specific to particular accessibility regimes as well as endogenous forms of production, maintenance, and management.

Counter-movements working to reassert socio-cultural conceptions of knowledge/information against the economic reductionism of informational capitalism have also adopted the idea of a digital or cultural “commons.” This commons “refers to a particular institutional form of structuring the rights to access, use, and control resources” (Benkler, 2006a: 60) and offers a form of knowledge/information management that is more attentive to the socio-cultural aspects of the knowledge/information dialectic. This “commons” metaphor has become prevalent in liberal legal resistance to existing IP law and the deepening of knowledge/information management through the international trade-based regime, especially in the work of legal scholars and activists following the US constitutional tradition (cf. Haunss and Shadlen, 2009; Lessig, 2001; Boyle, 2008). From this perspective, knowledge-based resources

²⁰ As I will discuss in Chapter Five, the Access to Knowledge Movement (A2K Movement), as well as the ability to manage this knowledge in particular ways, is partly a response to the economic inequities resulting from the concentration of knowledge/information by dominant, market-leading corporations.

are governed according to the concept of a public-oriented commons and “may be used or disposed of by anyone among some (more or less well-defined) number of persons, under rules that may range from ‘anything goes’ to quite crisply articulated formal rules that are effectively enforced” (Benkler, 2006a: 61; see also, Hess and Ostrom, 2007). The “commons” cannot be reduced solely to relationships of private property; however, it also exists as a sphere of communication and a place of community (Herman, 2009: 197). Therefore, the “commons”

“is always-already a political form of social organization that rests upon an explicit [ethos] that defines and delimits the rights and responsibilities of commons constituents. To phrase the issue another way, the commons requires an ethic of commonality” (*Ibid.*, 196).

The “commons” is a space where resources are allocated according to social relations of commonality as well as agonism, the interplay of which enables the formation of citizens and not merely consumers (*Ibid.*, 197). The agonistic character of the commons reflects the dialectic nature of knowledge/information. As discussed above, knowledge/information always-already exists in a mutually reinforcing relationship where each dimension is dependent on the other for regeneration and circulation; however, this dialectic is ever-present, as ‘knowledge’ and ‘information’ cannot entirely subsume one another to achieve perfect communication and the transmission of meaning. This dialectic is affirmed by the metaphor of the commons, as knowledge-based resources are recognized as having socio-cultural and communal properties that are not wholly or easily reducible to proprietary and exclusionary regimes of control and appropriation. However, the notion of a singular knowledge-based, cultural or digital commons is problematic if it is not conceptualized to account for different forms of knowledge/information governance that fall outside of the normative frameworks of the liberal legal tradition.

In liberal legal thought and doctrine, the dialectic of knowledge/information has been governed through exceptions to IP law that contribute to the construction and maintenance of a

legally sanctioned form of a commons: the public domain. For example, copyright law's distinction between ideas themselves – 'knowledge' or knowledge-based resources – and the expression of ideas in communicative forms – 'information' or informational assets– allows for dialectic interplay of knowledge/information to occur. The legal construction of an appropriable public domain allows existing knowledge/information to be reconsidered and adapted, while legal exemptions allow protected knowledge/information to be used for particular needs and according to specific circumstances. The distinction between idea and expression has been established in the earliest forms of American copyright law (Garcelon, 2009: 1309) and international copyright treaties such as the Berne Convention (Cohen, 1990), ensuring that only the codification, or expression, of ideas in material forms is protectable via copyright law (Vaidhyathan, 2001: 20-24). The legally enforced public domain is, therefore, designed to address the dialectic of knowledge/information by providing a sanctioned reserve of non-protected, and therefore appropriable, information. As in the case of the commons metaphor, though, the concept of a singular public domain is problematic and is often romantically used to suggest a universal space for free appropriation without attending to the agonism embedded within knowledge/information management, which always-already entails contesting social relations based on particular interests, needs, and concerns (Chander and Sunder, 2004). What is or is not deemed to be "public" entails normative evaluations of what is (or is not) private and worthy of legally sanctioned protection. For example, Bowery and Anderson (2009) demonstrate how the knowledge/information of indigenous peoples has been historically misappropriated and exploited under this framework, resulting in differential, inequitable, and so often oppressive forms of socio-cultural assimilation and political economic exclusion. This misappropriation is also evident in the cases of the LEGO Corporation's adoption of Maori cultural heritage and the

Fiji Airways rebranding using *masi* symbols, where the communal and socio-cultural knowledge-based resources of indigenous peoples are transformed to serve the private interests of capitalist firms.

The recognition of multiple “public domains” or “commons” is necessary in order to function across socio-culturally and political economically specific locales and situations and to limit misappropriation and inequality based upon culturally specific and historically contingent relations of power. Under Creative Transformation the tension between an individualized conception of knowledge and information and socially constructivist appreciations of the knowledge/information dialectic are, therefore, resolved in favour of private, individualized, and legally transferable rights. The technological and political economic transformations facilitated by informational capitalism have been aided by changes to IP law that increase the scope and breadth of protectable expressions and delimit the public domain(s) and commons in the process. The communicative “life” of IP as cultural goods and forms of necessary social expression (Coombe, 1998a) becomes threatened by these transformations, since the ability to control speech and communication enables private interests to dominate cultural expressions and life (Coombe, 1991; Macmillan, 2007: 317). Creative Transformation privileges informational commodities and assets for informational capitalist expansion and does not allow for nuanced understandings of a dialectic of knowledge/information. This dialectic highlights conflicting individualist and social roles for knowledge/information: “on the one hand is the belief that individuals should benefit from their intellectual endeavours, but on the other is the notion that these endeavours have such extensive public worth that there is a clear social interest in their free dissemination” (Sell and May, 2001: 468). Increasingly widespread efforts to refashion ‘knowledge’ as a commons on digital frontiers represents a new informational politics seeking to

address and contest overly-exclusionary legal regimes governing access to and control of knowledge/information via the privatization of informational commodities and assets.

Knowledge as a Commons on the Digital Frontier: Informational Politics and the Prevailing Counter-Movements

The control of knowledge/information has long been political. Innis (1944: 82) reminds us that the recording, preservation, and dissemination of ‘information’ has been used as “political weapons” since at least the 18th Century while technological advances to early 20th Century communication media helped disrupt traditional hierarchies of power and control (*Ibid.*, 91-95). Castells goes further and argues that “all politics since the beginning of time have been, to some extent, informational” and that in the contemporary political economic environment, “the technological transformation of information processing and mass communication have placed informational politics at the heart of the processes by which power is allocated and exercised in our society” (Castells, 2010: xxxii). However, Castells’ offers a narrow discussion of “informational politics” that focuses on the mediated aspects of communication in a transnational informational capitalist system where globalized mass media corporations wield disproportionate influence over how messages are constructed and transmitted (Castells, 2009).²¹ This perspective on informational politics overlooks how broader political economic transformations regarding knowledge/information are politically contested in and of themselves.

My own belief, more in line with Innis’ conception of the political role of information, is that the means through which knowledge/information is codified, reproduced, transmitted, and accessed constitute the socio-cultural and political economic structurations within which

²¹ For both Castells and Innis the emphasis is on information monopolies and the field of power relations, not necessarily political activity and resistance.

communication technologies operate. Analysis of informational politics (Jordan, 2013; 2015) must, therefore, also take into account how knowledge/information is managed in formal and informal ways under international legal regimes and according to particular normative propositions. The Creative Transformation of informational capitalism works to reorient knowledge-based resources and creative, communicative, and cultural activities as actual and potential sources of economic enterprise. Through the collection of digitized expressions of knowledge and creativity, ICT-based interaction is captured and codified as informational assets through IP law's ability to legally sanction and regulate monopolies over the ways that knowledge/information is used in online environments in social, political, cultural, and economic contexts. Nevertheless, the interactive and communicative nature of knowledge-based resources cum assets of informational capitalism provides the possibility for resisting the foreclosure of the socio-cultural at the service of the market-based economy. The commodification of knowledge-based resources through 'incentivizing' IP systems premised on liberal economically deterministic ideals, therefore, shift the distribution of resources into the control of corporate actors (Adair, 2010: 246). The ability to collect monopoly rents from IP-protected commodities engenders new modes of accumulation and have been instrumental in growing inequalities and concentrations of wealth (*Ibid.*: 253). The private 'enclosure' of communal and public knowledge-based resources accelerates accumulation by dispossession in the informational economy. Informational politics – counter-movement activities surrounding the definition, regulation, and control over knowledge-based resources and informational assets – are increasingly resisting the economic reductionism advanced by *creative transformation* through appeals to civic, constitutional, and human rights based in a liberal legal framework.

In *Empire and Communication* Innis describes how the technological characteristics of media entail biases towards the centralization and decentralization of the control over information flows (Innis, 2007: 27). Tendencies towards centralization and decentralization result in differing impacts regarding what is and is not available to the “commons”: overly “centralized” knowledge/information is accessible to a relatively small number of users, while “decentralization” entails the inability to exploit or control knowledge/information in particular ways. Communications scholar James Beniger (1986) has traced the rise of the so-called information society along the same lines, describing how the need to manage the developments of the industrial economy resulted in the centralization of knowledge/information in the transportation and manufacturing sectors under the control of business managers. The restricting of the industrial economic sector to better measure, record, and manipulate knowledge/information results in a “control revolution” (*Ibid.*), which has been extended to the codification, and later commodification, of informational expressions in order to maximize the potentials for economic rewards and capital accumulation based on the ability to control and leverage knowledge-based resources. This “control revolution” has been extended under informational capitalism via *creative transformation*, and is resulting in information political counter-movements seeking to displace the political economic hegemony of external controls over knowledge/information.

Attaching IP law to commodified informational outputs that are always-already dependent upon the appropriability of knowledge-based resources – in response to emerging digital realities and socio-cultural practices – overlooks the ways in which knowledge/information operate within and across social, cultural, political, and economic realms. Hess and Ostrom describe how digitally codified knowledge/information is a shared resource

that depends on and contributes to a complex ecosystem subject to competing forces and social dilemmas (Hess and Ostrom, 2007: 3-4). In particular, the dialectic nature of knowledge/information generation requires interplay amongst diverse actors:

“Whether socially owned or privately owned, the production of information works in a circle. An existing horizon of knowledge, information and symbolic products is the raw material to which human creativity or innovation is applied. The resulting product is then passed back into this horizon of knowledge as raw material for other acts of creativity, and the circle begins again. With each cycle, something new is created, but this new product always carries a trace of the earlier innovations on which it builds” (Kundnani, 1998/99: 56).

The commodification of knowledge-based resources as marketable and rent-seeking information, therefore, facilitates a double movement: the resources of the ‘commons’ are captured by capital, however, in doing so, capital is opened up to communal logics that undermine informational capitalist processes (Carlone, 2013: 527). For example, the dialectic nature of knowledge/information requires forms of cooperation and collaboration that seem ill suited to the economically deterministic logic of informational capitalism. As communications scholar David Carlone argues, “cooperation carries with it a set of ethical values and relations, such as responsibility to another, which may provide a resource for questioning and critiquing existing economic relations” (*Ibid.*: 529). Media scholar Martin Zeilinger has demonstrated how alternative musical production techniques and genres such as chiptunes and demos leverage transnational networks that share resources in a moral economy to enable modification and re-mixing (Zeiliner, 2012). This moral economy approach resists proprietary enclosure of knowledge/information in order to preserve socio-cultural stores of creative works, which can then be re-appropriated by others. However, alternative music communities must still contend with the misappropriation of their knowledge/information by commercial actors seeking to leverage easily and legally accessible resources for informational capitalist ends (Zeilinger,

2014). A double movement of Creative Transformation exists within which counter-movement actors are able to re-orient informational capitalist processes while simultaneously being re-appropriated to serve *creative transformation*. The reductionist logic of informational capitalism must, therefore, contend with the agency of various actors and stakeholders before, during, and after the commodification and exchange processes have taken place.

Since the digital and networked environments of informational capitalism depend on the legally sanctioned and technologically facilitated control over knowledge/information, informational politics represent a counter-movement to the underpinnings of *creative transformation*. These informational politics follow from the academic and activist work of legal scholars, such as Tim Wu (2010) and Yochai Benkler (2006) who focus on the technological and socio-cultural transformations taking place as digitized communication forms become enmeshed in the political economic structurations of informational capitalism. Wu and Benkler find that the extension and expansion of IP law in digital realms forecloses the ability to access knowledge/information in ways that are not sanctioned by rights holding content and technology businesses. Similarly, legal scholar Lawrence Lessig (2006) describes how digital codification of knowledge/information has privileged the economic imperatives of the holders of IP rights at the expense of alternative socio-cultural formations. The moral economies of chiptunes musicians are similarly circumscribed by domestic and international IP, which privileges the private appropriation of knowledge/information according to *creative transformation*.

This ongoing double movement coheres with the history of IP law, which has been marked by continuous struggle (Johns, 2010; May and Sell, 2005). Despite the potentials offered by digital technologies to democratize access to knowledge/information for alternative political economic and socio-cultural ends, the potential for social changes that seek to transform power

relations are foreclosed by “the political, legal, institutional, economic, and cultural forces that shape and constrain any changes” (Mueller, 2010: 5). Informational politics arise as the early optimism surrounding the emergence of the Internet and digital networked technologies is undermined by a growing awareness of the corporatization and privatization of digital technologies and content.

The private appropriation of knowledge/information by corporate actors facilitated by IP law threatens democratic and liberal values of creativity, cultural critique, and dialogue (Coombe, Wershler and Zeilinger, 2014: 8). Similar to the dialectic relationship of knowledge/information, access and control over knowledge-based resources and informational assets are contingent variables that gain their characteristics in relation to the processes they exist in: access can, therefore, be defined in relation to the existence or absence of mechanisms for facilitating the dissemination, appropriation, and (re)circulation of knowledge/information, and/or cultural expressions. Access to liberal and democratic spaces are, therefore, limited according to the political economic logic of institutions that are able to assert their interests and suppress alternatives and/or dissent. As Innis argues, large-scale organizations “have tended to flourish under conditions in which civilization reflects the influence of more than one medium and in which the bias of one medium towards decentralization is offset by the bias of another medium towards centralization” (Innis, 2007). In the context of informational capitalist expansion, access and control are structured and governed according to the economic interests of private IP rights holders; informational political counter-movements work to resist and reorient these changes, working within and through the same technologies and knowledge-based economies that attempt to limit alternative political economic arrangements.

The structuring of digital and networked technologies according to existing and dominant business interests follows a historical trajectory seen during the development of previous media and communication technologies. As Wu describes, “history shows a typical progression of information technologies: from somebody's hobby to somebody's industry; from jury-rigged contraption to slick production marvel; from a freely accessible channel to one strictly controlled by a single corporation or cartel—from open to closed system[s]” (Wu, 2010: 6). For Wu, these tendencies are so commonplace as to seem inevitable. However, it is important to resist technologically determinist accounts of these phenomena. The “cycle” from open to closed systems of knowledge/information management that Wu describes (*Ibid.*) – the progression from initially ‘open’ systems created by amateurs and hobbyists to ‘closed’ control-based mechanisms maintained by commercial actors, such as in the history of telephony and the rise of AT&T that Wu traces – is impacted by social, political, and economic circumstances that shape the evolution of media from amateur communities to established industries. The knowledge-based economy is rooted in socio-economic systems that necessitate the proprietary control over knowledge/information for preserving and extending capitalist accumulation and market-based relations. Creative Transformation is therefore defined in part as the result of an individualistic and market-based logic that seeks to impose technologically facilitated artificial scarcity over knowledge/information in order to extract surplus value for informational capitalist accumulation. Creative Transformation reinforces and maintains existing hierarchical political economic structurations and exacerbates conditions of inequity.

Nonetheless, the existence of peer-based and commons-oriented cooperation models for social interaction, technological development, and economic activity provide the possibility of transcending existing capitalist relations in more socio-culturally conducive ways (Fuchs and

Winseck, 2011). For example, “in the last 15 years a remarkable string of contentious mobilizations has emerged to challenge the normative and institutional frameworks that regulate how knowledge is produced, appropriated, and used” (Haunss, 2011: 129). In the United States in particular, legal scholars, activists, and technologists have founded initiatives such as the Creative Commons (CC) as a means of reasserting liberal democratic values within IP law and practice. The CC has established a series of alternative copyright licenses – or ‘copyleft’ licenses – designed as a reverse engineering of the existing IP regime. Law professor Michael Carroll, one of the founders of the CC, describes the licenses as:

A Creative Commons license is a form copyright license that can be linked to via the Web. In addition to the legal code, the license is described by a ‘human-readable’ Commons Deed, which identifies the key terms of the license and machine-readable metadata that associates the online location of the licensed resource with the online location of the license document. [...] These resources include scientific journal articles, music files, picture files, and weblogs. Creative Commons licenses permit certain royalty-free uses of the licensed copyrighted work. The most permissive license permits all uses so long as the copyright owner’s directions concerning attribution are followed. Other optional conditions include a requirement that derivative works be licensed under the same terms, a limitation to non-commercial uses, and a prohibition on the creation of derivative works. (Carroll, 2006: 47).

CC licenses are modeled on the success of the GNU General Public License²² in the software sector and allow both creators and users to more freely share their content on the Internet (Haunss, 2013: 204-205). The CC licenses are said to “respond to the explosion of ‘copyright

²² The GNU (Gnu’s Not Unix) General Public License was created by software engineers in the early 1980s in order to promote the sharing of collaboratively produced computer code outside of proprietary system of IP law and knowledge/information management used by large technology firms. The GNU project was initiated by computer programmer Richard Stallman in response to the propertization of computer code and software by computer and technology producing companies. Importantly, the GNU General Public License relies on existing IP law to create a public licensing scheme that avoids the misappropriation of GNU code by informational capitalist firms: “GNU is not in the public domain. Everyone will be permitted to modify and redistribute GNU, but no distributor will be allowed to restrict its further redistribution. That is to say, proprietary modifications will not be allowed. I want to make sure that all versions of GNU remain free” (Stallman, 1985). For Stallman, “copying all or parts of a program is as natural to a programmer as breathing, and as productive [and] it ought to be as free” (*Ibid.*). The GNU General Public License is, therefore, designed to facilitate non-proprietary forms of software production based on collaboration and sharing of knowledge/information.

events' that digital technologies have let loose" (Carroll, 2006: 46). Through these open licensing models, the CC seeks to create 'digital commons' of (more) freely accessible content to spur future creativity and innovation. As an informational political counter-movement, the CC demonstrates the possibility of alternative knowledge/information management regimes that may be implanted into future reforms of the IP regime. However, the ideas behind this counter-movement cohere with *creative transformation* and enable private actors to misappropriate CC-'protected' knowledge/information. As Zeilinger demonstrates, the CC movement presumes that open licenses will be used in "good faith" and relies upon open licenses that are difficult to enforce and may not, ultimately, discourage misappropriation (Zeilinger, 2014). The CC counter-movement also relies upon existing IP and domestic law to operate. Drahos and Braithwaite (2002) and Sell (2009), amongst others, demonstrate how existing IP law is regularly reformed and modified to meet the political economic needs of established industries and corporate actors. The open licenses of the CC community can, therefore, be discouraged or prevented through changes to IP law. For example, the Chilean Congress has recently approved legislation that creates an "unwaivable right of remuneration" for 'authors' of audiovisual works (Villarroel, 2016), which effectively prohibits the use of CC licenses in such cases. This law seeks to provide remuneration for 'authors' when their works are used online; however, it also limits alternative modes of knowledge/information governance by prioritizing the IP-based methods of capital accumulation (Malcolm, 2016).

As an example of informational politics, the use of CC licenses manifests the dialectics of knowledge/information, access-control, and economy-society, while remaining embedded within the economic reductionism of *creative transformation*. From the perspective of informational business interests, there is a need "to maintain the market value of information products, elites

must find ways to create artificial scarcity and restrict flows of information” (Vaidhyathan, 2004: 127). Under the auspices of domestic sovereignty and national security governments enact laws and regulations to reassert hierarchy and control when emerging media threaten existing socio-economic relations in line with the interests of domestically based businesses (Mueller, 2010: 159). IP law is a prime area where these business and government interests align under informational capitalism. In response to changing technological and socio-economic circumstances, IP law has been changed in order to extend the private monopolies of rights holding corporations in order to minimize uncertainty and promote a knowledge-based economy working to concentrate knowledge-based resources and informational capital under the control of dominant market players and financiers. In the case of CC licenses and changes to Chilean law, the economic imperatives of *creative transformation* are privileged and further distort the public-private balance of IP law in favour of IP rights holders. David Harvey argues that “monopoly power is foundational rather than aberrational to the functioning of capital and that it exists in a contradictory unity with competition” (2014: 134; original emphasis removed).

As described in Chapter 2, the digital environments and economic activities that drive informational capitalism are based, in part, on Metcalfe’s Law (Metcalfe, 1995; 2013), which argues that the value of a network increases in relation to the size of its user base. Informational capitalism’s network-based economic arrangements are, therefore, premised on a desire to increase monopoly control over an ever-expanding group of users who provide informational inputs into the network. The monopoly power(s) bestowed through IP law are similar to the conditions created by private property control over physical assets in that both become “the basis for exchange and by extension for competition” (Harvey, 2014: 135). Critical approaches to

informational capitalism disrupt the normative hegemony of Creative Transformation by highlighting the dialectic of knowledge/information as well as access and control.

Critical scholarship has a long history of identifying the domination of cultural industries and resisting the homogenization of ‘global’ culture through mass media concentration emanating from the global North—and the US, in particular (cf. Horkheimer and Adorno, 2006; Chomsky; 2002; Castells, 2009). In particular, sociologist Manuel Castells (2009) describes the tendency of this transnational mass media network to frame and construct political economic activity according to the information dissemination strategies of media industry and political actors to inhabit “the spaces of media flows ... [in order to] ... assert their power” (Castells, 2009: 391). As others have demonstrated, information *itself* has become political (Jordan, 2013; 2015; Drahos and Braithwaite, 2002; Coombe and Meurer, 2009; Lessig, 2006) due to the ways that legal regimes and business practices are used to delineate what knowledge/information can be legally appropriated and to what ends.

Legal mechanisms, business practices, and so-called terms of service agreements support specific political economic formations based on the governance of access to and control of knowledge/information. So-called surveillance capitalism (Foster and McChesney, 2014) has become a critical component of the informational economy (Allmer, 2012). Informational capitalist firms such as Facebook and Google rely upon user-generated knowledge/information to enable computer-mediated transactions (Zuboff, 2015). For example, Facebook’s Terms of Service states: “By using or accessing Facebook Services, you agree that we can collect and use such content and information in accordance with the Data Policy as amended from time to time” (Facebook, 2016a). On a separate page, Facebook’s Data Policy states:

“We collect the content and other information you provide when you use our Services, including when you sign up for an account, create or share, and message

or communicate with others. This can include information in or about the content you provide, such as the location of a photo or the date a file was created. We also collect information about how you use our Services, such as the types of content you view or engage with or the frequency and duration of your activities” (Facebook, 2006b).

This information is then used to “Provide, improve and develop services,” “Communicate with you,” “Show and measure ads and services,” and “Promote safety and security” (*Ibid.*).

Facebook’s Data Policy also states that user-generated knowledge/information is shared with “third-party partners and customers,” including “Advertising, Measurement and Analytics Services,” and “Vendors, service providers and other partners” (*Ibid.*). Through these terms of service agreements Facebook claims control over an abundance of knowledge/information, which can be leveraged for informational capitalist exchange. Media scholar Nicole Cohen argues, “Facebook, a space where both leisure time is spent and labour is performed, is an example of how, in the social factory, general social relations become moments of production” (Cohen, 2008: 18). The production of user-generated knowledge/information serves the economic interests of informational capitalist firms.

The spread of informational capitalist activity into new spheres of social life has made “information as a politics of liberation and exploitation . . . central to the twenty-first century” (Jordan, 2015: 1). How knowledge/information will be governed, by whom, and to what ends is contested on a number of grounds through various technological measures and are according to longstanding liberal political propositions. As then US Secretary of State Hillary Clinton (2010) described it, the technological and ideological underpinnings of global “information networks” amount to a “new nervous system for our planet,” which should adhere to US-constitutionally enabled freedoms, including “freedom of expression, freedom of worship, freedom from want, and freedom from fear . . .”. Secretary Clinton further linked the goals of “Internet freedom” to

the UN's Human Rights system and argued that "We need to synchronize our technological progress with our principles ... [and] ... find ways to make human rights a reality" (*Ibid.*). From a discursive perspective, Secretary Clinton's speech is instructive of the ways that the technogovernmentality and liberal orthodoxies underpinning the management and circulation of knowledge/information are framed, wherein "connection to global information networks is like an on-ramp to modernity" (*Ibid.*). While couched in universalized and emancipatory rhetoric regarding "freedom," this framing focuses primarily on negative rights – the freedom from undesirable or unwarranted actions from others, including government – rather than positive rights, such as the freedom to benefit from emerging conditions or realities. In doing so, this framing of "Internet freedoms" individualizes responsibility by tacitly advocating for the primacy of individuals' rights *from* government action as opposed to their rights *to* government supports and protection.

In the context of the transnational governance and management of knowledge/information, this liberal democratic framing circumscribes the possibility of public-oriented conceptions of how knowledge/information should be governed and the socio-cultural benefits IP law has been historically designed to protect. Individuated and economically reductionist framings result in "conflicts between property and liberty interests in cyberspace" (Gandy and Farrall, 2009: 350), which are then largely resolved according to liberal legal frameworks designed according to the rights of individuals (or their designates) to control their "property" (*Ibid.*) and to protect the business interests of informational capitalists. For example, the tensions between human rights to privacy and economic imperatives are foregrounded in the case of an Italian YouTube video, which resulted in charges and convictions against Google Italy's top executives for violating data protection laws. In this case, a video was posted to

YouTube that recorded an incident where an autistic student was bullied by a group of peers (Sartor and Viola, 2010). The video remained available on YouTube for two months until the Italian Postal Police requested that it be removed due to complaints from citizens that the video was “inappropriate” (*Ibid.*, 357). The Google Italy executives were found to have violated data protection law for illicitly “processing personal data ... for the purposes of making a profit” (*Ibid.*) as the video in question discussed and disclosed “personal sensitive data” by mentioning the disability of the student and, therefore, violated Italian and EU law about the handling of private information (Mendez, 2011: 138). The US Ambassador to Italy and Google’s official blog considered the verdict a threat to the idea of a “free Internet” (Google, 2010). This case revolved around the liability service providers have for processing and hosting illicit content about third parties uploaded by their users (Sartor and Viola, 2010: 376).

Google objected to the Court’s verdict by appealing to the safe harbor provisions of EU law, stating: “European Union law was drafted specifically to give hosting providers a safe harbor from liability so long as they remove illegal content once they are notified of its existence” (Google, 2010). The US Ambassador to Italy, David Thorne, mirrored this sentiment, saying “While we recognize the reprehensible nature of the material, we disagree that Internet service providers are responsible prior to posting for the content uploaded by users. [...] The fundamental principle of Internet freedom is vital for democracies which value freedom of expression, and is protected by those who value liberty” (quoted in Poggioli and Inskeep, 2010). Following an appeal, the Google Italy executives had their convictions overturned (Brodkin, 2012) as an appeals court and the Italian Supreme Court found that hosting providers are not liable for the actions of their users (IPKat, 2014). In such cases, the neoliberal and libertarian ideals engrained in *creative transformation* take precedence: government action(s) is largely

reduced to (in)action with respect to claims from socio-cultural stakeholders when these conflict with the concerns of informational capitalist business practices. The primacy of economic imperatives over individual rights represents a tension between the diverse interests of various stakeholders subject to informational capitalism and its attendant Creative Transformation.

The informational politics manifested in the Google-Italy lawsuit demonstrate how protecting public interests and the non-economic rights of individuals may conflict with the economic reductionism of *creative transformation*. Movements and counter-movements work to negotiate and inscribe how private and public rights as well as knowledge/information are characterized and governed in the international legal environment and the transnational knowledge-based economy. Modern liberal notions regarding individuated rights such as freedom of speech, freedom of assembly (in new digital environments), and personal privacy are transposed into informational capitalist spheres of production and interaction where neoliberal and libertarian norms supplant ethical, moral, and publically oriented concerns. The ideological underpinnings of *creative transformation* render non-proprietary visions of personal (and communal) liberty invisible, if not irrelevant. The logic of the market denies or obscures the vitality and generativity of knowledge/information in socio-cultural environments (Coombe, 1998a; Coombe and Turcotte, 2012a) and limits social and cultural rights when these conflict with the economic orientation of informational capitalism. Diverse and pluralist ways of life as well as the human rights of individuals and communities are, therefore, subjected to universalizing and prescriptive visions of how life *should* and *will* be transformed to accord with *creative transformation* and the expansion of informational capitalism.

The diminishment of cultural diversity and social plurality is accomplished at the service of generating greater “efficiency” in terms of transnational informational capitalist accumulation;

however, by delimiting alternative possibilities and ways of thought, Creative Transformation risks extending and entrenching long-standing and emerging political economic structurations of inequality. As science policy researchers Adrian Ely, Adrian Smith, and Andy Stirling argue “diversity allows us better to respond to ignorance arising from complex technological, environmental and socio-political dynamics, guards against lock-in to dominant (and sometimes unsustainable) pathways and provides a stronger foundation for future re-combinations of knowledge and resources that fuel innovation” (Ely, Smith and Stirling, 2013: 1076). Legal scholars Miranda Forsyth and Sue Farran argue that pluralism necessitates “the need to recognize the existence and value of many different worldviews” (Forsyth and Farran, 2015: 170) in order to not assimilate already existing alternative ways of life, nor foreclose the possibility of future transformations. In the context of the diffusion of informational capitalism and on-going Creative Transformation, this recognition and counter-hegemonic valuation provides “the opportunity to identify, analyze, and deliberate about the distinct socio-ecological [and political economic] consequences of different types of economic relations” (Burke and Shear, 2014: 132). Political economic concerns over the functioning of a “free Internet” consistent with *creative transformation* need not override the human rights of individuals to privacy and live free of exploitation.

Recognizing that informational political activities can exist and be enacted by a diverse array of stakeholders provides insight into the contradictory and problematic nature of *creative transformation*—especially when its techno-economist biases are transposed into situations and locales based on alternative socio-economic relations. In particular, the use of a human rights lens as a normative basis for informational political activity focused on contesting various forms of rights under informational capitalism provides a legitimating moral vocabulary for

questioning informational capitalist expansion on the established ground found in the international legal system.

Counter-Movement(s), Human Rights, and the Development Connection

Counter-movements that focus on human rights-based claims to oppose *creative transformation* help reassert the importance and vibrancy of socio-cultural practices and representative or community-based forms of accountability and decision-making. Unlike the liberal-individualistic reactions against Creative Transformation exemplified by legal scholars following the US Constitutional tradition, such counter-movements help to (re)embed informational capitalism in the social realm. The neoliberal and libertarian reduction of social and political rights to economic and individualized responsibilities results in a situation where individuals as well as communities implicated in informational capitalism are increasingly precarious and have little recourse beyond their economic standing. As communication scholars Andrew Herman, Rosemary Coombe, and Lewis Kaye have argued, under terms of service agreements individuals and communities “have no political rights to participate in the establishment of the constitutional conditions that create the parameters of [their engagement]” (Herman, Coombe, and Kaye, 2006: 204). Without these rights, the choices that individuals and communities have for developing their situations are constrained by the economic choices made by informational capitalists.

For example, individual rights to privacy can be used to assert counter-claims with respect to the surveillance capitalism and monetization of personal information used to spur knowledge-based economic expansion. As discussed above, the user-generated knowledge/information produced and commodified under informational capitalism represents another reconceptualization of the relationship between public and private rights to support

creative transformation. In Chapter 2, I showed how informational capitalist firms operate by appropriating the immaterial and free labour of their (prod)users by transforming them into marketable and exchangeable informational assets. In a classic critical sense, this relationship seems to exploit users by alienating them from their productive labour without economic reward. However, this exploitation also depends on the accumulation and monetization of private, user-generated knowledge/information of (prod)users. The business practices of informational capitalist firms such as Facebook and Google rely on a “new panopticon” (Brignall, 2012), which monitors, tracks, and appropriates user-generated knowledge/information for private ends. This surveillance for informational capitalist purposes is legitimized through Terms of Service Agreements and Data Policies, which serve as a form of private ordering that subtends the public legal system.

Article 12 of the UN’s *Universal Declaration of Human Rights* (UNDHR) states “No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks” (UNDHR, 1948). This right to privacy is also reflected in EU and Italian law (Mendez, 2011: 137). In the Google-Italy case, the original ruling found that the appropriation and monetization of personal and sensitive knowledge/information to generate advertising revenue for Google contradicted the privacy rights of the autistic student who was recorded while being harassed. Ultimately, the appellate court and Supreme Court of Italy invalidated this ruling; however, the lower court’s ruling demonstrates how human rights, including privacy, complicate the economic reductionism of *creative transformation* by helping to re-embed Creative Transformation into social and public contexts.

The affective relationship between companies and citizens as well as consumers is crucial to the success of informational capitalist firms, as speculative financial investments are based largely on the brand relationships that companies have and can generate with the public and consumers (Arvidsson and Colleoni, 2012; see also, Herman, Coombe, and Kaye, 2006; Coombe and Herman, 2001). Securing investments necessary to build and maintain an informational capitalist business requires demonstrating the “market” for the services that will be provided; informational assets in the form of sellable commodities or potentially lucrative knowledge/information about user habits and community trends must, therefore, be acquired, protected, and exploited to meet investor expectations. Yet, the surveillance and appropriation of user-generated knowledge/information runs into conflict with existing human rights law.

The dependency of informational capitalist businesses on user-generated knowledge/information as well as affective relationships of consumers opens space for informational political counter-movements to resist the economic reductionism and technological determinism of *creative transformation*. As Polanyian counter-movements against Creative Transformation, information politics seeks to re-negotiate how knowledge/information are accessed and controlled in order to address historic, existing, and emerging forms of exclusion and inequality. The debates surrounding Facebook’s plans to offer a “free basics” service in India demonstrate the tension between private and public conceptions about knowledge/information. In 2013, Facebook announced a partnership with 6 ICT²³ companies and the creation of the Internet.org service, which would allow mobile phone users in developing countries to access a “stripped down” version of the Facebook social network and other partner sites (Constine, 2013). Facebook and its partners asserted that their objective was “to make

²³ The founding partners were Facebook along with Ericsson, MediaTek, Nokia, Opera, Qualcomm, and Samsung (Facebook, 2013).

Internet access available to the two-thirds of the world who are not yet connected, and to bring the same opportunities to everyone that the connected third of the world has today” (Facebook, 2013). Mark Zuckerberg, CEO and co-founder of Facebook, released a “white paper” linking Facebook’s activities to improve Internet access to the idea of “connectivity as a human right,” which would enable the world’s population to participate in and contribute to the knowledge-based economy (Zuckerberg, 2013). However, counter-movement activists in the global South questioned the altruism behind the project, accusing Internet.org – which was later rebranded as Free Basics – for violating principles of net neutrality²⁴ and as an attempt to grow the social network’s user base by “vacuum[ing] up new users from the bottom of the pyramid for Facebook” (Murthy, 2015). The expansion of Facebook’s user base to include poor and marginalized peoples in the developing world would provide these users with only limited access to knowledge/information and connections, while their user-generated knowledge/information would be appropriated for informational capitalist purposes.

Informational political activities surrounding Internet.org and later Free Basics were particularly contested in India, where supporters of the service labeled their opponents as “left-leaning, America- and World Bank-bashing, anti-globalization ideologues” (Chowdary, 2016: 1) while counter-movement activists mobilized public support and pressed the government of India to prevent the service from operating (Danielson, 2015). In February 2016, the Telecom Regulatory Authority of India issued a ruling on net neutrality, which prohibits differential pricing schemes, and effectively banned the Free Basics service from operating in the country

²⁴ Net neutrality is a principle associated with the idea of a free and open Internet, which argues that Internet service providers (ISPs) treat “all content and applications equally, without degrading or prioritizing service based on their source, ownership, or destination” (Gasher, Skinner and Lorimer, 2012: 366). The principle of net neutrality is itself contested through debates about balancing political and economic goals (Bauer and Obar, 2014) across the knowledge-based economy and in developed as well as developing states.

(TRAI, 2016). The informational politics at play in the Free Basics debate in India demonstrate the contested nature of private economic interests and public-oriented concerns. Facebook's attempts to expand its user base through the provision of "free" access to select online services reflect processes of "deep marketization"—neoliberalized development initiatives that "reconfigure social relations in ways that support [informational] capital and market exchange relations" (Carroll and Jarvis, 2015: 283). In turn, the counter-movement activities of activists in India demonstrate that civil society can coalesce and oppose the economic reductionism of *creative transformation* by re-asserting social and public concerns about the trajectory of informational capitalism.

Informational political activism surrounding knowledge/information is often premised on the belief that increased access to and circulation of knowledge/information will promote more equitable forms of socio-economic activity by returning knowledge-based resources to a commons where individuals and communities can appropriate and deploy them for novel ends. Ironically, this was part of Zuckerberg and Facebook's own strategy to position Internet.org/Free Basics as a means of connecting users in the developing world to the global knowledge-based economy. In this double movement, increased access to knowledge/information is seen to provide the raw materials and tools necessary for engaging with informational capitalism from pluralistic and diverse perspectives. The raw materials represented by knowledge/information are used to better the lives and freedoms of actors within and at the margins of informational capitalist expansion. Informational political counter-movements, then, often contain a nascent development agenda inline with Benkler's optimistic beliefs about the power of networks. As Benkler argues, progressive expansions of ICTs and the knowledge-based economy may alter existing political economic hierarchies and empower a "widely diffuse population of individuals

around the globe and the firms or other toolmakers and platform providers who supply these newly capable individuals with the context for participating in the networked information economy” (Benkler, 2006a: 380). However, and as Benkler himself acknowledges, given the political economic concentration associated with informational capitalism and the successes demonstrated by IP-oriented industry actors in having law and regulations adapted to serve their business interests, Creative Transformation works to reinforce already existing political economic inequalities.

Creative Transformation’s codification and commodification of knowledge/information valorizes individualistic and proprietary forms of creativity and development, according with the neoliberal and libertarian roots of the Californian Ideology and informational capitalism. From this dominant perspective, creativity and authorship are removed from their “relational” (Craig, 2011; Craig, Turcotte and Coombe, 2011) and cooperative bases (Fuchs, 2011), serving to further disembed these from the social realm by incorporating them into technologically specific and legally governed modes of centralization. The creation and circulation of knowledge/information imagined as creativity performed as part of the knowledge-based economy is recast in terms of the so-called innovative creative destruction of *creative transformation* and existing social and economic practices and institutions are constantly disrupted, reimagined, and replaced.

The “new growth theory” of the knowledge-based economy seeks to “capture” the economic possibilities created through *creative transformation* in the hopes that this will then contribute to socially oriented development (Ruttan, 1998). However, due to the disembedding of informational capitalism from the social realm, the economically reductionist imperatives of *creative transformation* translate these new opportunities in the form of market-based

commodities and assets. For example, as information and media studies scholar Alison Hearn has demonstrated (2010), the opportunities offered by involvement in informational capitalist activities must be translated and marketed in economic terms. IP-related mechanisms such as branding and trade secrets are used to market differentiated informational assets as a means of generating exchange value and marketable commodities. Informational political counter-movements contest the development-oriented efforts of firms, such as Facebook, as well as those of IOs and other international institutions.

However, this re-negotiation of socio-economic arrangements remains problematic. As communications scholar Ursula Huws notes, “creative labour occupies a highly contradictory position in modern, global, ‘knowledge-based’ economies. On the one hand, companies have to balance their insatiable need for a stream of innovative ideas with the equally strong imperative to gain control over intellectual property and manage a creative workforce. On the other, creative workers have to find a balance between the urge for self-expression and recognition and the need to earn a living” (Huws, 2010: 504). IP regimes and other governmental techniques based on *creative transformation* are necessary for this “antagonistic dance” (*Ibid.*) to take place and fuel informational capitalist expansion, while also opening up possibilities for the re-assertion of the socio-cultural basis of economic arrangements.

Conclusion

This chapter has theorized the emergence of informational politics as counter-movement activities against the hegemony of *creative transformation* and informational capitalism. The dialectic of knowledge/information problematizes IP law’s tendency to overemphasize the “expression” and “application” of information in order to provide monopoly control over

otherwise socially accessible knowledge-based resources. The nature of knowledge and information as well as access and control poses a critical problem for formulating and maintaining knowledge management and IP regimes according to *creative transformation*'s shifts: how can knowledge/information and access/control be calibrated in order to preserve and expand knowledge-based economic activity while also preserving accessible forms of knowledge-based resources, which contribute to the creation of novel ideas and applications? The socio-cultural basis of knowledge/information is increasingly re-embedded into economic and market based relations, where knowledge-based resources form the basis of speculative financing and investments based on the informational assets and commodities of existing and emerging business practices.

This chapter argues that these informational politics represent Polanyian forms of counter-movements, within which alternative normative and ideational calculations are asserted in order to attain the desired possibilities and outcomes for pluralistic groups and communities. The governance of knowledge/information via the international IP regime reduces socially constituted resources and communicative acts to an economic focus. Informational political activity works to address imbalances in knowledge management and IP governance in order to provide the opportunities for socio-culturally specific forms of creativity and transformation.

As I will discuss in my next chapter, this represents a nascent development preoccupation in line with the “capability approach to development” (Sen, 1987), as the desire to “balance” access and control is based on concern over the freedom to use knowledge/information to improve the social, economic, cultural, and political lives of diverse groups and peoples. Informational politics from the perspective of the capabilities approach works to re-negotiate the terms of informational capitalism and the ‘knowledge’ economies and monopolies advanced

through *creative transformation*. The political renegotiations exemplified by prosumers as a reaction against the informationalization of labour highlight how legal frameworks dependent upon the individualization of knowledge/information hamper human capabilities and the ability to transcend political economic inequities. In the following chapter, this theorization of “informational politics” as “counter-movements” is used to analyze the pluralistic concerns of stakeholders working to address the inequities of informational capitalism outside of the liberal, individualistic, and economic paradigms of *creative transformation*.

CHAPTER FOUR

RAISING AN UMBRELLA: INFORMATIONAL POLITICS AS COUNTER-MOVEMENTS TO CREATIVE TRANSFORMATION

This chapter contributes to informational political analysis by describing and analyzing counter-movements that challenge *creative transformation* and seek to (re)define and (re)negotiate how knowledge/information is characterized, governed, and accessed. It begins by summarizing some of the concerns of stakeholders in pluralism and other interest groups with respect to knowledge/information management under transnational informational capitalism, generally, and the international trade-based IP regime, specifically. Through these counter-movements, political actors, and civil society activists work to disrupt and delegitimize *creative transformation's* overly individualized and economically-reductionist conception of knowledge/information. By so doing, they help assert different rights-based perspectives and alternative normative frameworks regarding the knowledge-based economy. For example, appeals to domestic and international human rights obligations through a cultural rights framework provide a normative basis for resisting the totalizing and universalizing conceptions advanced by *creative transformation* (Ahmed, Aylwin and Coombe, 2009; Coombe, 2005). By incorporating and emphasizing the UN system's commitment to human rights norms and values, informational politics oppose the economically oriented rights provisions engrained in the WTO framework and diffused through the TRIPS-based international IP regime.

Conflicts over which rights should be privileged form the basis of political economic formations and has led to geopolitical and informational contestation, wherein *creative transformation* and so-called IP universalism are contested by groups and governments asserting

alternative futures for informational capitalism based on the betterment of people, often through human development frameworks. Counter-movements against Creative Transformation manifest in opposition to economically-reductionist and proprietary governance of knowledge/information.

I begin this chapter by discussing recent counter-movement activities in the US surrounding domestic IP law reforms. The Stop Online Piracy Act (SOPA) and the PROTECT IP Act (Preventing Real Online Threats to Economic Creativity and Theft of Intellectual Property Act, or PIPA) were bills introduced into the House and Senate, respectively, which sought to curb online infringement of IP-protected goods. As I describe, for varying reasons SOPA and PIPA were protested against by civil society groups and corporate actors who objected to provisions in the bills, which, they argued, threatened the “open” and interoperable architecture of the Internet. As I argue, these protests demonstrate the fluidity of informational political activity, as groups work to influence how knowledge/information management regimes and IP law are enacted to support their particular interests and concerns. However, informational politics cannot be viewed as binary opposition to the international trade-based IP regime. The SOPA and PIPA debates demonstrate how counter-movements can work to resist *creative transformation* and entrench Creative Transformation. The plurality of counter-movements involved in informational politics against the international trade-based IP regime offers alternative means of resisting IP deepening. As I discuss, both development and human rights discourses and practices offer globally legitimated values and norms and the backing of moral force for these efforts to broaden the scope of international IP debates—opening questions about and providing greater priority to issues of access to goods, services and technologies as well as rights to knowledge. Counter-movement approaches that work to advance locally specific forms

of knowledge/information management within and outside of IP law challenge the supposed universality of the international trade-based regime. The diversity of actors involved in informational politics and the interests that they put forward indicates the contested and reinforcing nature of the double movement of Creative Transformation: movements and counter-movements work against one another while being embedded in an interrelated relationship of negotiation and influence.

From this perspective, the prevalence of peer-based digital media production alternatives such as the FLOSS community, efforts to diffuse ICTs into developing and marginalized locations via so-called ICT4D initiatives and conflicts over access to medicine and “essential knowledge” in the form of medical and pharmaceutical treatments in the global South are all counter-movement struggles against *creative transformation*. They are informational political counter-movements, which challenge individualistic and economic conceptions of knowledge/information in the informational economy.

The FLOSS, ICT4D, and access to medicines examples are paradigmatic cases of struggle against Creative Transformation. While diverse in terms of their areas of focus, they coalesce as means of negotiating the hegemonic ideals perpetuated through *creative transformation*. As I will argue, to varying degrees these informational political activities engage in a double movement with Creative Transformation where the universalizing tendencies of informational capitalism are contradicted by and agitated against through assertions of the specific needs of peoples and communities rooted in oft-marginalized ways of life, socio-cultural constitutions, and political economic statuses. At the same time, though, these counter-movements remain influenced by and often reassert the biases of *creative transformation*, which they purportedly resist. This chapter argues that by working beyond the liberal legal tradition

discussed in Chapter Three, informational political activity can represent and advance counter-movements that support pluralistic stakeholder concerns within and on the margins of the informational economy by working to advance political economic transformations more attentive to pluralistic ways of life.

Informational Politics in Flux: The Plurality of Concerns of Counter-Movements in an Informational Economy

It is important to recognize that informational politics are not necessarily *only* the purview of counter-movements working in opposition to informational capitalism and Creative Transformation. As discussed in Chapter Three, informational political counter-movements often resist the logic espoused via *creative transformation* while subtly reinforcing the liberal and individualistic perspectives that support the expansion of informational capitalism and the knowledge-based economy. Critical theorist Nancy Fraser recognizes this tendency within counter-movements and argues against binary conceptions of a coherent “double movement” and in favour of acknowledging the existence of a plurality of concerns emanating from distinct economic and social causes (Fraser, 2013). Informational politics comprises a variegated multi-stakeholder field of formal and informal negotiations and deliberations wherein industry-oriented stakeholders, domestic governments and international organizations, and civil society actors and community participants assert differing perspectives in attempts to influence the regimes used to control and manage access to knowledge/information. For example, legal scholar Jyh-An Lee’s (2012) research into the “non-profit organizations” involved in debates over the “intellectual commons” finds that industry-oriented groups represent the interests of the holders of IP rights and the commercial activities of digital media companies, while oppositional groups focused on “open access” or the expansion of the “commons” propose alternative IP and knowledge

management regimes. These counter-movement activities are fluid, as stakeholders from various sides of the Polanyian “double movement” forge allegiances with various actors and groups according to the issues at stake in an attempt to reform IP and technology law in ways that suit their business practices or socio-cultural interests. It is therefore problematic to reduce informational political counter-movements to an either/or proposition between internally consistent groups asserting or resisting the trajectory of reforms to the existing international trade-based IP regime.

This tendency is demonstrated by the US debates surrounding the 2011 SOPA and the PIPA legislation. The SOPA and PIPA debates focused on introducing IP and technology law intended to curb the online “piracy” of IP-protected goods and services. This legislation was designed to provide US-based industries and American law enforcement agencies with the ability to take actions against foreign-based websites deemed to be infringing upon the IP of US nationals and corporations—particularly in the “content industries” of the audio-visual entertainment sector. Stronger enforcement mechanisms against foreign-owned and operated websites were deemed necessary due to the transnational nature of the Internet, which allows for the distribution and dissemination of goods and services across national boundaries. Supporters of the legislation argued that such measures are necessary to protect the IP of various industries, most notably those dealing in the creation and distribution of entertainment content, and the corresponding jobs and other revenue opportunities these industries provided for the general public.

Opponents of the bills contended that SOPA and PIPA were too broad and threatened civil liberties such as free speech and privacy as well as the future innovation and economic growth potentials offered by digital technology and online business sectors. In particular, the

proposed court-ordered Domain Name Server filtering of allegedly infringing websites were alleged to allow law enforcement agencies to effectively shut down so-called “rogue” websites without due process and “without any reasonable opportunity for the owner or operator of the website in question to be heard or to present evidence on his or her own behalf” (Lemley, *et al*, 2011). Civil society groups such as the Wikimedia Foundation as well as legal scholars and activist groups including the EFF criticized the bills on individualistic and utilitarian grounds. For example, legal scholars Mark Lemley, David S. Levine, and David G. Post, argued that the knowledge management regime advanced through SOPA and PIPA:

“share an underlying approach and an enforcement philosophy that pose grave constitutional problems and that could have potentially disastrous consequences for the stability and security of the Internet’s addressing system, [and] for the principle of interconnectivity that has helped drive the Internet’s extraordinary growth, and for free expression” (2011: 34).

Similar concerns were expressed by leading Internet and digital technology firms, including Google, Facebook, and Yahoo!; they insisted that the proposed legislation amounted to censorship of the world wide web, risked the “innovation and job creation” of the tech-sector, and would be ineffectual at combatting piracy (Google, 2012). Civil society and corporate activism combined to oppose provisions in the bills that would allow law enforcement agencies to prevent access to Internet domains due to alleged infringement on a small number of single webpages. Such provisions were criticized for working outside of the “safe harbor” provisions of the Digital Millennium Copyright Act (DMCA), which protect Internet Service Providers (ISPs) from legal action as long as the ISP makes reasonable efforts to prevent IP infringement. Civil society and technology industry actors coalesced to oppose the provisions contained in SOPA and PIPA, arguing that the broadly-defined powers described by the bills could allow for

ensorship of the Internet and would violate the US' First Amendment protecting freedom of speech.

The combined efforts of “emerging industry”²⁵ actors in the digital technology industries and civil society activists helped galvanize public opinion against the two bills. While the two general groups shared a common interest, their respective goals and political economic interests were distinct. While couched in the language of freedom, rights, and the ideal of an “open” Internet, technology sector efforts against SOPA and PIPA must be evaluated according to the economic interests guiding their positions. From a critical political economic perspective, it is important to recognize the risks that SOPA and PIPA represented to the existing business practices and financial success of tech giants such as Google and Facebook. The legislation not only threatened the stability and viability of the Internet’s architecture, it also added economic burdens to the business operations of the firms in the tech sector by bringing the safe harbor provisions of the DMCA into question, leaving them vulnerable to more litigation. Furthermore, these bills would have problematized the business models of these emerging companies as well as their self-described ability to “innovate” further. By ingraining a control-based regulatory scheme to protect content industries, SOPA and PIPA threatened the economic basis of technology-based industries that facilitate access to online content to generate advertising revenue as well as amass user-generated knowledge/information.

This criticism serves to highlight the interplay between market-oriented claims and those of civil society actors. For example, the non-profit foundation Wikimedia’s arguments against

²⁵ The term “emerging industry” has been used to describe companies involved in the digital and online technology sectors. However, given the growth of informational capitalism this term is misleading: many of these companies have come to dominate various sectors of the informational economy. They are, therefore, only “emerging” in so far as they are contrasted to the traditional vanguards – or legacy corporations – of the technology, media, and entertainment sectors.

SOPA and PIPA had much in common with those of their civil society counterparts. Wikimedia later framed their involvement in terms of the dangers that SOPA and PIPA posed for the “free and open Internet” and the dissemination of “knowledge” for Wikipedia users, arguing:

“For Wikipedia, this fight has never been about money, but about knowledge. As a community of authors, editors, photographers, and programmers, Wikipedians invite everyone to share and build upon the work already begun. In a little over a decade, Wikipedians have built the largest encyclopedia in human history. Wikipedia’s mission is to empower and engage people to document the sum of all human knowledge, and to make it available to all humanity, in perpetuity” (Wikimedia, 2012).

Both Wikimedia and civil society groups worked to oppose SOPA and PIPA in order to protect online freedoms and to resist the overreach of IP legislation based on the priorities of content industry groups. The debates surrounding SOPA and PIPA moved from a core group of interested stakeholders to include “more disparate groups and individuals from various other communities of interest, such as gamers, Reddit users, and political bloggers from across the political spectrum that were tied together through weak links provided by sites used frequently by all users, such as Wikipedia and Google” (Benkler, *et al.*, 2015: 615). The members of these groups opposed the proposed legislation for private and public reasons. In this sense, these informational political activities act as a bridge between the actions of “emerging industry” actors and civil society groups acting according to rights-based claims focused on the individual rights and liberties of online users and communities to be able to access and build upon existing knowledge/information.

As an expression of informational political activity, the debates surrounding SOPA and PIPA highlight the plurality of concerns presented by various stakeholders in debates surrounding knowledge/information management, IP law, and the legal and technological governance of the Internet: industry actors whose business models depended on IP-protected

commodities and assets worked to encourage the US government and like-minded allies to adopt new law designed to extend and protect their monopoly rights and their control over IP-protected knowledge/information, while counter-movements resisted these efforts on the basis of public and private concerns about the “proper” functioning of a “free and open Internet” and the benefits to users gained through greater access to knowledge/information. These debates nonetheless wholly cohere within a liberal legal framework and the norms of the Californian ideology, strengthening *creative transformation* by protecting private speech rights and expanding the realm of possible control of private property over knowledge/information.

Many of the most prominent critics of existing IP law and the so-called deepening of the international trade-based IP regime are US legal scholars and activists rooted in the constitutional tradition of “fair use,” “freedom of speech,” and “public domain” doctrine (Coombe, 2005). These concerns do not reflect the plurality of socio-cultural and human rights claims that have and might be advanced to oppose the deepening of IP law and the expansion of Creative Transformation. Within the SOPA and PIPA debates, the contrary positions of “emerging industry” actors from the technology and digital services sectors resisted these laws by arguing that their provisions unduly constrained their ability to forge new business models based on alternative knowledge/information management techniques. Civil society actors concerned with the undermining of civil and constitutional rights aligned with “emerging industry” representatives to oppose changes to knowledge/management regimes and IP law. Such a counter-movement, if it can be called one, does not reflect the pluralistic concerns of informational political movements who seek to advance human rights and development norms in the global informational economy.

Debating Human Rights in the Globalized Informational Economy

The informational political debates above, and as discussed in Chapter Three, frame the contestation over knowledge/information inline with the Western, liberal legal tradition of individualized and primarily economically-oriented interests. Legal scholar Madhavi Sunder (2006) describes this as a reductionist framing and indicative of the failure of the “utilitarian model of IP,” which is primarily concerned with economic efficiencies and incentivizing creative production for capital accumulation. Instrumental and utilitarian considerations of IP overemphasize macroeconomic effects and overlook the distributional impacts these knowledge management regimes can have for broad-based and long-term knowledge/information creation (Sell, 2007: 69; Chon, 2006: 2831). Part I of the WTO TRIPS Agreement, for example, states that “intellectual property rights are private rights” and recognizes “the underlying public policy objectives of national systems for the protection of intellectual property, including developmental and technological objectives” (WTO, 1994a: 319). Article 7 of the TRIPS Agreement states that the enforcement of IP protections via the Agreement and WTO is designed to “contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations” (*Ibid.*, 323). However, the purported balance between “private rights” and “public policy objectives” are framed in technologically determinist and economically reductionist ways. The intentions of the WTO system are clearly stated in the Marrakesh Declaration, which states the creation of the WTO “will strengthen the world economy and lead to more trade, investment, employment and income growth throughout the world” (WTO, 1994b: iii). Through the WTO, the international trade-based IP regime seeks to protect and incentivize the production of “ideas

and knowledge” and strike “a balance between the long term benefits and possible short term costs to society [...] especially when the period of protection expires and the creations and inventions enter the public domain” (WTO, 2008: 39). As discussed earlier, the subsequent TRIPS-plus shift to bilateral and multilateral trade agreements has extended and deepened the protections offered through IP law, further exacerbating the monopolies of knowledge held through the “private rights” of IP holders. IP-protected knowledge/information is, therefore, presumed to benefit social and economic interests through the private appropriation, commodification, and diffusion of new technologies and knowledge-based resources through informational capitalist exchange.

Approaching IP-protected knowledge/information from an economically reductionist and utilitarian perspective fails to recognize the transnationally pluralistic and culturally specific nature of informational politics in the globalized informational economy. As Rosemary Coombe and I have argued elsewhere (Turcotte and Coombe, 2013), the international legal and economic community remains dominated by Western-oriented institutions, such as the WTO, and frameworks, such as the international trade-based IP regime, wherein the diffusion of IP law internationally is presented as an universal, ahistoric, and optimal prerequisites for global economic and trade-based integration. However, these purportedly universalized norms are continually contested by actors, stakeholders, and coalitions of interested parties who resist the marginalization of culturally specific and development-oriented goals by economic reductionism and *creative transformation*.

Under Creative Transformation, the pluralistic concerns of stakeholders in the informational economy are marginalized and reinterpreted through universalizing schemas biased towards private and individuated forms of rights. This inverts Article 27 of the UN

Declaration of Human Rights, by foregrounding the private interests of “the author” and making the “the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits” (UNDHR, 1948: Article 27 (1)(2)) dependent upon the exhaustion of or limitations to the IP-protected knowledge/information. As Sell argues, this tends towards outcomes where “rights which used to be considered to be privileges or exceptions have superseded obligations of rights holders to the public” (Sell, 2007: 58): The private monopoly rights granted via IP law are prioritized when their proprietary controls are threatened by the competing rights of individuals, community members, or foreign governments seeking to interpret or design IP law according to local situations and to meet domestic social needs.

This political economic privileging runs counter to rights-based perspectives of human development, which assert the “indivisibility and interdependence” of human rights (Gready and Ensor, 2005). Conflicts between the international trade-based IP regime and the international human rights framework have existed since at least the late 1990s, when attempts to implement provisions of the Convention on Biological Diversity by providing protection for “traditional knowledge” were alleged to violate the TRIPs Agreement (Coombe, 1998b). International trade law imagines “economic freedom” as being enabled by market-based mechanisms, arguing that “personal self-development and [the] enjoyment of human rights” are promoted when the ability “to produce and exchange goods and services including one’s labour and and ideas” exists (Petersmann, 2002: 629). From this perspective, human rights play a utilitarian role in promoting other ends—human rights are to be “enjoyed” rather than protected in and of themselves.

Through the international trade-based IP regime:

“individuals are seen as objects rather than as holders of rights. They are empowered as economic agents for particular purposes and in order to promote a

specific approach to economic policy, but not as political actors in the full sense and nor as the holders of a comprehensive and balanced set of individual rights” (Alston, 2002: 826).

Creative transformation and the expansion as well as deepening of the international trade-based IP regime help to affirm and diffuse this conception throughout the knowledge-based economy. Individual rights are privileged according to the economic imperative of appropriating and exploiting knowledge/information for informational capitalist accumulation. The technologically determinist and utilitarian framing of knowledge/information through IP law re-orientes the human rights of individuals as well as communities towards economic ends (Beiter, 2016) and away from alternative rights-based and development perspectives that embrace motives and norms that cannot be reduced to market-based calculations.

Human development initiatives incorporating economist Amartya Sen’s “capability approach to development” (Sen, 1985; 1987; 1992; 1999 [2001]), for example, represents a reimagining of “standard economic frameworks for thinking about poverty, inequality and human development” (Clark, 2006: 32) by re-orienting “utility-based measures to human welfare” (Wong, 2011: 30). The “capability approach” foregrounds the need to improve the “real opportunities (environmental opportunities and individual abilities) that a person has to lead a life he or she values” (Zheng and Stahl, 2011: 69). This is done by promoting the “capabilities” of individuals and communities to have the “freedom” to achieve desired changes in lived reality: these capabilities are the “real opportunities you have regarding the life you may lead” (Sen, 1987: 36). For Sen, capabilities are different from “functionings” – the “beings and doings” of a person (Zheng and Stahl, 2011: 71) such as being a healthy or wealthy person – in that human capabilities depend on “the various combinations of functionings that a person can achieve. Capability is thus a set of vectors of functionings, reflecting the person’s freedom to

lead one type of life or another” (Sen, 1992: 40)²⁶. According to the capability approach, the opportunity to be healthy or wealthy depends upon the freedom, or capacity, to access functionings, such as food or medical treatments, necessary to be healthy as well as the resolution of structural impediments that may preclude an individual from becoming wealthy—or financially self-sufficient.

The capability approach is in line with human rights-based practices, human rights politics, and the use of human rights norms to alter existing political economic structurations according to the specific needs and desires of pluralistic communities. According to Sen, human rights represent the freedom and right to develop certain capabilities; human rights and the capability approach are complimentary as long as neither perspective looks to subsume the other (Sen, 2005). For example, in the realm of education, rights-based and capability approaches compliment one another by foregrounding a student’s right to an education as well as the necessity of providing an educational program that enhances the capability of a student to freely pursue her desires (Robeyns, 2006), regardless of her gender, other socio-cultural characteristics or political economic standing. Counter-movements to *creative transformation* are crucially linked with this approach to human rights-based development practice: in many cases, informational political counter-movements seek to address imbalances regarding access to and control of knowledge/information in order to improve the lived realities of and possible futures for individuals and communities enmeshed within informational capitalism. From the perspective of critical theory, working through the rights-based and capability approaches allows the social arrangements and political economic shifts associated with Creative Transformation to

²⁶ David Clark summarizes the distinction between functionings and capabilities, arguing a functioning “refers to the *use* a person makes of the commodities at his or her command,” while a capability “reflects a person’s *ability* to achieve a given functioning” (Clark, 2006: 34).

be critically evaluated on the basis of how these effect people's well-being, freedom of agency, and their opportunities for acting in desirable ways in informational capitalist environments (Zheng and Sthal, 2011: 75). As I discuss below, the emphasis on redressing inequitable social, economic, political, and cultural arrangements advanced by informational political counter-movements works to deconstruct and address the technologically determinist and economically reductionist framings of *creative transformation* and the international trade-based IP regime.

The capability approach to development sees rights as a “a prior ethical entitlement” (Sen, 1999: 229) that play an important role in the acquisition of “capabilities” by entitling opportunities to determine one's own outcomes (Nussbaum, 2011; Sen, 2005). In theory, human rights-based frameworks provide legal and normative force for ensuring that law and policy do not privilege macroeconomic growth or the economic concerns of private actors over the rights of individuals and communities (Easterly, 2014). The indivisibility of the civil, cultural, economic, political or social rights addressed in the international human rights framework entails that all of these rights are necessary for the realization of any of the others (Nickel, 2008). The international trade-based IP regime prioritizes the proprietary economic rights of individuals and corporations without due consideration of how these rights conflict with those held by individuals and communities who are excluded by the monopolies these laws confer.

Historically, two contrasting beliefs about the relationship between IP and human rights have emerged; in the first,, IP and human rights are seen to be incompatible because IP fundamentally undermines “a broad spectrum of human rights obligations, especially in the area of economic social, and cultural rights” (Helfer, 2003: 48) and, in the second, IP and human rights are viewed as potentially compatible because each body of law seeks to address questions about generating “balance” between individual monopoly rights and social concerns about the

imposition of one's rights over another's (*Ibid.*). The transnational expansion of informational capitalism and the norms associated with *creative transformation* has resulted in new contestations about the ways that IP rights conflict with the rights and responsibilities of others.

Rights-based practices and discourses can help to demonstrate the limits of totalizing frameworks, while providing means for peoples to assert forms of injustice and articulate specific interests (Coombe and Weiss 2015). Research into the deployment of transnational IP law into small island developing states, for example, shows how trade-oriented rights and obligations disrupt and constrain the capacity of individuals and state governments to calibrate IP law according to domestic circumstances (Forsyth and Farran, 2015). Forsyth and Farran demonstrate how “weaving” IP into local circumstances helps mitigate the inequitable political economic outcomes associated with transposing universalized forms of IP and offers new opportunities to tailor legal vehicles and legal systems to improve the opportunities and capabilities of marginalized peoples and communities.

Similar arguments have been made with respect to using “geographic indications” (GI) or “marks indicating conditions of origin” to help retain cultural and communal practices of knowledge/information management within the international trade-based IP regime (Aylwin and Coombe, 2014; Coombe and Aylwin, 2011). In India, non-government organizations as well as state actors have worked with local communities to ensure that local actors are able to secure GI protections (Aylwin and Coombe, 2014), which enable them to determine how their traditional knowledge-based resources are adapted and commodified for exchange in informational capitalist markets. GI rights have been granted for Indian products ranging from agricultural products and non-agricultural products and have been included in Indian law and validated by the WIPO (WIPO, n.d.). NGOs and development agencies in the global South are encouraging

countries to provide supportive legislation and working with communities to take advantage of the GI provisions in the TRIPS Agreement as a means of pursuing sociocultural rights, protecting biodiversity, and creating sustainable development agendas (Coombe and Malik, forthcoming). For example, Ethiopian coffee and Ghanaian cocoa industries are using GIs in ways that mitigate economic costs and contribute to collaborative and communal forms of production (cf. Oguamanam and Dagne, 2014; Turcotte, 2016a). In this way, the use of GIs helps to reembed *creative transformation* in the social base by providing opportunities for local communities and individuals to develop and market “commodities” in ways suitable to their particular needs.

Counter-movement activity using frameworks based on rights-based grounds – including appeals to human, development, and indigenous rights – and alternative development perspectives work to disrupt the universalization of the international trade-based IP regime, calling attention to the socially constituted basis of knowledge/information. The socially constitutive and contingent nature of knowledge/information problematizes *creative transformation*, which foregrounds utilitarian and economically-oriented ideals as a means for attaining informational capitalist growth and human development. This economic reductionism ignores the “capabilities” and opportunities necessary for leveraging technology and associated knowledge/information for human development purposes. The capability approach to development has been adapted to include rights-based perspectives towards ICTs, which recognize different levels of opportunity and capability within dominant political economic arrangements. The adoption of this “rights-based” development perspective (Hamm, 2001; Gready and Ensor, 2005; Darrow and Tomas, 2005) reveals how political economic structurations can reinforce existing hierarchies of knowledge/information access and control at the service of transnational informational capitalist processes. The rights-based perspective

“aspires to a more holistic integration of human rights as an ethical framework in the planning of projects designed for human improvement” (Gready and Ensor, 2005: 14), bringing normative force to informational political activities working as counter-movements against *creative transformation*’s universalist and proprietary ideals.

Rights-based development practices demonstrate how the recognition of peoples’ rights to exist and participate in the informational economy in a non-discriminatory and equitable fashion brings attention to the ways power can be reoriented by enabling localized and specific forms of knowledge/information management. The rights-based development perspective also helps reframe assistance from a form of individualized charity to a universal responsibility to promote political, economic, and social rights that empower human dignity and social participation (Aylwin and Coombe, 2014). From this perspective, the dialectic of knowledge/information must be attended to, maintained, and redeployed as the means of generating and protecting informational commodities and assets; simultaneously, spaces for counter-movement resistance and the re-appropriation of knowledge/information must exist through which socio-cultural claims to knowledge-based resources and the benefits derived therefrom can be asserted.

The double movement of Creative Transformation simultaneously results in the (re)appropriation of socio-culturally produced knowledge/information for the expansion of informational capitalism. Arvidsson and Colleoni (2012) describe the socio-cultural importance of knowledge/information in terms of a shift towards creating and cultivating affective relationships with users (and consumers) in order to drive speculative investments in ICTs and informational capitalist businesses. These affective and socio-culturally contingent relationships become an informationalized asset generated through and reinforced by the productive habits of

users of informational goods and services. Socio-cultural attachments are, therefore, necessary for engaging individuals and communities through the use of these goods and services so that the knowledge/information they create contributes to the informational assets of the companies and service providers themselves. Informational capitalist companies are able to appropriate and commodify user-generated knowledge/information for their own economic benefit without necessarily providing their users with economic reward or compensation. Instead, the value derived from these goods and services is fundamentally socio-cultural and affective and does not necessarily improve the political economic standing of users.

Recognizing and reconciling these unequal economic and development opportunities has become the focus of scholars, activists, and policy makers (cf. de Beer, *et al.*, 2014; Smith, *et al.*, 2011; Crandall and Fisher, 2009; Jeffrey, 2003; Servon, 2002). The human and economic development impacts of privatized and monopolistic forms of IP law are similarly critiqued for the inequities they engender and reinforce (cf. Wong and Dutfield, 2011; Natanel, 2009; Gervais, 2009; Deere, 2008). In the context of a knowledge-based economy, the UNDP and other international organizations are increasingly working to link human development perspectives and goals to ICT availability (UNDP, 2001). The capability approach to development has shaped many of these mainstream initiatives (Benkler, 2010: 223; Krikorian, 2010: 93fn53), but such official initiatives often overlook rights-based justice and development concerns central to social change. Central to mainstream theories and projects of human development is an understanding of “well-being in terms of enhancing capabilities, in lieu of other concepts of well-being such as utility (happiness, desire fulfillment) or opulence (income, commodity command)” (Wong, 2011: 27). From a rights-based perspective, however, technological access to ICTs and

knowledge/information will not necessarily result in improved capabilities unless this access is coupled with legal means to appropriate knowledge-based assets in desirable ways.

Paradigmatic Cases

To varying degrees, rights-based development norms and the capability approach are evident in informational political counter-movements working to re-orient Creative Transformation towards more socio-cultural ends. The political economic consequences of Creative Transformation are becoming clearer as informational capitalism is diffused further transnationally and becomes embedded in an increasing array of everyday activities (Dyer-Witheford, 2015; 1999a). As discussed in Chapter 2, these political economic outcomes increase inequality and concentration over knowledge/information. However, efforts to improve access to and the use of knowledge/information in digital technological environments through peer-produced and collaborative production, ongoing efforts to increase the availability of ICTs in developing or marginalized locations, and counter-movements focused on the human health concerns associated with proprietary forms of pharmaceutical creation and monopolization represent three paradigmatic sites of informational political struggle. In particular, the development and promotion of non-proprietary and collaborative forms of software production is a means of resisting and recasting monopolistic and corporatized practices of technological innovation and the associated informationalization of labour. The so-called FLOSS movement and other forms of “peer-based production” offer alternative forms of knowledge/information production, which seek to engender more social and community-oriented forms of collaboration, generation, and management. As well, access to digital technologies necessary for adapting to informational capitalism and addressing unequal development possibilities are being promoted through ICT4D

efforts seeking to diffuse ICTs into developing and underserved locales. Lastly, the monopoly control over essential knowledge/information necessary for producing life-saving medicines and treatments is a focal point of human rights claims and informational political activities seeking to disrupt life-threatening outcomes of Creative Transformation. These examples demonstrate how oppositional and alternative ways of attending to knowledge/information are becoming increasingly politicized and (re)negotiated as a form of Polanyian double movement with respect to transnational informational capitalism: counter-movements challenge the existing business practices of informational capitalist activity, while simultaneously expanding the boundaries of *creative transformation* by embedding socio-cultural practices and concerns within the knowledge-based economy.

FLOSS as a Digital Media and Peer-based Production Alternative

The digital media and peer-based production alternatives exemplified by the FLOSS movement highlight the challenges posed by emerging informational capitalist technologies and business practices as well as the changing socio-cultural and political economic relationships they facilitate. The economically reductionist and technologically deterministic beliefs of *creative transformation* overlook the socio-cultural and alternative political economic arrangements engendered by cooperative forms of technological and knowledge/information creation. Privileging individualized economic rights and opportunities at the expense of collective and social cooperation obscures how informational capitalist accumulation and diffusion are interrelated with the survival of non-economic social and communicative groups. The accumulation by dispossession of socio-cultural resources from an “informational commons” at the service of capitalist accumulation depends on the existence and continual expansion of a

reserve of appropriable knowledge/information. Digital, networked technologies offer the potential for reconfiguring proprietary framings of knowledge/information at the service of alternative political economic logics. Deconstructing the discourses used to describe these political economic and technological shifts demonstrates alternative possibilities and increases awareness about the possibility of change.

The FLOSS community stems from the creation of the GNU General Public License in the early 1980s and works to re-orient informational capitalism to include collaborative and peer-based forms of software production. This form of social and collaborative knowledge management is facilitated by legal and quasi-legal mechanisms such as the GNU General Public License and extended by more recent initiatives such as CC licenses by applying accepted IP moral rights concepts, such as attribution, while also enabling rights-holders to easily and identifiably share their works with like minded users. These licenses, while based upon the individuated authorship paradigm ingrained in the international trade-based IP regime, typify the double movement associated with Creative Transformation: these socially-governed forms of knowledge management recognize and assert the dialectic nature of knowledge/information by facilitating greater accessibility and the opportunity to produce derivative works by relying upon the legal forms and ideologies promoted by *creative transformation*. FLOSS ideas also follow from Lessig's widely cited *Remix: Making Art and Commerce Thrive in the Hybrid Economy* (2008), and his description of how digital technologies facilitate creative activities based upon combining previous cultural texts in new ways. While these acts appear unprecedented and rooted in the socio-technological circumstances of the time, Lessig argues that only the techniques of these relational "read-write (RW)" practices are novel and that recombinant creativity harkens back to previous eras where knowledge/information were orally transmitted

across generations (Lessig, 2008: 82). For Lessig and others (cf. Benkler, 2006a; Wark, 2006), while ongoing changes to the Internet's architecture and IP law are occurring in the name of commercial progress and resulting in the Internet being (re)made and (re)coded to increase security and dissuade supposedly illicit acts of information sharing (Lessig, 2006), digitally networked technologies continue to enable creative agents to appropriate, combine, and recast cultural texts and ideas.

FLOSS reacts against the concentration of capital based on the commodification, acquisition, and control of knowledge/information as goods and services, which is leading towards an informationalization of labour and the recasting of the relationship between labour and capital based on the former's ability to provide knowledge/information that can be appropriated and exploited for the former's economic benefit. FLOSS and other open source software activists routinely assert the emancipatory potential offered by collaborative forms (Fuchs and Sandoval, 2015) of "peer-based production" (Benkler, 2006a) as alternatives to proprietary and competitive processes of informational capitalist expansion. Sociologist Eran Fisher argues that:

"This new legitimization discourse of technology marks a transformation in the 'spirit of capitalism' from its industrial phase, in which the legitimization discourse emphasizes the capacity of capitalism to bring about social emancipation (by alleviating exploitation) to its postindustrial 'spirit of networks' phase, in which the legitimization discourse focuses on capitalism's capacity to enhance individual emancipation (by alleviating alienation and inauthenticity and allowing more creativity and personal expression)" (Fisher, 2010: 23).

The "new spirit of capitalism" identified by Fisher meshes with the idealistic and aspirational goals assumed via FLOSS movement actors, as they seek to harness the opportunities made possible via cooperative digital technology creation to recast political economic structurations in

ways more conducive to collaborative production—while also being attentive to specific and differing levels of capabilities in historically marginalized and disadvantaged communities.

However, these efforts must be analyzed to see if and how oppositional informational politics are simultaneously influenced by the presuppositions of *creative transformation* they are seeking to subvert. Technological changes will not produce political economic transformations on their own. The existing institutions and hierarchies of informational capitalism, as a broader Polanyian “movement,” are resistant to shifts that threaten their existence and reproduction. In response, the dominant players of informational capitalism work to co-opt and appropriate alternative or subversive practices so that they align with or reinforce *creative transformation* and informational economic expansion. Digital, networked technologies will not automatically result in social changes and may be subsumed by the “hegemonic discursive practices” (Schröter, 2012: 302) that they negotiate: “neither the conditions of production nor the forces of production can be considered the individual cause; rather, the cause is always to be found in their complex interaction” (*Ibid.*, 303).

This informational political struggle is evident in the creation of software – itself a fundamental component of informational capitalism – according to collaborative and socially governed forms of knowledge/information production. The FLOSS movement has become a prominent counterpoint to corporate and proprietary-based models for technological innovation and advancement. According to Benkler and others, FLOSS represents “an oasis of anarchist production” (2003: 1246) and a “collaborative peer based production model” (2006: 63), which draws on the collective strength of a community of users and co-creators to develop and improve software programs. The FLOSS community is said to comprise a “geek” sensibility, which helps form a “recursive public ... that is constituted by a shared concern for maintain[ing] the means of

association through which they come together as a public” (Kelty, 2008: 28). The recursive publics demonstrated by FLOSS communities represent “a fundamental reorientation of power and knowledge in the contemporary world” (Farmer, 2009: 618) and subvert proprietary characterizations and management of knowledge/information.

Through a focus on specific needs and the desires of particular communities, FLOSS can be used to advance counter-movements that disrupt the universalizing tendencies of *creative transformation* and open spaces for re-imagining and re-deploying the tools and technologies of informational capitalism in ways that promote alternative forms of knowledge/information production and circulation. For example, urban and rural “hack labs” in Peru have been created and act as a “counter-balance” against technological determinism by connecting multi-disciplinary partnerships around the use of FLOSS for educational purposes attuned to local realities (Chan, 2014). Such activities reassesses the liberal underpinnings and reformulations advanced more generally by FLOSS communities, which anthropologist Gabriella Coleman identifies as containing an “informal political scope” that serves “as a catalyst by which to rethink the assumptions of IP rights through its use and inversion” (Coleman, 2004: 508) Georg Von Krogh, *et al.*, demonstrate the political scope of FLOSS communities through their research on Freenet, “software that allows the publishing and obtaining of information through the Internet without the possibility of censorship” (Von Krogh, *et al.*, 2008: 6). The Freenet community is based on communal resources and a non-proprietary knowledge/information management regime. Like the Peruvian hack labs that Chan describes, the Freenet community coalesced around a common goal of using technology to meet specific needs—in this case anonymity of users. By developing and sharing their knowledge/information, the Freenet community was able to create technologies that are designed to share knowledge/information

while also preserving the anonymity of users. Such activities demonstrate how FLOSS communities “represent an important indicator of a post-industrial society where users develop knowledge and information-based products for their own needs and freely share them with others” (*Ibid.*, 18).

FLOSS reflects the dialectic relationship between knowledge-based resources and informational assets in the context of software production and represents a potential means of challenging and reconfiguring the prevailing political economic structurations of informational capitalism. As communication scholar Tarleton Gillespie argues:

“...technologies can powerfully shape the social activities in which they intervene, sometimes with significant political consequences; at the same time, technologies are also powerfully shaped by the individuals and institutions that produce them and [are] reshaped in powerful ways by users, suggesting that their impact has a lot to do with the meanings that are negotiated and the cultural contexts in which that negotiation occurs” (Gillespie, 2007: 14).

The socio-economic changes (re)asserted through collaborative and peer-based production methods disrupts the dominant logic of *creative transformation* and informational capitalist privileging of proprietary and individuated political economic relationships by basing knowledge/information production and management on distinctive moral informational economies. The continued success of FLOSS and similar collaborative production practices represents a counter-movement against technological and legal restraints that impose artificial scarcity over knowledge/information. This counter-movement helps foreground the possibility of the abundant circulation of knowledge/information for divergent political economic and socio-cultural purposes. The “intrepid users who refuse these constraints” (*Ibid.*, 18) challenge the orthodoxy of technologically facilitated and legally governed knowledge management regimes of informational capitalist accumulation.

As emerging social and technological practices, FLOSS activists and peer-based production methods challenge Creative Transformation by reorienting access to and control of knowledge/information in socially beneficial ways. The cooperative-competition these socially governed forms of knowledge management create help subvert informational capitalist structures by replacing the economically oriented antagonism between cooperation and competition that informational capitalism relies upon (Fuchs, 2011). In these counter-movements, providing users with legal rights and social standing creates goodwill between distributors and users (Herman, Coombe and Kaye, 2006), advancing the generation of knowledge/information, which can be appropriated in socially and economically beneficial ways. Cooperative-competition (Fuchs, 2010) emerges as previously antagonistic relationships are recast to provide all sides with reciprocal benefits. These benefits accrue by foregrounding the dialectic nature of knowledge/information so that groups and practices marginalized by proprietary knowledge management regimes based in IP law are (re)asserted and given legitimacy as well as efficacy to engage in knowledge/information production and management systems outside of the corporatized international trade-based IP regime. For example, communications scholar Anita Say Chan's research into FLOSS activists in South America, generally, and Peru, more specifically, analyzes how a poly-vocal network of activists interested in FLOSS production have resisted the encroachment of policies privileging the adoption of proprietary software (Chan, 2013; 2008; 2007; 2004) and actively adapt and reconfigure open source software to attend to the local educational and cultural needs of rural and indigenous populations (Chan, 2014). Examples such as this, the Peruvian hack labs, Freenet, and others (Briendl, 2010; Maurer and Scotchmer, 2006) demonstrate FLOSS' informational political potential as a counter-movement against informational capitalist orthodoxy.

Within FLOSS communities, dialogue, interconnectivity, and collaborative relationships become recognized and reinforced for the integral roles they play in the generation and circulation of knowledge/information. Their practices are reminiscent of what Elizabeth Frazer and Nicola Lacey idealize as “dialogic communitarian[ism]” (Frazer and Lacey, 1993), which privileges relational perspectives while valuing individual creative activities based upon such relationality. Similarly, the individuality privileged by informational capitalism requires discursive engagement and the ability to remain part of narrative networks of others so that an individual’s interpretations and appropriations of knowledge/information can occur. From this perspective, creativity, innovation, and originality are not necessarily the product of individuated labour and inspiration—as imagined and asserted by *creative transformation*. Instead, these acts are recognized as part of broader social, cultural, economic, and political relationships that fuse an individual’s understanding with external influences. While an individual’s *expression* of creativity may be articulated as an authorial concept based in originality via IP law, the expression is always-already implicated within external networks of *knowledge/information* fundamentally dependent on the resources necessary for subsequent “creativity” and “innovation,” which they contribute to in turn.

This relational perspective of creativity and authorship (Craig, 2011) recognizes the duality inherent in the management and production of knowledge/information. Rather than either obscuring the individualistic components of authorship—the ability to appropriate various sources for new ends—or the relational aspects of creativity—the contingent and interconnected nature of knowledge/information—a relational perspective articulates how culture is not external to the individual (Coombe, 1991). From this perspective, knowledge-based resources and informational assets are similarly entangled and interrelated that contribute to the generation and

diffusion of subsequent knowledge/information for socio-cultural as well as political economic purposes. As counter-movement expressions of informational political activity, these means of producing and protecting knowledge/information reassert socially contingent realities that are obscured by the proprietary, individuated, and monopolistic framings of *creative transformation*. Peer-based production and FLOSS alternatives help foreground the recursive and relational nature of knowledge/information, highlighting the ways in which previous ideas, texts, and forms are appropriated to create derivative works.

In spite of the growing commercialization and propertization (Hughes, 2006) of knowledge/information in the digital environments of informational capitalism, counter-movements of FLOSS activists work to re-negotiate knowledge management regimes to reinscribe the accessible nature of the knowledge/information in digital realm. For example, Christopher Kelty (2008) describes the “open source” software movement as an initiative committed to developing and disseminating digital code and technologies that retain the Internet’s open ethos. As an informational political counter-movement, the FLOSS movement is cast as a reaction against perceived overreaches of privatized forms of IP and knowledge management rooted in aspirations and beliefs that an open and accessible Internet benefits from increased collaboration and relational creativity. Rather than ‘locking in’ content and information via digital code, FLOSS and peer-based production alternatives allow knowledge/information to be accessible in ways that enable subsequent programmers to fix problematic elements of the software and create new and improved uses as well as possibilities.

From a socio-legal perspective, law is seen to evolve to reflect changing circumstances associated with “double movement” contestation. However, *creative transformation* largely privileges the interests and business models of existing industry actors over emerging

alternatives, resulting in ongoing IP expansion that threatens to prevent the alternative forms of knowledge management offered by FLOSS and peer-based production alternatives. In particular, copyright law has become a central area of contestation in debates over the political economic structuring of informational capitalism. From the context of the US, copyright was originally intended to “To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries” (US Constitution, Art. I, Sec. 8). However, in the double movement of informational capitalism, copyright law is being increasingly extended so that rights holders are able to exert control over creative works for longer periods of time and in different areas. Copyright and other forms of IP, more generally, are presented as important mechanisms for ensuring that adequate compensation and financial incentives for knowledge/information production occurs. Focusing copyright and IP reform efforts to protect against the “illicit” copying and dissemination of knowledge/information through TRIPS-plus mechanisms means that *creative transformation* forecloses alternative socio-cultural and political economic relationships in favour of entrenching the established hierarchies and business models of informational capitalism’s dominant actors. By relying primarily upon legal mechanisms created to serve informational capitalist accumulation, FLOSS and peer-based production alternatives that seek to “extend” the “informational commons” may reinforce the status quo of existing political economic imbalances by not accounting for multiple views of plural commons or pluralistic informational politics.

As an informational political counter-movement, FLOSS and associated peer-based production alternatives are always-already influenced by the individuated and proprietary tenets of informational capitalism and *creative transformation*. The reliance on the GNU and CC licenses to advance socio-cultural forms of knowledge management operate/function to (re)assert

the monopolized and corporatized IP regime of Creative Transformation. Working at the margins of the international trade-based IP regime, this socially governed knowledge management governance regime is dependent upon liberal legal individuated rights for its normative basis and legal force. The knowledge/information governed by these alternatives relies upon the intentions of individuated “creators,” but is not indicative of any broader commitment to socially just means of accomplishing knowledge/information diffusion across socio-economic hierarchies. The diffusion of knowledge/information under these circumstances is framed as a contractual and altruistic “gifting” of knowledge/information to an “information commons.” This individuated form of rights-based negotiation can further obscure the communal and socially contingent relations of knowledge/information production and dissemination. The reduction of socio-cultural justice to the individuated and rational actor, or economic agent, entails that public issues and goods become the purview of benevolent informational capitalist actors. These attempts to leverage the informationalization of labour for counter-movement informational political purposes, therefore, reinforce the binaries of public and private as well as knowledge and information that informational capitalism and *creative transformation* depend upon.

Bridging the Digital Divide through ICT4D

The unequal political economic structurations typified by the informationalization of knowledge/information that FLOSS as well as other digital media and peer-based production alternatives seek to rectify with respect to the creation and diffusion of software technologies are similar to concerns over access to the infrastructure necessary for engaging with the “information society” and participating in the knowledge-based economy. Unequal access to new technologies restricts the ability of disadvantaged groups to participate in the increasingly knowledge-based

economy. These inequitable technological situations are often referred to as a “digital divide” (Arunachalam, 1999) and became an issue for domestic governments and international development initiatives in the mid-to-late 1990s.

Since the late 1990s and early 2000s, bridging this digital divide has become a key focus of domestic governments and international development initiatives (cf. Gore, 1991; 1994; World Bank, 1999; UNDP, 2001) and has been accompanied by scholarly interest in making ICTs work for development purposes (cf. McAnay, 2012). The idea that a “digital divide” was accompanying the spread of ICTs and the emergence of the informational economy became an area of concern for the Clinton administration in the US. In an article in *Scientific American*, US Vice-President Al Gore linked the emerging “information superhighways” (Gore, 1991: 153) to previous technological advances, such as the printing press, to capitalism (*Ibid.*, 150), and with the utilitarian argument that these ICTs would empower people to “use their creativity to challenge the world around them in ways never before imagined” (*Ibid.*, 152). Gore argued for active government intervention and regulation of this emerging system, and later cautioned: “we can't create a nation of information haves and have-nots. The on-ramps to the information superhighway must be accessible to all” (Gore, 1994: 6). As communication scholar Daniel Greene argues, the Clinton administration thereby linked ICTs, the Internet, and digital technologies to “the opportunity to compete in the New Economy [and] transformed the potential precarity of the New Economy into a series of opportunities for competition—if you, your community, or your country made the right upgrades” (Greene, 2016: 1212-1213). The US government as well as international institutions worked to mobilize this frame and create policies and initiatives to technologically address the inaccessibility of ICTs and digitally codified knowledge/information in order for individuals to engage in informational capitalist activities.

In 1999 the World Bank's *Knowledge for Development* report (World Bank, 1999) linked concerns over the so-called digital divide with human development initiatives and the need to expand the diffusion of ICTs internationally so as to allow people in developing states to take part in the knowledge-based economy. Similarly, then-UN Secretary General Kofi Annan (1999) identified the problem as revolving around:

“The capacity to receive, download and share information through electronic networks, the freedom to communicate freely across national boundaries – these must become realities for all people. ... Today, being cut off from basic telecommunications services is a hardship almost as acute as these other deprivations, and may indeed reduce the chances of finding remedies to them.”

Domestic governments, IOs, and civil society organizations (CSOs) proposed that ICT4D are a key means of addressing the digital divide by ensuring greater access and connectivity to the tools of informational capitalism (Servon, 2002; Jeffrey, 2003; Crandall and Fisher, 2009).

Proponents of ICT4D argued that the diffusion of these technologies are key to improving the lives and situations of poor and disadvantaged groups in developed as well as developing states (Shade, 2003). The concept of ICT4D became prominent at a time when the purportedly revolutionary potential of ICTs and the “information superhighway” were emerging and these continue to sway policy makers, pundits, and consultants (cf. Tapscott and Williams, 2010; Schmidt and Cohen, 2013). As discussed earlier, then-Secretary of State Hillary Clinton even adopted language reminiscent of Gore's argument, arguing that the Internet and digital media amounted to “on-ramps to modernity” (Clinton, 2010).

ICT4D initiatives seek to provide the tools necessary to access these “on-ramps” and, in turn, the “modernity” promised by *creative transformation*. For example, Close the Gap is an international NGO aiming to “bridge the digital divide by offering high-quality, pre-owned computers donated by European companies to educational, medical and social projects in

developing and emerging countries” (Close the Gap, 2016a). Launched in 2009, Close the Gap works with the UN and is a signatory to the UN Global Compact and a member of the UN Global Alliance for ICT and Development and the UN Department of Public Information. The NGO partners with public and private institutions to disseminate pre-used technologies through projects in developing states. Large informational capitalist ICTs are members of these partnerships, including Microsoft, Dell, and Ricoh (Close the Gap, 2016b). In particular, Microsoft supports Close the Gap by providing free software licenses for donated computers (Close the Gap, 2016c). These types of arrangements often exacerbate inequalities as governments and institutions are unable to afford the costs necessary to continuously update the “free software,” helping to embed the dependency and limit the technological capabilities (James, 2003) of people in developing countries.

The overall effectiveness of ICT4D is debated (Kagami and Tsuji, 2002; Crandall and Fisher, 2009) and it is important not to overlook the inequities that are associated with technologically mediated access (Coombe, 1996). Aside from a lack of access to particular technologies, the so-called digital divide is characterized by both inequalities in the distribution of ICTs as well as in attendant levels of skill and capacity to use these technologies in marginalized communities and developing economies (van Dijk, J., 2005). Issues of age, gender, income, and wealth contribute to forms of “information poverty” (Norris, 2001), which preclude marginalized and low-income individuals and communities from accessing the technologies needed to develop the skills deemed desirable by informational capitalists—or the opportunity to use these technologies and tools in alternative ways. This digital divide is manifest in differing levels of access to and control over knowledge/information as well as the lack of opportunities to improve human capabilities and benefit from informational capitalism.

Critical theorists continuously problematize the narrow and technologically determinist perspectives that underlie such beliefs in the socially progressive impact of ICTs (cf. Morozov, 2013) and ICT4D, itself, as containing fundamental contradictions as well as emancipatory potentials (Unwin, 2009; Lovnik and Zehle, 2005; Nederveen Pieterse, 2010; Parayil, 2005). ICT4D efforts have come under scrutiny for focussing on the technological aspects of the digital divide and failing to account for the political economic and socio-cultural inequities that exacerbate and reinforce marginalization as well as dependency (Carroll and Jarvis, 2015; Wade, 2002). With respect to the double movement of Creative Transformation, this technological determinism coheres with the economic imperatives of informational capitalism and problematizes efforts to leverage ICTs for development purposes. Focusing on technological access risks absorbing social and cultural actions into a proprietary model based upon private wealth accumulation and market liberalization. For example, ICT4D initiatives such as the “One Laptop Per Child” program (Warschauer and Ames, 2010), which seeks to distribute laptop computers to students throughout the so-called developing world, work to condition children and students as informational consumers dependent upon external sources for both ICTs and knowledge/information. As consumers, moreover, the agency of these users is appropriated to serve informational capitalist accumulation, as we have seen. Similarly, the resistance to Facebook’s “Free Basics” service in India (Venkatraman, 2015) discussed earlier reflects the domestic concerns of government and civil society actors about allowing foreign control over access to online services via a proprietary model.

In this light, mainstream attempts to spur development via ICT4D fail to account for the economic reductionism and technological determinism of *creative transformation*, serving to further diffuse utopian perspectives of informational capitalism and the benefits offered by

participation in the knowledge-based economy. As sociologist Jan Nederveen Pieterse argues (2010), ICT4D and other efforts to address inequality through technological means are “unbearably light” in terms of the lack of attention that is given to how these efforts work to expand and deepen informational capitalist markets. One explanation for this is that many ICT4D practitioners and scholars “have more knowledge of development literature than of ICT literature,” which leads to an overemphasis on efforts to ensure the viability of deploying ICTs internationally (Raiti, 2007: 2). ICT4D initiatives also suffer from a lack of clarity about the nature and contributions of ICTs in places that are economically marginalized: whether ICT4D is about the transfer of technologies or is better understood as socially embedded actions, and whether ICT4D contributes to conservative, progressive, or disruptive transformations (Avgerou, 2010). Nederveen Pieterse argues that ICT4D and other initiatives aimed at improving human development must serve to “disembed technology from capital” (*Ibid.*) in order to address the “digital divide” (Sorj and Guedes, 2005). Fuchs and Eva Horak (2008: 101) describe the multifaceted technological, economic, socio-cultural, and political dimensions of the “digital divide,” arguing that unequal arrangements are “caused by certain stratification processes that produce classes of winners and losers of the information society, and participation in institutions governing ICTs and society” (Fuchs and Horak, 2008: 101).

This stratification and the opacity that Avgerou identifies in ICT4D discourse results in a reductionist view of the development opportunities that increased access to ICTs might facilitate by failing to account for how the technological issues surrounding ICT4D are intertwined with socio-economic structururations. Focusing on ICT4D as a technological and economic imperative according to *creative transformation* ensures the political economic structururations of informational capitalism are transposed into developing countries via ICT4D initiatives that are

inattentive to domestic realities and needs. This contributes to a new form of “dependency” (Wade, 2002), as the diffusion of ICTs does not necessarily entail greater access to the knowledge/information necessary to use or transform these technologies according to domestic circumstances. From a capability approach perspective, ICT4D focuses largely on the ‘functionings’ needed to participate in the knowledge-based economy and often overlooks the opportunities, or capabilities, necessary for using these technologies for desired ends.

The diffusion of proprietary ICTs and software into developing countries results in a form of digitized dependency that is exacerbated by proprietary forms of knowledge/information management and the international trade-based IP regime. For example, people are often unable to modify or reverse engineer ICTs and software, such as “free software” from Microsoft, to meet domestic needs due to the digital rights management provisions of trade-based international IP law. As Chan’s research into the FLOSS activist communities of South America helps demonstrate (2013), the lack of a legal ability to modify imported technologies and software circumscribes the possibility of using ICTs to improve local capabilities. The capability approach provides one avenue for recognizing and addressing the socially contingent nature of technology and the political economic disparities associated with human development (Zheng and Stahl, 2011). In particular, “a critical capability approach that conceptually and methodologically incorporates situated agency as a key element would allow us to critically evaluate the design of social arrangement and of the basis of cultural norms as part of the assessment of well-being and agency [and] freedom” (Zheng and Stahl, 2011: 75). Taking into account the local needs and norms of particular communities allows ICTs to be used in ways that can address specific development needs, such as education (Chan, 2014). Since informational capitalist activities focus on the knowledge/information disseminated through ICTs, ICT4D initiatives and other

attempts to “bridge” the digital divide must focus on the availability of such “big data” (Chan, 2015) as well as the legal regimes that make some forms and uses of knowledge/informational legally impossible.

Human rights-based and capability approaches to development provide opportunities for recasting informational capitalism norms and legal structures to be attentive to broader, socially oriented goals and concerns. The indivisibility and interdependence of human rights (Gready and Ensor, 2005) ensures that various rights – including the right for everyone to enjoy the benefits of scientific ‘progress’ and its applications, the right to benefit from the protection of moral and material interests of the author, the right to property, and the right to health (Lee, 2015) – must be protected in a non-discriminatory and equal fashion. As legal scholar Peter Yu argues, the international trade-based IP regime contains a patchwork of bilateral, plurilateral, and regional trade agreements, “which arguably have strengthened those attributes of intellectual property rights that have human rights status, [but also] create considerable impediments to the protection of [other] human rights” (Yu, 2012: 1100). The private and economically oriented rights of IP holders are asserted despite their contradictions with the non-economic rights of others. The IP rights of pharmaceutical companies, in particular, imperil the human right to health.

Access to Medicines and Human Rights-based Claims to Essential ‘Knowledge’

The contestation between rights demonstrated through concerns over the propertization of knowledge/information and the activities of FLOSS activists and peer-based production alternatives do not necessarily identify ‘human rights’ as the concerns they are addressing. ICT4D initiatives similarly focus on technological access to digital technologies as a means of addressing technological inequities. Counter-movement claims to social, cultural, political, and

economic rights are variously deployed in other avenues as a means to contest the overreach of IP law and monopolistic as well as proprietary control over knowledge/information. Through the recognition of the indivisibility and interdependence of human rights, these various rights-based claims are necessarily connected by overarching concerns surrounding justice, freedom, and development. In this sense, the human rights framework offers a means of challenging the neoliberal and proprietary underpinnings of Creative Transformation (Chapman, 2009) and the unjust existing medical-profit regime, which violates the human rights of peoples across the world (Pogge, 2005). Governments and social movement actors working to assert the right of developing state governments to use the flexibilities contained within the TRIPS Agreement to promote issues of public health clearly link their efforts to the human rights framework. The international response to the AIDS crisis of the 1990s is but one example.

The AIDS crisis of the 1990s resulted in a group of developing states – notably, South Africa and other African states, Brazil, India, and Thailand – and like-minded civil society advocates and NGOs (Sell, 2007) working together to re-assert domestic and publicly oriented concerns against an international trade-based IP regime designed, in part, to benefit the economic concerns of transnational pharmaceutical companies (Drahos and Braithwaite, 2002). This coalition of ‘access to medicine’ advocates appealed to the World Health Organization (WHO) and human rights frameworks contained in the UN system to characterize ‘life saving’ drugs as ‘essential medicines,’ irrespective of the fact that the knowledge/information used to produce them are proprietary and governed via international IP law.

Throughout the 1980s and ‘90s, the WHO had developed a Revised Drug Strategy containing the recognition of ‘essential drugs’ – drugs and medicines regarded as basic and necessary for meeting a population’s specific health concerns – and recommended that state

governments enact domestic law and policies supportive of the use of generic medicines (Laing, *et al*, 2003). The signing and ratification of the TRIPS Agreement, which came into effect in 1995, shifted the international trade norms surrounding IP and pharmaceuticals (Matthews, 2011; Drahos and Braithwaite, 2002), complicating the objectives of the Revised Drug Strategy. Transnational pharmaceutical corporations would, therefore, be able to assert their proprietary rights over knowledge/information necessary to produce life-saving medicines, allowing these rights-holders to gain considerable control over the availability of patented medicines in the global South (Pinheiro, 2010: 621). Furthermore, trade sanctions, and in particular the threats of receiving retaliatory trade measures by being included on the USTR's Special 301 Report Watch List, undermined the possibility of using the "flexibilities" built into the TRIPS Agreement (Abbott, 2002) to create domestic industries for generic drug creation as well as the parallel importation of these drugs to meet the public health objectives of developing and least developed states. The access to medicines campaign worked to forge support within the WHO and across sympathetic international forums to reaffirm the applicability of TRIPS flexibilities in the name of the public good (Correa, 2002).

Subsequently, "the interpretation and potential amendments to the TRIPS Agreement's provisions pertaining to medicine and public morality became highly politicized, with access to medicine representing the first globally publicized struggle in what has become a worldwide access to knowledge movement" (Coombe and Turcotte, 2012a: n.p.). In this light, the access to medicines movement is more than an attempt to ensure that patented pharmaceuticals and other life-saving treatments are accessible to people in need despite their inability to pay the purchase price (Snodgrass Godoy, 2013); as an informational political counter-movement, access to medicine activism works to ensure that fundamental and necessary knowledge/information can

be used and deployed in particular locations to meet domestic health concerns. Increased access to knowledge/information that can be used to address and treat the health concerns of those suffering from AIDS, for example, disrupts the proprietary and monopolistic tenets of the *creative transformation*. Governments and civil society activists representing the human rights concerns of the poor and sick worked to use norms about access to medicines to ensure that people in low-income and developing states could benefit from the diffusion of knowledge/information about life-saving drugs as well as increase their ability to appropriately apply this knowledge/information despite the transnational IP regime's focus on private economic concerns.

The Doha Round of WTO trade talks, which began in 2001, became a focal point of this counter-movement activity. Counter-movement activity opposed the expansion of the international IP regime by including provisions and terms that would threaten access to medicines and the efforts of domestic governments to safeguard public health (Sell, 2001a;b; Shashikant, 2010). The human right to health and the amorality of an IP and trade regime that would undermine the capacity of low-income and developing states to confront public health epidemics served to politicize attempts to amend the TRIPS Agreement – or similar so-called TRIPS-plus trade agreements (Sell, 2010b). These counter-movement activities brought socio-economic and human rights concerns to the foreground, helping to galvanize support behind the creation and adoption of the Doha Declaration (Fachel Leal, *et al*, 2014). The Doha Declaration (2001) helps reaffirm the public-regarding role of IP, stating that “the TRIPS Agreement does not and should not prevent Members from taking measures to protect public health [...] the Agreement can and should be interpreted and implemented in a manner supportive of WTO Members' right to protect public health and, in particular, to promote access to medicines for all”

(WTO Ministerial Conference, 2001). Public health scholar Lisa Forman argues that the right to health has been extensively re-interpreted and asserted in international law, helping to explicate the duties of policymakers, judges, and civil society and offers “increasingly tangible and powerful tools” (Forman, 2015: 96) for addressing the inequities of the international trade-based IP regime. The Doha Declaration represents a concrete example of the successes of informational politics counter-movements in opposing and affecting the dominant logic of *creative transformation*. However, these counter-movement “gains” are simultaneously opposed and curtailed by the “movement” itself, which seeks out new venues and means for establishing and exerting the vested interests of informational capitalists.

For example, processes of “forum shifting” (Sell, 2009) help to re-entrench disparities of access, as the governments representing the interests of informational capitalists rights-holders move negotiations to bi-lateral and plurilateral forums more hospitable to these goals. The recently concluded TPP negotiations are but another example of a host of bilateral and plurilateral trade agreements that work to extend and entrench the private interests of IP rights-holders and the states where these TNCs are located (Heine and Turcotte, 2014; Heine and Turcotte, forthcoming; Carrier, 2013). Therefore, the fundamental political economic inequalities of the international trade-based IP regime remain despite declaratory affirmations about the legality and appropriateness of IP exceptions, such as the TRIPS flexibilities. Similar rights-based arguments are made in efforts to promote food security (Yamin, 2003), further human development (Wong, 2011; Matthews, 2011), support public education (Chon, 2011), protect traditional cultural expressions (Wong and Fernandini, 2011), and traditional knowledge (McManis and Terán, 2011). A Polanyian double movement is evident in this on-going interplay and (re)negotiation between groups seeking to extend principles of marketization via IP law and

oppositional actors seeking to address perceived overreaches by appealing to social, public, and political norms including human rights-based frameworks (Calboli and Ragavan, 2015). Analysis of informational political counter-movements must, therefore, include recognition of double movement interplay and how opposing groups contradict, appropriate, and reinforce existing norms and ideological positions.

Conclusion

The Creative Transformation taking place under informational capitalist expansion is based upon the disembedding of knowledge/information from its social and cultural bases. In order to generate new forms and spaces for capitalist accumulation, knowledge/information are appropriated and commodified in order to be deployed as value and rent-seeking assets in market-based transactions. The privileging of knowledge/information as economic goods is met with the rise of informational political activity where groups and actors promote or resist *creative transformation* and the political economic structurations of Creative Transformation. In particular, this double movement of Creative Transformation sees interplay and negotiations between economic and social actors seeking to address and alleviate tensions resulting from proposed and existing treatments of knowledge/information. While the dialectic and socio-cultural basis of knowledge/information is the root of these informational politics, they are manifest in a number of interrelated ways. IP law has become one prominent area of informational political activity, as economically-oriented interest groups, actors, and governments have been met by a counter-movement of groups seeking to address socio-cultural and developmental concerns. Since informational capitalism is based on the commodification of knowledge/information and its deployment as informational assets, the political economy of IP

law under informational capitalism is of paramount concern. Alternative modes of practice based on FLOSS and peer-based production processes, ICT4D initiatives attendant to rights-based claims and the capability approach to development, and the access to medicines campaign highlight how rights are contested, reformulated, and reinforced via informational political activities. Similar to the access to medicines campaign, a transnational A2K Movement has emerged to contest restrictive IP law and knowledge management regimes by foregrounding the possibilities created by increasing access to knowledge/information.

CHAPTER FIVE

FINDING COVER? TRACING AND CRITICALLY ‘DECONSTRUCTING’ THE IDEA OF ACCESS TO KNOWLEDGE AND THE A2K MOVEMENT

The final chapter of this dissertation critically analyzes a counter-movement engaged in the double movement of informational capitalism: the A2K Movement. As I discuss below, the A2K Movement is a loose coalition of academics, activists, and civil society actors who have coalesced under the umbrella of an idea of “access to knowledge” as a counter-point to the international trade-based IP regime. The idea of facilitating greater access to knowledge is presented as a goal to oppose the privatization of knowledge-based resources through IP law. In this chapter, I begin by tracing the historical emergence of the concept of access to knowledge in relation to IP law as well as in debates about the role this access play in bettering the socio-economic situations of individuals, communities, and states. Next, I describe how the idea of access to knowledge was adopted by counter-movement actors in the context of the WIPO-DA, leading to the emergence of an A2K Movement. I then deconstruct the concepts within the A2K Movement from a combined perspective of CLS and cultural studies deconstruction. This deconstruction demonstrates and analyzes the informational political nature of the A2K Movement with respect to *creative transformation*. A CDA is then presented of a representative sample of texts written by A2K activists from academia as well as civil society. This CDA analysis is undertaken according to the framework proposed by Isabela Fairclough and Norman Fairclough (Fairclough and Fairclough, 2012) for critically analyzing political and argumentative discourse. Two legal documents – the proposed *Draft Treaty on Access to Knowledge* (A2K

Treaty, 2005) and the *Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled* (Marrakesh Treaty, 2013) – are also critically examined through this CDA framework to highlight double movement arguments about the role and status of knowledge-based resources in the informational economy. The chapter concludes by arguing the A2K Movement is an exemplar of the double movement of informational capitalism: a counter-movement working in opposition to the processes of *creative transformation*, while being simultaneously embedded within this ideological apparatus. This critique of the A2K Movement demonstrates both the limitations of and possibilities for enacting political economic change through counter-movement activities under Creative Transformation.

A Note on Methods: Tracing, Deconstructing, and Analyzing Discursive Roots

This chapter focuses on the discursive claims made through the A2K Movement in opposition to the international trade-based IP regime and the individuated and proprietary ideals of *creative transformation*. Critical scholarship helps demonstrate how discourse is dependent upon historical circumstances, particular places, subjects, and ways of thought (Foucault, 1972). The historic tracing of a specific discourse includes the identification of the conditions giving rise to forms of “truth” (Foucault, 1993: 202) embedded in relations of power. In this chapter, I trace the discursive roots of the idea of access to knowledge as it relates to IP law and the role of knowledge-based resources in socio-economic contexts. Similar methodologies have been implemented across the social sciences and humanities, including sociology (Dean, 1992; 2010), legal critiques of cultural questions and ideologies (Koopman, 2013), accounting with respect to Maori land claims and settlements (Kearins and Hooper, 2002), cross cultural management research (Prasad, 2009), critical health studies (Miró-Bonet, *et al*, 2014), in dance education

studies concerned about prevailing body image typologies (Ritenburg, 2010), education studies (Allen, 2011), studies of child abuse (Bell, 2011), restorative justice (Richards, 2011), political science (Jenkins, 2011), human rights studies (Manokha, 2009), and studies of power relations and struggle (Levy, 1998). Discursive tracing has been found useful in critical social science studies seeking to uncover latent or hidden assumptions and power relations by examining the specificity and locality of the complex genesis of knowledge generation through discursive practices (Sharp, 2011) as well as the constitutions of subjects across history, which contribute to their current conceptualizations (Foucault, 1993: 202). Discursive tracing identifies and analyzes underlying relationships, enabling “reconceptualization of the current order, rejecting what is tacitly accepted but known to be flawed, and problematizing it in terms of its historical production” (Kearins and Hooper, 2002: 735). The method allows for critical analysis of the formulation, contestation, and perpetuation of ways of thought and practice. Tracing the discursive roots of access to knowledge helps to inform a critical analytical perspective for theorizing the construction of this idea and the activism of the A2K Movement with respect to *creative transformation*.

Discursive tracing, therefore, enables the deconstruction of discursive framings and assumptions. Business, law, and finance scholars Kate Kearins and Keith Hooper (2002) have used such methods to uncover latent assumptions and hegemonic constructions within forms of legal interpretation and practice. Social theorists Charles Lemert and Garth Gillan (1982: 135) argue that deconstruction, as well as “reconstruction,” must be based on the material contained in available documents. Therefore, the conventions determining how particular documents are produced, disseminated, and preserved must be taken into account, as “particular discursive practices may, for example, militate against documenting contentious issues” (Kearins and

Hooper, 2002: 741). In this chapter, both primary and secondary sources are considered as components of the corpus relating to the idea of access to knowledge as well as the A2K Movement. As I argue, the A2K Movement has emerged through the formation of an academic-activist complex, within which the scholarly writings and presentations of academics are used to describe as well as inform subsequent activist activities. The scholarship of these academics is not merely a representation or documentation of access to knowledge or the A2K Movement; this scholarship actively informs and engages activists as well as the norms and values underlying the Movement.

Social scientist Paula Saukko (2003: 126-129) highlights the problems associated with analyzing emerging discourses, such as the A2K Movement. However, by following statements that begin to recur, discursive tracing identifies emergent discourses and ideologies in political and social situations that are often overlooked (*Ibid.*, 127). These emergent discourses can then be deconstructed and analyzed in relation to the double movement and informational capitalism. In particular, the deconstruction performed in this chapter combines aspects from CLS and cultural studies traditions. The CLS tradition of deconstruction (cf. Peller, 1985; Gordon, 1984; 1987; Kennedy, 1991, 1978; Kelman, 1987) seeks to go beyond accepted norms and practices of legal theory or to be actively “penetrating the surface ... to discover the unexpressed assumptions” (Tushnet, 1984a: 627) contained in legal thought and practice. In a late 1980s article on the subject, Jack M. Balkin, of the Yale Information Society Project, describes how deconstruction works to invert hierarchies and liberate the text from the author (Balkin, 1987). Deconstruction is an analytical tool to uncover what is privileged and what is excluded in legal thought (*Ibid.*, 786). Legal topics such as “rights” narratives are prime sources for discourse and

deconstruction, as their social construction and contingency are obscured by normative claims to universalism (Tushnet, 1984b).

Similarly, cultural studies deconstruction is self-reflexive and is used to address “the problems and paradoxes” in complicated political relationships (Hall, 2006). In particular, Derridian inspired deconstruction helps identify insoluble paradoxes of authority within systems and institutions (Derrida, 1996). Polanyian double movements reflect this insolubility: movements and counter-movements continuously assert competing interests and positions with respect to how political economic transformations should occur. The democratic pluralism shaping dialogical contests within double movements entails that these struggles are never wholly conclusive. Communications scholars Daniëlle Raeijmaekers and Pieter Maesele describe this as an agonistic situation wherein “democratic politics cannot, nor could it ever, produce the kind of coherent and unified society that is reconcilable with liberal and deliberative ontology” (Raeijmaekers and Maesele, 2015: 1046). Cultural studies uses of deconstruction enable dialogical agonism to be considered through dialectical and non-dialectical terms. As Hall argues, through deconstruction, cultural studies approaches identify conventional and non-conventional concepts of dialectics: the conventional one proposes that synthesis, conciliation, reconciliation, and totalization can occur as well as a non-conventional, “negative, or infinite dialectic that is the movement of synthesizing without synthesis” (Hall, 2006: 43).

The combination of CLS and cultural studies approaches to deconstruction used in this chapter uncovers the assumptions and paradoxes of *creative transformation* and the A2K Movement, while also highlighting the interdependence and indeterminacy of the double movement. The tracing and deconstruction of access to knowledge and A2K Movement

discourse undertaken in the first part of this chapter, uncovers themes and perspectives (Fairclough, 2003: 130-131) used to inform the CDA that follows—which I outline below.

The identification of source materials for the discursive tracing, deconstruction, and analysis in this chapter is based on a “pragmatically-oriented historical interpretation” (Kearins and Hooper, 2002: 739) according to the interdisciplinary theoretical framework of this dissertation. The materials I discuss below have been selected and analyzed “in order to establish what was and is being said and done, by whom to whom, and to what effect” (Dreyfus and Rabinow, 1982: 200). In their genealogical analysis of accounting practices used to govern and legitimize Maori land transfer claims, Kearins and Hooper “asked of the material [at] hand, where are the differentiation, the objectives, the economic disparities, the colonizing of the law and the rationalization?” (Kearins and Hooper, 2002: 752). Similarly, this chapter is based on concerns about how access to knowledge has been theorized as an idea, for what purposes, and under what political economic structures.

The discursive tracing, deconstruction, and analysis of the idea of access to knowledge as well as the A2K Movement are based on detailed searches of scholarly and legal databases for the terms “access to knowledge” and “A2K Movement”. In particular, edited volumes produced by A2K advocates and activists (cf. Montgomery, 1968; Goodlad and Keating, 1990; Krikorian and Kapczynski, 2010; Essalmawi, 2008; 2009; Malcolm, 2010; Noronha and Malcolm, 2010) are relied on for the conceptual framing and mapping they provide as well as for footnotes and online references to other pertinent sources, including websites, online conference programs, and interviews or speeches with A2K actors. This discursive orientation helps identify the assumptions and influences that have served to knit the A2K Movement into a political and social agenda.

Tracing the Emerging Idea of “Access to Knowledge”

The concept of “access to knowledge” has been invoked during debates surrounding IP law since at least the mid-19th Century. In a submission to Britain’s the *Journal of the Society of Arts* entitled “On Patent-Right,” the author, signing as Cosmos, argues:

“If children cannot get *access to knowledge*, they must be slaves, if grown people cannot *develop their natural faculties*, they must be slaves; and if the rules of society be such that capital only is power, and *the means of acquiring capital be excluded from all but the actual possessors*, we at once set up a hereditary caste, and we shut out the hope of progress, and thus destroy our natural energy” (Cosmos, 1853: 272; emphasis added).

In line with liberal and utilitarian beliefs surrounding IP, Cosmos’ concerns regarding the deleterious effects of restricting “access to knowledge” centre on the decreased abilities of individuals to “develop” their abilities in the service of “acquiring capital”. This argument maps onto the efforts to “balance” between the need to ensure diffusion of knowledge/information and the desire to incentivize “innovative” and “productive” activities, which underscored some of the earliest examples of IP law (cf. Tawfik, 2010). As Cosmos argues, “a patent is for an *art*, the artificial application of some natural principle – not for the *science* or knowledge on which the art may be based” (*Ibid.*, 271; emphasis in the original). This foregrounds the dialectic between the application of knowledge/information for particular ends and the ability to benefit from and build upon knowledge-based resources for alternative purposes as a means of attaining social good.

Cosmos’ submission argues in favour of patent law as a necessary “evil” for encouraging the creation of useful technologies and to ensure that individual creators are rewarded for their efforts. However, this argument recognizes the public goals of IP law and expresses concern about the tendency towards capitalist monopolies:

“Competition in the market induced newer improvements in machinery, and each new improvement became a property, in the form of a new patent. Capital accumulated, means of transit improved; but the mass of the working people could only remain workers, having no means of accumulating capital. The tendency of capital to accumulate in large masses constantly became greater, and every day the difficulty of rising in the world increased, and is increasing. With the accumulation of capital profits lessen, and the door is closer and closer barred to enterprise in existing operations. ... With all this there is a tendency in capital to be conservative, to keep out competition” (Cosmos, 1853: 272).

The argument is that the monopolistic tendency of rights holders require balances to IP law, which promote the circulation of knowledge-based resources in ways that do not impair the ability of individuals to contribute to “improvement” that benefits society.

This early example of the use of access to knowledge discourse within debates about IP law is rooted in the liberal legal ideals and utilitarian goals, which critics such as Sunder (2006) problematize.

These liberal and utilitarian arguments about the necessity of access to knowledge for progressing publicly oriented goals appear in later discussions of the role of “knowledge” in society and in relation to religious and educational institutions. For example, the “emancipation of the state from the church” is seen as a result of the breakdown of hierarchies of knowledge located in and controlled by “the priestly caste” (Harris, 1881) and the belief that “similar systems of education and equal access to knowledge bring about a greater mental and social parity between groups” (Thomas, 1904: 611). As Sara Bannerman details, this conception of access to knowledge was a component of the earliest forms of international copyright law (Bannerman, 2016). In particular, during the negotiations that led to the *Berne Convention for the Protection of Literary and Artistic Works*, the delegate from Haiti, Louis-Joseph Janvier, argued in favour of access to knowledge provisions for scientific research as a means of benefiting the global community: “the discoveries and processes of which, as they become daily

more numerous and more ingenious, must be brought to the attention of all peoples of the globe for the greater benefit of each one of them, in as short a time as possible” (cited in Bannerman, 2016: 37). Due in part to Janvier’s arguments, the Berne Convention initially included a positive right for the reproduction of newspaper, periodical, and scientific articles through the public domain unless the author or publisher expressly prohibited such acts (Bannerman, 2016: 38).²⁷ Subsequent arguments in favour of access to knowledge viewed the idea as integral for promoting personal and social purposes within liberal societies (Hobson, 1909) and for promoting democratic dialogue (Studebaker, 1935a: 69) to the extent that it was described as a “fundamental right” (Studebaker, 1935b: 78). The perspective of access to knowledge as a “fundamental right” draws upon liberal notions about freedom of expression (Mill, 1859) and is linked to the belief that educators must foster and improve such access to safeguard democracy and serve the public good (Studebaker, 1935b: 78). This concept of access to knowledge as an integral part of education and as a fundamental element of liberal democratic societies becomes a recurring theme throughout the 20th Century (cf. Oppenheimer, 1954).

The Foundations of Access to Knowledge, a symposium issue of the *Frontiers of Librarianship* published in the late 1960s (Montgomery, 1968) ties various themes together and set the stage for the invocation of “access to knowledge” as a core element of individual and social “progress” in educational settings. The meeting itself brought together an interdisciplinary group of “scientists, social scientists, humanists, information scientists, and system theorists” to explore the “structure and transmission of knowledge ... and [how] to facilitate access to that knowledge” (Bergen, 1966: 711). In these documents, formal and informal access to and

²⁷ Elsewhere Bannerman (2016: 128-164) traces how this early “right” to access to knowledge was subsequently challenged and weakened within the international copyright system, which would later become the basis of the copyright-related aspects of the TRIPS Agreement and WIPO treaties.

exchange of knowledge is presented as a fundamental aspect of the advancement of scientific and technical knowledge (cf., Menzel, 1968; Garvey and Griffith, 1968). Information technologies were regarded as components for facilitating the construction and diffusion of “information systems” through which access to knowledge is facilitated (Borko, 1968). Cybernetics and librarianship scholarship become linked with the goal of facilitating access to knowledge and the advancement of “human thought” and social progress (Deutsch, 1968). These theories link ideas of technologically facilitated advancement to the progress and accumulation of “knowledge”. Then, as now (cf. UNESCO, 2005; Mansell and When, 1998), improved access to knowledge through ICTs is regarded as a means of advancing society.

During the 1970s and 1980s, the idea of access to knowledge for public purposes re-emerged and was foregrounded as an essential element of human education and capability formation within pedagogical debates about unequal educational opportunities for students in the US (Kamens, 2009). In these debates, access to knowledge was framed as a basic right for generating equitable educational opportunities for students in order to improve their capacities to better their own political economic situations (Prawat, 1989; Darling-Hammond, 1994). The quality and equality of educational experience was deemed to depend on “equal access to knowledge” (Murphy and Hallinger, 1985-1986: 135), which would contribute to improving the prospects and opportunities of students (Goodlad, 1984; Goodlad and Keating, 1990; Murphy, Hallinger and Mesa, 1985; Oakes, 1986). Improving educational experiences through access to knowledge was described as a means of addressing social inequality and social (im)mobility (Pohoski, 1986). Then US President Jimmy Carter adopted this framing, stating, “the instant access to information and the calm and reasoned guidance of a qualified librarian can make the difference between the success or failure even of a life” (Carter, 1980: 25). Later, during their

efforts to operationalize and measure Sen's capability approach to development, the UNDP (Frediani, 2010) adopted access to knowledge as one of the elements necessary for improving quality of life, including the concept in its annual Human Development Report (UNDP, 1990; 2007). Amidst changing technological circumstances (Gueriguian, *et al.*, 1978), access to knowledge (and information) and education were presented as offering the potential for individual growth and social progress.

The progressive optimism surrounding the idea of access to knowledge was also viewed with skepticism based on concerns that restrictive access to knowledge policies and structures would curtail "progress" and entrench forms of inequality. For example, during the early 1990s there were worries that dominant corporations and industries might "influence the flows of knowledge about technology so as to limit their rivals' innovation" (Shepherd, 1990: 460). As well, the historical legacy of Jim Crow policies that restricted access to knowledge based on race were seen as being re-inscribed through a "cyber ghetto" where Black Americans were less likely to have access to knowledge and ICTs, which further disadvantaged racially marginalized communities in the US (JBHE, 1998). Divides relating to access to knowledge within developed countries due to corporate practices and between developed and developing countries were identified as areas of concern (Streeten, 1982). Increasing access to knowledge was seen as a means of addressing historic and political economic inequities: "to meet the twin objective of growth with equity, knowledge cannot be the prerogative of a few; everyone in a society must have access to knowledge ..." (Mashelkar, 1999: 26). To meet these "twin objectives," issues surrounding IP law were raised and debated: in an article in *India International Centre Quarterly* the Director General of India's Council of Scientific & Industrial Research, R.A. Mashelkar,

argued for the need to “mobilize public opinion and influence government decisions and policies on diverse IP issues” (*Ibid.*, 37).

Mashelkar’s comments are in line with a mid-1990s train of thought regarding the TRIPS Agreement and the impacts of IP on facilitating or restricting access to knowledge. Regarding the TRIPS Agreement, Mashelkar argued that “when we come up for reviewing TRIPS, we need to push for TRIPS plus, meaning TRIPS plus *equity and ethics*” (*Ibid.*, 39). These debates parallel Cosmos’ concerns from the mid-19th Century, Janvier’s arguments at the Berne Convention negotiations, and later debates regarding the appropriate role and balance of IP law for promoting social benefits and economic growth (Matuck, 1993; Mokyr, 2009), which were rekindled during 1960s debates about inequitable access to knowledge in and between the developed and developing “worlds” (Altbach, 1986). The monopolistic tendency to restrict access to knowledge to gain competitive advantage while also discouraging competition was seen as a detrimental by-product of IP law (Breyer, 1970; Strong, 1981; Leavens, 1981). During this time period, such concerns were raised in areas such as librarianship (Ginsburg, 1993), farmer’s rights and biodiversity (Shiva, 1993b), indigenous knowledge and concerns over “biopiracy” (Brush, 1993; Aoki, 1998; Mauro and Hardison, 2000), and with respect to the rise of digitization and ICTs (Lyman, 1996; Phan, 1998; Dowell, 1998; Henderson, 1998; Samuelson, 2000). Preserving and promoting access to knowledge was presented as a means of mitigating the negatives associated with monopolistic IP regimes for governing access to knowledge/information.

The concept of access to knowledge is historically linked with discourse and debates surrounding IP law, education, and publicly oriented goals. Elsewhere, ‘knowledge’, itself, has been identified as a means of controlling populations and inscribing dominant power relations

(Innis, 2007; Foucault, 1972; 1980). Within the discourse of access to knowledge, the concept of free or unhindered access to knowledge is associated with optimistic, liberal, and utilitarian conceptions of modernity and progress. The optimism surrounding the idea of access to knowledge has been associated with technological changes presumed to further increase and democratize the flows of ‘knowledge’. Knowledge-based resources are seen to be valuable; through the codification and dissemination of “knowledge” as “information” via communication technologies, “individuals will have access to the knowledge contained within, and they will then be in a position to overcome the poverty that has dominated their lives” (Burden, 2000: 46). Furthermore, education and the democraticization of access to knowledge are viewed as a means of addressing sociopolitical concerns by offering the potential to play a “dialectical role in social transformation” with respect to overarching neoliberal political economic structurations (Gandin and Apple, 2002: 26). Through improved access to and diffusion of ‘knowledge’, the capabilities of individuals are presumed to improve, offering potentials for personal and social development (Walker, 2003). The linking of “access to knowledge” with “education,” “capabilities,” and overcoming “inequalities” re-appear during deliberations about the WIPO-DA and are present in the A2K Movement itself—albeit in increasingly digital and transnational realms and conceptualizations.

The WIPO Development Agenda and The Idea of an Access to Knowledge (A2K) Movement

Following the establishment of the TRIPS Agreement in the late 1990s, increasing concerns over how IP law worked to limit access to knowledge (Stiglitz, 2007-08; Kapczynski, 2009) and an increasing recognition of the role knowledge/information diffusion plays in human development efforts (cf. World Bank, 1999) helped to bring development concerns within the international

trade-based IP regime.²⁸ Developing countries, including Argentina and Brazil, and like-minded civil society groups (Nguyen, 2005) used the UN-based WIPO to promote the idea of a WIPO-DA, which would foreground issues of development in contrast to the economically-oriented TRIPS-based IP regime (May, 2007a;b; WIPO General Assembly, 2004). This proposal included liberal conceptions regarding access to knowledge and the role of IP, arguing:

“While access to information and knowledge sharing are regarded as essential elements in fostering innovation and creativity in the information economy, adding new layers of intellectual property protection to the digital environment would obstruct the free flow of information and scuttle efforts to set up new arrangements for promoting innovation and creativity, through initiatives such as the ‘Creative Commons’. The ongoing controversy surrounding the use of technological protection measures in the digital environment is also of great concern” (WIPO General Assembly, 2004: 3).

In order to address these concerns, the proposal advocated an international IP regime attentive to the promotion of access to knowledge through a Treaty of Access to Knowledge and Technology (*Ibid.*).

These efforts ignited debates about the appropriate limits and functions of IP law in a heterogeneous global situation where diverse needs co-exist (cf. Finston, *et al.*, 2002). British High Court Judge Hugh Laddie describes this situation in terms reminiscent of Polanyi’s double movement thesis:

²⁸ The TRIPS Agreement does contain cursory acknowledgements of the development impacts and burdens that implementing the Agreement would have on developing and least-developed countries. These include the so-called flexibilities to attend to domestic policy concerns, such as public health, as well as “transitional” periods for implementing the provisions of the Agreement (Part VI). However, TRIPS-plus negotiations and subsequent trade agreements have worked to foreclose these flexibilities (cf. Ruse-Khan, 2011) and the transition periods for least-developed countries have been regularly extended (Syam, 2014) recognizing the difficulty such states have in meeting the obligations of the international trade-based IP regime. The minimal recognition of development issues in the TRIPS Agreement are further denigrated by an “implementation game” within which developing and least-developed countries have:

“struggled to complete extensive reforms of IP laws, administration and enforcement, [and have] faced mounting pressures from developed countries, multinational corporations, and some international organizations to adopt even higher IP standards than TRIPS requires and to abstain from using the flexibilities available in the Agreement.” (Deere, 2008: 1).

“On the one side, the developed world side, there exists a powerful lobby of those who believe that all IPRs [(intellectual property rights)] are good for business, benefit the public at large and act as catalysts for technical progress. They believe and argue that, if IPRs are good, more IPRs must be better. On the other side, the developing world side, there exists a vociferous lobby of those who believe that IPRs are likely to cripple the development of local industry and technology, will harm the local population and benefit none but the developed world” (Ladie, 2002: iii).

The WIPO responded to such critics and sought to address these issues through the adoption of the WIPO-DA. It was argued that WIPO, as a UN agency, must address the economic and social development concerns of countries in the global South (Nguyen, 2005; Gerloff, 2006). The WIPO-DA was seen to offer room for optimism for those committed to broader policy discussions of IP law in all sectors (de Beer and Geist, 2008: 166). However, critics maintained that because the WIPO is structured around norms that give primacy to market-based economic development in fostering social development, there may still be little room for alternative voices and visions (Bannerman, 2009: 32). In such debates, ‘knowledge’ was framed as “a prerequisite to – or, at least, a component of – poverty reduction, population health, food security, universal education and most other human development goals” (de Beer and Bannerman, 2013: 76). Critics of the international trade-based IP regime contended that the access to knowledge idea provides states with opportunities to nuance their relationship with IP to claim entitlements and exercise TRIPS flexibilities to meet basic needs, including food and health, increasing capabilities for education, attaining human rights, cultural heritage protection, and environmental sustainability (Wong, 2011: 3). In response to the international trade-based IP regime, “many diverse counter-hegemonic movements [...] emerged with a common concern. Whether in treaty negotiations or in the streets, they believe in the fundamental justice of global access to knowledge and learning” (Tawfik, 2013: 314).

The A2K Movement arose as an overarching counter-movement to the international trade-based IP regime, seeking to resist and reorient the TRIPS-based system and bring greater attention to diverse socioeconomic claims as well as development efforts (Katz, 2010) around the idea of access to knowledge. The A2K Movement adopted “access to knowledge” discourse to serve as an umbrella term encompassing diverse sets of actors and issues, including FLOSS, international development as well as plant genetic diversity, food security, global health, farmers' rights, indigenous rights, cultural heritage, and digital inclusion (Kapczynski, 2008; Mueller, 2010: 89). According to James Love, of the CPTEch Project (now KEI), the A2K Movement seeks to re-orient the international trade-based IP regime according to the development-oriented concerns of the WIPO-DA and by building off of the successes of the Doha Declaration:

“The proponents of the Development Agenda recognize that compensating artists is important. But they also think that other considerations are important as well. Another way of thinking about this is to ask: is there a connection between access to knowledge and access to medicine? And that is, I think, the way CPTEch would put it. Rather than framing the argument as ‘the right to share,’ we should be promoting ‘access to knowledge.’ [...] We are making an effort, along with others, to reframe this issue as access to knowledge. As in access to medicine, access to knowledge does not really mean that nobody gets paid for his or her work. Certainly, with medicine, everybody is completely honest about the fact that the solution has to be consistent with an economic model that supports innovation. [...] They are just pushing to make sure that when we design public policy, we do it in a way that promotes more equitable access to knowledge. We need to make sure that developing countries have access to scientific journals, textbooks, software, data, and distance education tools” (quoted in Ngyuen, 2005; see also, Finston, *et al.*, 2002).

CPTEch and other civil society organizations played a pivotal role in the establishment of the A2K Movement as a counter-movement against the perceived excesses of the international trade-based IP regime (Hogge and Franz, 2011; Bannerman, 2016). As discussed further below, this Movement is heterogeneous and includes a variety of sometimes conflicting perspectives about

how best to advocate for access to knowledge in various international forums (Krikorian, 2010). The general A2K Movement has resisted adopting and promoting coherent and universalized theories or ideologies in order to preserve the diffuse nature of the actors under the umbrella (Shaver, 2011).

The idea of access to knowledge as a necessary component of life under informational capitalism was deployed as a counter-movement to the existing IP regime (Kapczynski, 2008; Noronha and Malcolm, 2010). Scholars, civil society actors, and activists coalesced under the broad framework of an A2K Movement as a way of positing alternatives to the international IP regime (Krikorian and Kapczynski, 2010). For example, James Love described the efforts of the A2K Movement as a “war” against the prevailing IP regime and the enclosure of knowledge (quoted in New, 2006). A2K Movement actors worked to preserve a broad framing to incorporate the needs and concerns of a diverse set of stakeholders based upon local and developmental needs (Shaver, 2008a; Rizk and Shaver, 2010; Subramanian and Shaver, 2011; Armstrong, *et al.*, 2010). The A2K Movement uses the idea of access to knowledge conceptually to assert alternative socioeconomic needs and development perspectives based upon the rights to ‘knowledge’ and the accompanying ability to operate within informational capitalism (Mueller, 2010). Under this counter-movement “umbrella”:

“A2K groups are, for example, developing critiques internal to the economic logic most commonly used to justify IP law, challenging the notion that information is most efficiently produced by individuals seeking to make a profit, and arguing that privatized innovation systems prioritize private over social welfare” (Kapczynski, 2008: 885).

The A2K Movement, then, has “become a master frame linking many formerly disparate elements of communication and information politics, business, policy, and law. [...] based on a reappraisal of the nature of property rights over information and networks”

(Mueller, 2010: 152). The discursive roots of the idea of access to knowledge are adopted by the A2K Movement to create an informational political counter-movement that views access to knowledge as a public good based on the utility “knowledge” has in strengthening human capital under liberal legal frameworks, which regard such access as a right (GES, 2008). Through the A2K Movement, the idea of access to knowledge was framed according to liberal legal ideals and utilitarian conceptions of the role “knowledge” plays in human development.

“A2K” Concepts and Creative Transformation: The Influence of FLOSS and the Californian Ideology

The concepts the A2K Movement is concerned with – utility, human capital, and rights to access – share similarities with those that the history of the general idea of access to knowledge addresses. The A2K Movement works to posit access to knowledge from a utilitarian and pragmatic perspective (Krikorian, 2010) to advance justice claims involving human and economic development via individual participation and liberty through more “balanced” forms of IP law (Balkin, 2006). Legal scholar Jack M. Balkin, of Yale University’s Information Society Project, who presented at the first Access to Knowledge Conference in 2006, describes the goals of the A2K Movement as: “first, promoting economic efficiency and development, and second, widespread distribution of those knowledge and informational goods necessary to human flourishing in our particular historical moment– the global networked information economy” (*Ibid.*). Balkin’s description links the A2K Movement with the broader history of access to knowledge more generally; the A2K Movement, like the concept of access to knowledge itself, seeks to generate and diffuse knowledge-based resources as a means of producing socio-economic progress.

The concepts adopted through the A2K Movement work to advance issues relating to access to knowledge within the context of the emerging so-called “knowledge” or “information” society (cf. Noronha and Malcom, 2010; Essalmawi, 2008: 5-6; Essalmawi, 2009; Stratton, 2009: 21) and the desire to promote “innovation” (Love, 2009). The “information commons” and “networked cooperation” theorized by Benkler, who was another presenter at the first Access to Knowledge Conference in 2006, help inform these perspectives: Benkler states that these two “ideas subvert the traditional left-right divide, form the foundation for some of the most interesting and unusual alliances, and provide the platform on which political and economic interests meet around a common institutional and organizational agenda” (Benkler, 2010: 227). FLOSS and other forms of “open source collaborative models” are two key aspects of the A2K Movement identified by A2K advocates (Latif, 2009: 30- 32; Malcolm, 2010). The promotion of “open” and “accessible” forms of cooperation and production are seen to foster the development of communities committed to these ideals (Voyce, 2011: 418). As Benkler argues (2010: 235), the emergence of the “networked information economy has created the material conditions for the confluence of freedom, justice, and efficacy understood as effective learning and innovation,” which the A2K Movement advocates for and to which it contributes.

However, as law professor Ruth Okediji illuminates, the A2K Movement contains a fundamental paradox with respect to IP law and access to knowledge: the Movement “depends so integrally on the core assumptions that sustain the legitimacy of the international IP system, the most essential of which is that technological innovation is a principal cause of national economic growth” (Okediji, 2008). Deconstructing the concepts adopted by the A2K Movement demonstrates how the focus on utility and the human capital building potentials of access to knowledge cohere with *creative transformation* and (neo)liberal economic assumptions about

individual rights to participate in informational capitalist activities. The A2K Movement, therefore, internalizes circular reasoning about the value of knowledge/information, which reify technologically determinist assumptions that collaborative or networked technological infrastructures will necessarily propagate more “open” and “accessible” forms of knowledge/information production and diffusion.

In her introductory chapter to the edited volume *Access to Knowledge in the Age of Intellectual Property* (Krikorian and Kapczynski, 2010), legal scholar Amy Kapczynski (2010: 24) questions the utility of an informational and technologically dependent knowledge/information “commons.” Kapczynski points out how the global dimensions of the A2K Movement and its counter-movement opposition to the prevailing international trade-based IP regime are “domesticated” through the invocation of Western, liberal assumptions of an accessible commons (*Ibid.*). The self-reflexivity in this secondary source written by an A2K Movement academic is a feature of the discursive formation of the A2K Movement and its underlying concepts. The “umbrella” raised by the A2K Movement to protect against the further deepening of the international trade-based IP regime is shared by pluralistic and global stakeholders who use this protected space to advance diverse claims. The discourse employed by the A2K Movement seeks to encompass such claims while providing opportunities for disagreement and dialogue.

Scholars more removed from the A2K Movement, such as Bowery and Anderson (2009), similarly disrupt the narrative of an accessible information commons by highlighting how universalized ideals about “information sharing” can work to dispossess culturally valuable and governed forms of knowledge/information from local communities whose histories and knowledge management regimes are not based on Western and individuated ideals. Kapczynski

as well as Bowery and Anderson identify underlying tensions within the conceptual apparatus used by the A2K Movement, while also being supportive of its general political aims. Sociologist Gaëlle Krikorian (2010: 71) notes that the heterogeneity of the A2K Movement and its openness to differing points of views allows A2K actors to disagree “without sacrificing the capacity to function as a common entity advancing a common cause.” The A2K Movement is, therefore, a counter-movement to the TRIPS-based IP regime and the TRIPS-plus trajectory of IP negotiations, which seeks to account for theoretical and practical diversity amongst different groups, people, and communities while advancing common interests against overly restrictive forms of IP law and knowledge management.

The A2K Movement is self-reflexive and careful not to reify nor universalize ideals irrespective of local conditions and situations. However, the legal and political concepts the A2K Movement foregrounds operate within and across the Creative Transformation of informational capitalism itself. Kapczynski (2010: 18) notes that the A2K Movement is concerned with “concepts such as the ‘public domain’ and the ‘commons’ and ideals such as ‘sharing,’ ‘openness,’ and ‘access’ . Below, I present an analysis of a CDA of the A2K Movement demonstrating linkages between A2K concepts and ideals and those privileged under informational capitalist practices. For now, it is necessary to link the conceptual framework of the A2K Movement with the ideals constituting the Californian ideology and *creative transformation*: (neo)liberalism, libertarianism, and technological determinism (Barbrook and Cameron, 1996).

As information scholar Milton Mueller (2010: 268) points out, the ideological impulse behind the A2K Movement is a “liberal critique of the excesses of intellectual property in the digital age” (Ibid., 268). At times, this critique casts proprietary and non-proprietary

relationships in binary terms (cf., Benkler, 2010) and overlooks the existence of dialectics and differing political economic structurations, which may necessitate locally specific alternative arrangements with respect to knowledge/information generation and diffusion. The A2K Movement purports to resist the totalizing effects of neoliberalism (Kapczynski, 2010; Krikorian, 2010) to accommodate different social, economic, cultural, and political needs; however, the Movement also reinterprets neoliberal assumptions about entrepreneurship and innovation or progress, as groups have seemingly adopted many key frames regarding “innovation” as a means for promoting technological access for socioeconomic growth, human development, and “progress” (cf. Love, 2009). Furthermore, these ideas are associated with libertarian ideals about individual freedoms from governmental or state-sponsored encumbrances. Much like within the Californian ideology, there is an effort to link liberal and libertarian ideals (Benkler, 2010; Boyle, 2003: 46; 2007). Mueller (2010) argues that the A2K Movement is conflicted by two different ideological frames: one based in the idea that digital technologies and access to information can alleviate poverty and another that purports to reorient proprietary regimes for communal purposes. As discussed earlier, under informational capitalism, communicative and cultural acts are playing an increasingly important role in domestic and international law and policy debates as well as the creation of informational capitalist business practices. The Creative Transformation serves to conceal such differences in order to remove restrictions from increased access to knowledge/information for informational capitalist purposes.

However, the dominant strands of justification for the A2K Movement rely upon theories conceived during the emergence of digital technologies and extol their much-celebrated (potential) ability to disrupt existing modes of practice and socioeconomic arrangements. In particular, the discourse of the A2K Movement has its roots in the open source FLOSS

campaigns, particularly Benkler's scholarship, and is similar to ICT4D theory in that it appears to adopt a technologically determinist position: unfettered access to knowledge, often through digital means, is pursued as an end in itself irrespective of local needs and realities (Nederveen Pieterse, 2005). This digital centrism develops from FLOSS actors and the persistence of the Californian ideology that attempts to resist the subjugation of digital technologies and software by IP regimes that privilege commodified resources owned and controlled by corporate actors. As I show below, A2K Movement discourse adopts the FLOSS position that digital technologies and the software systems that operate them are essentially communicative and cultural acts that need to be allowed to circulate within a global knowledge commons for continued improvements and innovations to occur (Benkler, 2006a; Lee, 2010).

For example, the "information commons" metaphor of the A2K Movement distinguishes between resources held and controlled through proprietary legal regimes and a non-proprietary space where resources can be drawn upon unencumbered by IP law (Boyle, 2008, 1997-98; Lessig, 2001; Atteberry, 2010). By combining the potentials of digital technologies to foster a global knowledge commons, the A2K Movement seeks to offer "both a new conception of freedom in the networked environment and a pragmatic appreciation of the capabilities of peer production" (Mueller, 2010: 266). Yet, Bowery and Anderson demonstrate how A2K Movement actors as well as debates over the balancing of access and control must attend to how marginalized and colonized peoples and cultures "can participate as people of the 21st century, rather than as representatives of dead artefacts" (Bowery and Anderson, 2009: 500). Alternative access and control arrangements imagined and proposed by Indigenous and marginalized groups are instructive for creating relationships that do not entrench significant and detrimental forms of historic exclusion (*Ibid.*, 480) and how the introduction of Western conceptions of "ownership"

and authority may disrupt local practice and detract from the politics of the A2K Movement (Forsyth and Farran, 2015: 18). The A2K Movement's "heterogeneity" must, therefore, be foregrounded in order to ensure that prevailing forms of marginalization, dispossession, and exclusion are not furthered by claims regarding "informational abundance" (cf. Verzola, 2010), which cohere with the Californian ideology and informational capitalism's ongoing Creative Transformation.

A2K Activism: An Academic-Activist Complex?

The A2K Movement includes conceptual framing as well as a variegated network of activism. As mentioned above, this networked A2K activism is comprised of heterogeneous actors and groups involved in counter-movement activities against the international trade-based IP regime. Actors and organizations involved in the activism of the A2K Movement are located in developed as well as developing countries and coalesce around the concepts comprising the A2K "umbrella". This "global social movement" includes "A2K groups seek[ing] to coalesce through an architectural framework provided by law and to embed their own interests in that law, they are developing a range of proposals to reform IP law and arguments that operate within the discourse that governs contemporary discussions about IP" (Kapczynski, 2008: 804). Therefore, A2K Movement activism exists in dialogical relationship between like-minded activists as well as the overarching international trade-based IP regime they seek to (re)negotiate. From the lens of Polanyi's double movement thesis, A2K activism is an oppositional counter-movement, which seeks to assert social and publicly oriented concerns against the expansion of an economically oriented IP regime.

The debates the A2K Movement is involved in focus on domestic and international law as well as the governance structures developed by international organizations, including the WIPO, the WTO, the UNESCO (Noronha and Malcolm, 2010: 10-15), and other UN agencies such as the UNDP, the United Nations Conference on Trade and Development, and the WHO (Nguyen, 2005). Various civil society groups, including digital rights groups, open source and open content communities, consumer groups, libraries and archives, and academics, and private sector companies and organizations have coalesced and formed strategic allegiances to advance issues based on the discourse of the A2K Movement (Noronha and Malcolm, 2010: 15-22). As well, domestic governments, such as those of Brazil (Shaver, 2008) and India (Subramanian and Shaver, 2011), have been active proponents and allies of the A2K Movement in the face of opposition from the US, its European allies (Noronha and Malcolm, 2010: 22-24), and Japan (Nguyen, 2005).

The diversity of A2K activists results in a dialogic double movement within which various counter-movements simultaneously resist, reinforce, and recast norms and ideals associated with the international IP framework. As Krikorian (2010: 73) argues, “the A2K Movement is not so much based on a claim of ‘unity’ of all people and their struggles, but rather on the effort to convince others that they are affected, should be concerned, and should act accordingly.” The A2K Movement seeks to harness collective awareness of the problems of the existing international trade-based IP regime and encourage its actors to develop “an interest in defining themselves and in being perceived not simply as contradictors or opponents of the [IP] system, but as promoters of a positive and cohesive agenda—something bigger than mere opposition” (*Ibid.*, 72). This positive agenda is based on advancing the idea of access to knowledge as a means of promoting innovation and progress, including four broad categories:

food and health, education and science, culture and media, and communication and infrastructure (Katz, 2010: 278-295). These efforts include “bottom-up private ordering strategies” as well as calls for “top-down legal change” (Kapczynski, 2008: 831). A2K Movement activism, therefore, works to both change local conditions of knowledge-management by offering alternative strategies of private governance, such as the use of CC licenses or open access publishing models, while also being involved in international and domestic legal processes regarding IP and the role of knowledge/information in the informational economy.

Cutting across these themes, activists and academics have engaged with one another to address A2K concerns in two prominent ways: with respect to open access of knowledge/information (Atteberry, 2010) as well as a broader critique of the international trade-based IP regime as an economically oriented movement advancing new forms of informational colonialism and accumulation by dispossession (Aoki, 1998). For example, “the Yale Law School Information Society Project A2K conferences, starting in 2006, have played a valuable role in strengthening the links between the A2K movement and academia” (Latif, 2010: 120).²⁹ The A2K Movement has been informed by an activist-academic complex, through which the diverse goals and concepts of the movements are themselves (re)negotiated and deployed in various ways.

The activities of librarians and the open access movement, including the 2003 Berlin Declaration on Open Access to Knowledge and Information in the Sciences and Humanities, have helped to advance the cause of access to knowledge in educational and scientific settings.

²⁹ The Information Society Project at Yale Law School, directed by Jack M. Balkin (who founded the centre in 1997) and Valerie Belair-Gagnon (since 2014), has been a leading supporter of the A2K Movement and has hosted four A2K conferences in 2006, 2007, 2008, and 2010. For more information, see: <http://isp.yale.edu/search/node/Access%20to%20Knowledge%20Conference>.

The goal of the Berlin Declaration is analogous with the idea of access to knowledge as well as A2K Movement activists' desire to leverage new technologies to promote better and more just outcomes:

“Our mission of disseminating knowledge is only half complete if the information is not made widely and readily available to society. New possibilities of knowledge dissemination not only through the classical form but also and increasingly through the open access paradigm via the Internet have to be supported. We define open access as a comprehensive source of human knowledge and cultural heritage that has been approved by the scientific community” (Berlin Declaration, 2003).

The Berlin Declaration seeks to address concerns raised by practitioners in the library and archive communities over issues including restrictive user rights and prohibitively expensive licensing regimes (Hoon, 2003). The Berlin Declaration follows two other open access statements of principle – the Budapest Open Access Initiative and the Bethesda Statement on Open Access Publishing – and it was at an April 2004 meeting to address to educational and scholarly materials “where the decision was first made to use the term ‘A2K’ as the ‘brand name’ for a movement that included not only the learning-tools issues, but also the broader issues of access to knowledge, including access to medical and other inventions” (Ress, 2010: 480).³⁰ Via scholarly and educational initiatives to promote open access publishing, A2K’s

³⁰ As recounted by Manon A. Ress (2010, 493fn11), the Founding Editor of KEI’s open access, peer reviewed journal *Knowledge Ecology Studies*, this meeting was attended by a:

“varied set of actors [including] consumer/public interest representatives such as Rhoda Karpatkin (Consumers Union), Benedicte Federspiel (the Danish Consumer Council), Anna Fielder (Consumers International), James Love (CPTech), and Collette Caine (Consumer Institute South Africa); academics such as Jean-Claude Guédon (Université de Montréal), Peter Jaszi (Washington College of Law, American University), Raquel Xalabarder (the Open University of Catalonia, Barcelona), and Alan Story (Kent Law School); libraries’ representatives Prue Adler (the Association of Research Libraries) and Bob Oakley (the American Association of Law Libraries); government representatives Luis Villaroel Villalon (Chile) and Ahmed Abdel Latif (Egypt); and foundation representatives Vera Franz (the Open Society Institute) and Becky Lentz (the Ford Foundation).”

academic-activist complex helped to catalyze the nascent movement and set the stage for subsequent A2K Movement activities.

As a broader counter-movement against the international legal regime for IP in an informational economy, A2K activism is implicated within and set apart against *creative transformation*. Alternative opportunities offered by FLOSS-based production techniques remain embedded within the reductionist lens of the Californian ideology. Yet, academics and activists coalesced around the idea of the transformative potential of access to knowledge as a means of resisting and reshaping the international trade-based IP regime. More recently, the scope of thought behind the A2K Movement has broadened and is beginning to question the liberal legal assumptions from human rights and development oriented perspectives (Shaver, 2011). As well the A2K Movement has been adopted as an alternative paradigm for researching and criticizing the international trade-based IP regime (de Beer and Bannerman, 2013), leading to new research and activist projects focused on reimagining IP law for development related purposes, such as the openAIR project in Africa (de Beer, *et al.*, 2014; Turcotte, 2016a). The academic-activist complex of the A2K Movement contributed to the creation of a Draft Treaty on Access to Knowledge (A2K Treaty, 2005), discussed below, for proposed consideration at the WIPO and was presented as a means of addressing the inherent inequities associated with IP-based and informational capitalist universalism; the Draft Treaty illustrates the key areas of concern for A2K activists, which have continued to be expressed in a variety of forums and contexts.

The A2K Movement and Informational Politics: The A2K Movement in Relation to Creative Transformation

The purportedly non-ideological positioning of the A2K Movement is reflective of pragmatic and utilitarian perspectives of the role and need for access to knowledge under informational

capitalism. As a counter-movement against the prevailing trends of *creative transformation*, the concepts behind the A2K Movement's worldview must be considered in relation to existing and alternative ways of organizing informational capitalism. Deconstructing the discourse surrounding concepts of sharing, openness, and access helps to demonstrate similarities and discontinuities with *creative transformation* as well as alternative capitalist and development possibilities.

The liberal legal roots of the A2K Movement combine with the technologically utopian aspects of *creative transformation* to perpetuate political economic structurations that concentrate control in those that provide access to the technologies used to transmit knowledge/information. However, this (neo)liberal ideological orientation is simultaneously undermined by a discourse premised on the transformative potential of co-operation based sharing, openness, and access to knowledge/information. Yet, the A2K Movement demonstrates latent human rights and development orientations, focusing on alleviating social and economic injustice by using access to knowledge as a means of providing new capabilities for human development (cf. GES, 2008). Too often, though, these resistant tendencies fall into the (neo)liberal framework of individualized rights and do not pay attention to collective and communally oriented rights nor development concerns surrounding communication and cultural activity. The pragmatism and utilitarianism of the A2K Movement reifies sharing, openness, and access as fundamental and universal concepts to be encouraged to promote economic growth and human development. The pragmatic utilitarianism of the A2K Movement rests on a belief that digital and networked technologies offer revolutionary potentials to disrupt existing regimes of knowledge management and attendant political economic power. However, "values are intimately involved in the everyday choices we make using technology" (Nardi and O'Day,

1999: 60). What and how particular concepts are valued changes; it is crucial to understand values as the result of negotiated processes and that neither particular technologies nor the values used to promote or restrict particular uses are neutral (*Ibid.*). In the A2K Movement discourse, sharing, openness, and access are ideas as well as values, which are promoted as means of maximizing beneficial outcomes associated with access to knowledge. However, in an informational capitalist situation where the economic system itself is based on access (Rifkin, 2000: 167), these values can be appropriated to advance the properitization of knowledge/information and the Creative Transformation the A2K Movement seeks to resist.

Sharing, openness, and access are recurring ideals throughout A2K discourse. Kapczynski (2010) provides a conceptual framing of how these ideals are used, stating “these concepts are sometimes self-consciously cultivated by activists and at other times can more accurately be said to be immanent in their claims” (2010: 18). These concepts are often taken-for-granted assumptions and are combined with an overarching belief that they are universally beneficial. Sharing and openness are portrayed as constitutive elements of freedom, whereas access is more readily associated with claims for distributive justice (*Ibid.*, 37). The three ideals are presented as operating in opposition to the exclusionary logic of the dominant IP regime and are fundamental to the theoretical framework and discourse of the A2K Movement. In various ways, sharing, openness, and access are imminent in the A2K Movement’s concern over the strength of the public domain and viability of the information commons. It is through interplay between the three concepts that subsequent creativity, innovation, and progress can be cultivated and realized. For example, FLOSS activities are said to demonstrate the inadequacy of proprietary IP regimes, which are said to incentivize creative endeavours and the generation and application of knowledge/information (Benkler, 2002: 371-372). Non-economic motivations as

well as the goodwill and satisfaction derived from sharing and openness offer different incentives to knowledge/information creation and exchange. It is through access to the shared and open knowledge/information of others that individuals and communities are able to attain satisfaction. For the A2K Movement, “the domain of access to knowledge is thus pictured as a domain of unbounded, unboundable exchange” (Kapczynski, 2010: 36). A2K Movement discourse recognizes the untenable nature of such “unboundedness,” and the importance of the GNU General Public License, which is said to mandate sharing over exclusivity (*Ibid.*, 33) by restricting certain commercial uses of shared open source software code; such restrictions are deemed an acceptable limit to openness in the name of freedom.

However, in the context of the Creative Transformation and informational capitalism, sharing, openness, and access work at the service of political economic structurations that concentrate wealth and limit freedoms under the control of informational capitalists. As discussed in Chapter Two, knowledge-based resources are dispossessed from the information commons using exclusionary knowledge/information management techniques in order to drive capital accumulation of corporate and private actors in the informational economy. The freedoms advocated for by the A2K Movement’s conceptualization of sharing and openness are, therefore, freedoms to produce and use knowledge/information while remaining subservient to informational capitalists. For example, informational capitalist firms such as Google, which is said to be a “friend” of the A2K Movement (Noronha and Malcolm, 2010: 22), base their business models on the free exchange of knowledge/information online in order to generate and capture proprietary forms of knowledge/information that can then be leveraged by the company as assets or commodities. These types of informational capitalist firms leverage the accessibility of knowledge/information generated elsewhere as a means of extracting rents and value from

shared, open, and accessible resources. On the other hand, companies in sectors where knowledge/information is produced for sale as a commodity – such as the pharmaceutical and entertainment sectors – employ the IP law and knowledge management regimes that the A2K Movement finds overly exclusionary and problematic. The life-saving and social natures of pharmaceuticals as commodities are more readily identifiable as forms of knowledge/information that serve the public good. Yet, the inequitable political economic concentration associated with the informational activities of A2K “friends” like Google also has far reaching and deleterious consequences. Structural and spatial concentration of political economic power is also a public concern in terms of broader public policy objectives. Sharing, openness, and access need to be valued for the ends they help engender and not as ends themselves.

‘Deconstruction’ and the Role of Critical Discourse Analysis

In the section above, the discourse, concepts, ideals, and arguments of the A2K Movement were deconstructed using CLS and cultural studies approaches. Below, a representative sample of A2K Movement texts is analyzed through CDA. Deconstruction and CDA are similar to the critical tradition of scholars such as Michel Foucault and seek to uncover hidden biases, assumptions, and relations of power. In particular, CDA has been heavily influenced by Foucauldian scholarship and “the insight that societal institutions are themselves constructed and maintained through discourse” (Herring, 2001: 624; on CLS, see Coombe, 1989). CDA is seen as an extension of Foucauldian notions of the interplay between discourse, society, and power and as an attempt “to work out theoretical and methodological first principles” (Diaz-Bone, *et al.*, 2008: 22). This chapter adopts deconstruction and CDA methods to critically examine how the concepts, ideals, and arguments employed by the A2K Movement work within a Polanyian

double movement conception of dialectic interplay and (re)negotiation of political economic structurations and socio-cultural concerns.

CDA shares a concern with deconstruction in that the former, like the latter, is concerned with the discursive “concealment of social power relations, for instance, by playing down, leaving implicit or understating responsible agency of powerful social actors” (van Dijk, T., 1993: 250) CDA is used to trace the use of concepts (the public domain and informational commons), ideals (sharing, openness, and access), and arguments (regarding innovation and progress as well as human development and human rights) in the academic-activist literature of the A2K Movement. The body of literature I discussed above deconstructed scholarly volumes on the emergence of the A2K Movement and its key frameworks (Krikorian and Kapczynski, 2010), state-specific case studies on the activities of A2K actors and the accessibility of knowledge in developing countries (Armstrong, *et al.*, 2010; Rizk and Shaver, 2010; Shaver, 2008; Subramanian and Shaver, 2011), and CSO guidebooks and toolkits that link A2K theorizations to practice (Essalmawi, 2008; 2009; Malcolm, 2010; Noronha and Malcolm, 2010). The CDA below takes into account Teun van Dijk’s (van Dijk, T., 1993: 252; see also, 2011, 2008) assertion that CDA is primarily concerned with “the discourse dimensions of power abuse and the injustice and inequality that result from it” and is “motivated by pressing social issues, which it hopes to better understand through discourse analysis”. As well, Norman Fairclough, *et al.*, (2004: 4), maintain that CDA “focuses on how discourse figures within the strategies pursued by groups of social agents to change societies in particular directions”. CDA is, therefore, a helpful method for analyzing the discursive construction of the A2K Movement, which seeks to advance policies designed to address inequitable power relationships relating to the access to and control of knowledge-based resources.

A core component of CDA is critical reflection of the analysis (Fairclough, 2001) as well as the analyst (van Dijk, T., 2001). Hidden and unidentified assumptions on the behalf of the analyst will colour the CDA being undertaken. With this in mind, it is necessary to reflect on the hypotheses that I began with while starting and performing this CDA of the A2K Movement. My assumption and concern was that A2K activism may contain and reinterpret liberal and technologically determinist assumptions and biases and cohere with the problematic elements of the Californian ideology. As I will describe in detail below, the discourse of A2K is more nuanced: while at times such biases are apparent, they are often and continually countered by alternative perspectives from activists who are dealing with the same subject(s). A2K discourse is complex and multifaceted, reflecting the heterogeneity of the Movement itself. However, and in line with deconstruction's concerns regarding hierarchies, the discourse of the A2K Movement primarily emanates from developed locales outward, while being influenced by the perspectives of developing state or historically marginalized peoples. This hierarchy, especially with respect to A2K Movement scholarship where scholars and funding agencies from developed countries have been central for editing and producing texts, must be acknowledged for its impact on the generation and diffusion of knowledge/information relating to the A2K Movement itself.

Such a hierarchy is important from the CDA perspective and critiques of how discursive production influences “socially shared knowledge, attitudes and ideologies, namely through their role in the manufacture of concrete models” (van Dijk, T., 1993: 258-259). Social interaction and social structure (van Dijk, T., 2001: 353) are important aspects of discourse construction within and in opposition to external and dominant discourse structures. The discursive construction of the A2K Movement, which began at US law schools including Yale, has shifted in recent years as activists and organizations in the developing world play larger roles. This is

not to say that the A2K Movement has historically marginalized voices from the developing world (cf. Latif, 2010). The A2K Movement has evolved to further reflect and incorporate the concerns of developing country representatives and their issues. The changes in the political activities and discursive construction of the A2K Movement are consistent with general accounts of political discourse identified by Fairclough (2013: 194), where critical deliberations and practical argumentation result in the evaluation of the positions advocated with respect to the outcomes they are likely to engender. Member groups as well as contexts and social structure play a role in how discourses are shaped and defined (van Dijk, 2001: 354). The shifting hierarchies of discourse generation and diffusion of the A2K Movement literature must then be closely examined with respect to how or if the discourse surrounding A2K ideals, concepts, and arguments are presented.

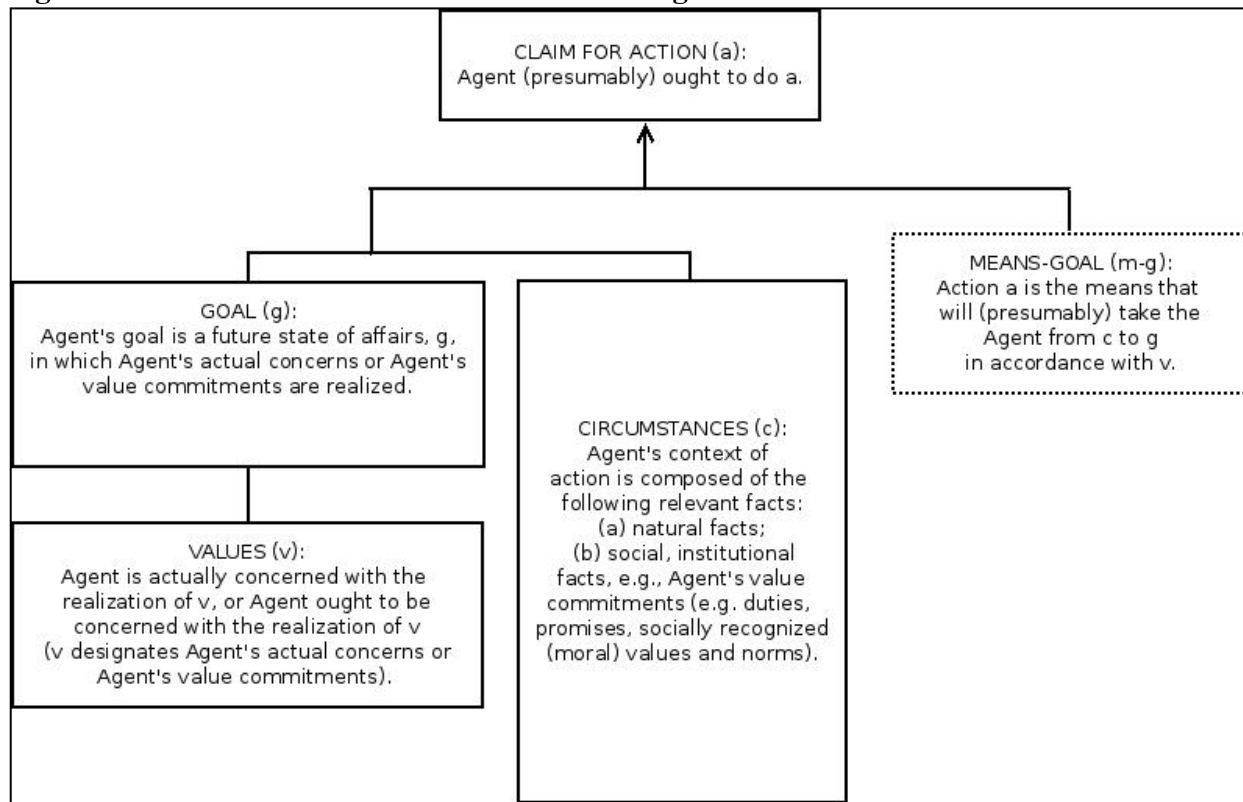
In the sections below, I use a CDA approach to political discourse developed by Fairclough and Fairclough (2012). In contrast to other approaches to political discourse analysis (Chilton, 2004; 2010; Wodak, 2009a;b), Fairclough and Fairclough foreground the fundamentally argumentative and deliberative nature of political discourse (Fairclough and Fairclough, 2012: 20-21). As a counter-movement against the existing international trade-based IP regime, the discourse of the A2K Movement not only seeks to problematize existing normative frameworks regarding the propertization of knowledge/information, but also seeks to advance the concept of access to knowledge as an alternative to proprietary and corporatized control of knowledge-based resources. For this reason, the texts below are critically analyzed with respect to the themes and perspectives (Fairclough, 2003: 92) identified during the discursive tracing above. In particular, how these documents represent the themes of “utility,” “human capital,” and “rights” are analyzed with respect to the conflicting double movement

perspectives surrounding access to knowledge diffused via *creative transformation* and resisted by the A2K Movement.

Elsewhere, Norman Fairclough argues how ideologies and discourses serve as representations of themes and perspectives (Fairclough, 2003: 10-15; 92) and how such representations of “knowledge” contribute to “control over things” (*Ibid.*, 22). The sections below use the CDA approach to the political discourse of the A2K Movement and focus on how utility, human capital, and rights are used as representations of the world with respect to how knowledge/information is implicated within the movement towards Creative Transformation as well as a strategy to frame, and subsequently resist, proprietary forms of control over knowledge-based resources. Fairclough and Fairclough argue, “representations [...] provide *premises in arguments for action*, and [...] representation issues can therefore be integrated within an account of action” (Fairclough and Fairclough, 2012: 21; emphasis in original). Figure 1 (below) describes the composition of political discourse as an argumentative process of discourse construction used to advance an agenda through political deliberation, including the circumstances (c), values (v), goal (g), means-goal (m-g), and claim for action represented through discursive representation of the advocate. These elements combine to create a position that can subsequently be criticized through counter-argumentation (*Ibid.*, 50). This chapter excludes such a counter-argument from consideration in order to analyze the discourse of the A2K Movement as a counter-movement argument against the international trade-based IP regime and in favour of knowledge management regimes based on a presumption of access.

In particular, I analyze the discursive representations of the A2K Movement by examining the ideological representations used to frame access to knowledge in two speeches made at the inaugural A2K Conference at Yale University in 2006 (Balkin, 2006;

Figure 1: Structure of Political Discourse and Argumentation



(Recreated from: Fairclough and Fairclough, 2012: 48)

Benkler, 2006b) as well as in the introduction to the *Access to Knowledge Toolkit I* written by the IP Officer of Bibliotheca Alexandria (Essalmawi, 2009). This CDA does not focus on the linguistic aspects of political discourse (Chilton, 2004; 2010; Wodak, 2009a;b); the political discourse analysis method developed by Fairclough and Fairclough (2012) examines how deliberative and argumentative claims function as ideological representations of alternative possibilities or “imaginaries” for political economic and socio-cultural change (Jessop, 2004). This discursive framing illustrates the circumstances (c), values (v), goal (g), means-goal (m-g), and claim for action represented by the A2K Movement in relation to *creative transformation* and the international trade-based IP regime (Figure 2, below). These texts are also analyzed in

relation to the discursive tracing and deconstruction I have presented above as well as in relation to other examples of A2K academic-activist writings. Following this, I conduct CDAs of two A2K-related treaties: the *Draft Treaty on Access to Knowledge* (A2K Treaty, 2005) and the *Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled* (Marrakesh Treaty, 2013). These texts put the discourse of the A2K Movement into action and are said to represent alternative approaches to the management of knowledge-based resources in the international legal system (Bannerman, 2016: 28). Through this CDA approach, I demonstrate the double movement characteristics of the A2K Movement as a counter-movement against Creative Transformation, which simultaneously appropriates and reinforces aspects of *creative transformation*.

A Critical Discourse Analysis of A2K Academic-Activist Writings

The deconstruction of the liberal legal ideals behind the A2K Movement presented above helps foreground the representations and aims of the Movement as they relate to alternative conceptions of knowledge-resource management in an informational or knowledge-based economy. The A2K Movement is fundamentally concerned with issues of “knowledge” circulation and invokes the concepts of the public domain and informational commons as central components of “accessibility”. This section analyzes how “knowledge” and “information” are constructed as essential resources to be made accessible through mechanisms such as the “public domain” and an “informational commons”.

This dissertation argues that knowledge and information are better referred to in terms of a knowledge/information dialectic. This dialectic emphasizes the mutually constitutive and dependent relationship that “knowledge” and “information” share. Secondary literature written

by academics associated with the A2K Movement recognizes a tension between knowledge and information. Kapczynski (2010: 45) states “knowledge is a capacity that is central to empowerment—one that relies upon, but is not reducible to information.” Benkler (2006: 313) defines knowledge as:

“the set of cultural practices and capacities necessary for processing the information into either new statements into the information exchange, or more important in our context, for practical use of the information in appropriate ways to produce more desirable actions or outcomes from action,”

and information as “raw data, scientific reports of the output of scientific discovery, news, and factual reports.” From Benkler’s definition, Kapczynski suggests (2010: 45) that “information is objective and external, while knowledge is the capacity to use information to create new information or to use information to generate technical effects in the world (knowledge as ‘know-how’).” However, while recognizing the separate and related aspects of knowledge/information, the theorizations following from Benkler’s definitions do not adequately address the dialectic nature of knowledge/information.

In his address at the inaugural Yale Information Society Project’s (Yale ISP) A2K Conference in 2006, legal scholar and founding director of the Yale ISP Jack Balkin borrows from Benkler’s work and defines knowledge in four ways:

- “1. Human knowledge— education, know-how, and the creation of human capital through learning new skills.
2. Information— like news, medical information, data, and weather reports.
3. Knowledge-embedded goods (KEG's) — goods where the inputs to production involve significant amounts of scientific and technical knowledge, often but not exclusively protected by intellectual property rights. Some key examples are drugs, electronic hardware, and computer software, but in contemporary economic life, information and intellectual property provide an increasingly important share of almost all valuable goods.
4. Tools for the production of KEG's— examples include scientific and research tools, materials and compounds for experimentation, computer programs and computer hardware.” (Balkin, 2006: n.p.).

Balkin's definition, which he describes as Benkler's "typology," distinguishes between "knowledge" and "information" in the first and second definitions; the third and fourth definitions move towards a recognition of the knowledge/information dialectic but do so in utilitarian ways.

As Balkin, states later: "The goal of access to knowledge is to improve access to all four of these components of the knowledge economy: 1. Access to human knowledge; 2. Access to information; 3. Access to KEG's; 4. Access to tools for producing KEG's" (Balkin, 2006). Here the goal (g) of the A2K Movement is clear: "access to knowledge" is to be improved within the context of the "knowledge economy." This goal is derived from particular values (v), which Balkin describes as a "question of distributional justice, both within a society, say rich and poor, men and women, and across different societies, say countries in the North and the South" (Balkin 2006). Balkin's concerns over distributive justice help frame the work of the A2K Movement as a response to perceived inequities over access to knowledge in the world economy and the concentration of knowledge-based resources and attendant wealth. These values also might be said to assume a "human rights" perspective; however, in Balkin's argument these rights are approached from top-down processes of government provision (Balkin, 2006), not from a perspective where these rights are inherent in human social life and must be protected or are best realized from bottom up empowerments. Presumably, these will be enabled by access to "knowledge" alone. The circumstances (c) Balkin describes relate to social and institutional conditions that privatize "knowledge" and make access more difficult or expensive. In response, and in line with the values (v) expressed in the text, Balkin argues:

"Access to knowledge means that the right policies for information and knowledge production can increase both the total production of information and knowledge goods, and can distribute them in a more equitable fashion. The goal is first, promoting economic efficiency and development, and second, widespread

distribution of those knowledge and informational goods necessary to human flourishing in our particular historical moment— the global networked information economy” (Balkin, 2006: n.p.).

In this passage, the goal (g) of the A2K Movement is clearly represented as being primarily concerned with the promotion of “economic efficiency and development” as well as a secondary concern with “human flourishing” within the context of informational capitalist political economies. The latter concern moves closer to a capability approach to development through access to knowledge wherein “everyone [is given] the skills to make their own pies³¹ and share them widely with others” (Balkin, 2006: n.p.). The pie metaphor that Balkin employs helps link the Movement with ideas about bounty and abundance. In doing so, Balkin argues the A2K Movement can increase opportunity through creating enabling frameworks for greater access to knowledge.

However, if, as this project argues, “information” is the codification of “knowledge” in transmittable media forms, “knowledge” and “information” cannot be neatly or easily separated and the typology Balkin uses to state goal (g) of the A2K Movement need to be more clearly integrated. Balkin argues:

“we might promote human development through producing lots of information goods for people and distributing them widely. On the other hand, we might promote human development by promoting decentralized access to information tools and by encouraging participation in the production of information goods by large numbers of people.” (Balkin, 2006: n.p.).

“Knowledge” and “information” are presented as being separate elements of conditions for promoting “human development” through the “production of information goods”. However, knowledge/information must remain related and connected so that the capabilities necessary to

³¹ Here Balkin is describing the knowledge-based economy as a “pie,” stating that the A2K Movement is “not simply fighting about how to divide up a pie. Access to knowledge is about making a larger pie and distributing it more fairly” (Balkin, 2006: n.p.).

receive, produce, and apply newly acquired knowledge-based resources are cultivated and can be exercised to codify and transmit informational forms. The discourse of the A2K Movement seeks to make a distinction between the components of knowledge/information and, in turn, privileges the dissemination of information. As Kapczynski (2010: 46-47) notes:

“If the A2K movement is to embrace its initial identification with the concept of access to knowledge, it must recognize that while access to some information is clearly a prerequisite of building knowledge in Benkler’s sense, more ubiquitous access to information is not the same thing as more ubiquitous access to knowledge”.

However, Kapczynski’s early theoretical discussion about conceptualizing “knowledge” and “information” does not appear to be taken up or addressed in other A2K positionings. Instead, the terms “knowledge” and “information” remain linked (cf. Balkin, 2010: xix; Katz, 2011: 272) and characterized according to Benkler’s problematic definitions, which Balkin adopts in his framing of access to knowledge. The endurance of Benkler’s definitions may be partly attributed to his prominence within the A2K Movement as well as in broader CSO and FLOSS communities. Benkler’s optimistic accounts of peer-based production alternatives and the potentials offered by digital and networked technologies are alluring. However, the A2K Movement must clearly account for what counts as “knowledge” as well as *how* such resources are accessible.

Finally, Balkin relates the A2K Movement back to the international trade-based IP regime, establishing the diffusion and deepening of IP law as a circumstance (c) contributing to the goal (g) of the Movement. Balkin argues “the international IP and trade regime has increasingly adopted policies that prevent the efficient and equitable flow of knowledge, information, and knowledge goods” (Balkin, 2006) and states the A2K Movement must address problems with IP law as well as related policies governing

how “knowledge” and “information” are created and circulated. In particular public means-goals (m-g) of the A2K Movement are presented, including protections and provisioning of access to knowledge are presented, which are linked to a “functioning public sphere” (Balkin, 2006) and public institutions.

Here, Benkler’s influence is again apparent with respect to the concepts used to promote accessibility: the public sphere, and an implied public domain, and a proposed informational commons. These two concepts recur throughout the A2K literature and are used to show the dangers of overly restrictive IP and knowledge management regimes. In line with the Geneva Declaration, A2K discourse presents the public domain as “an essential element for the growth of the Information Society” (quoted in Essalmawi, 2009: 17). The public domain model of A2K is rooted in James Boyle’s arguments about the “second enclosure movement” and the move to attach IP rights to previously “public” resources (Boyle, 2003). The public domain is seen as a necessary and important safeguard for protecting against privatized and proprietary overreach while also enabling a place where subsequent creators can draw from to generate new knowledge/information. A2K activists argue that the dominant international trade-based IP regime is detrimental because “by increasing the restrictions and excluding the limitations and exceptions, they are permitting for less and less information to be freely available in the public domain” (Noronha and Malcolm, 2010: 34; see also, Stratton, 2009).

In his speech to the same A2K Conference, Benkler notes that the idea of an “information commons” and a healthy “public sphere” are core components of the idea of access to knowledge represented by the A2K Movement. Benkler helps represent diverse concerns relating to the management of knowledge/information as an “emerging counter-movement of Access to Knowledge” (Benkler, 2006b). The recognition, creation, and advancement of this counter-

movement is the claim for action (a) that the A2K Movement makes: for Benkler, “We have an opportunity to forge a practical, cultural and intellectual coalition at a moment of transformation” (Benkler, 2006b) through which the goal (g) of improving access to knowledge within the knowledge-based economy can be achieved.

Following Balkin, Benkler represents this goal in terms of the values of justice and freedom:

“Why care? Justice and freedom. The combination of information knowledge economy, rise of network information society, and development of freedom identify access to knowledge as central to human development, both as freedom and as justice. Justice: the emergence of a global information economy means that more of what makes for human welfare and development depends on information, knowledge and culture.” (Benkler, 2006b).

Again, the circumstances (c) created by the knowledge-based economy and informational capitalism necessitates actions that will increase access to knowledge. By invoking the metaphor of freedom, Benkler also works to more clearly link the A2K Movement with concerns that are not dependent on utilitarian considerations about economic value:

“As to freedom, we have seen the technological threshold conditions enable greater practical human agency, individual action, both commercial and noncommercial, and social sharing and exchange are emerging as major modalities of economic production, which, in turn, allow us to exercise greater individual autonomy and participate in an appreciably more participatory public sphere and in newly emerging practices of more participatory and critically self-reflective culture.” (Benkler, 2006b).

However, this conception of freedom and autonomy remains dependent on “economic production” as the means for human development. The strengthening of human capital, then, is privileged as a means of achieving great human development and equity within informational capitalist frameworks.

The introduction to the *Bibliotheca Alexandria Access to Knowledge Toolkit I* (Essalmawi, 2009) uses similar representational strategies. In it, Hala Essalmawi, Principal

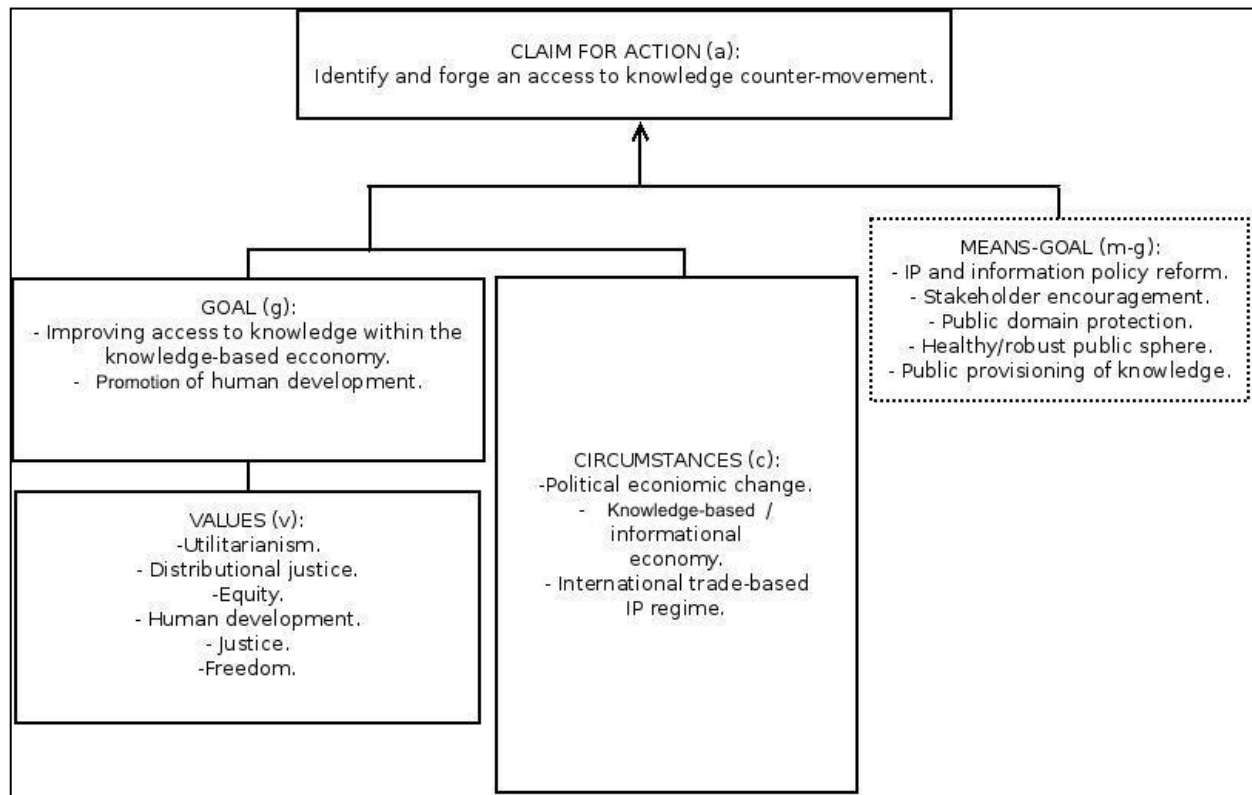
Attorney and IP Officer at Bibliotheca Alexandria, states that the organization has “developed a growing interest in issues related to knowledge production and dissemination. Within this context, the BA focuses mainly on topics related to innovation, creativity and intellectual property” (Essalmawi, 2009: 5). For this reason, the *Toolkit* was created “to introduce this global movement, its activities and the issues of interest to different stakeholders” (Essalmawi, 2009: 7) and offers perspectives from academics, activists, and practitioners from developing states dealing with issues related to access to knowledge. Three years after the A2K Conference at Yale, Essalmawi argues “the issues of Access to Knowledge gained significant momentum” and the “‘access’ issue has become a pressing item on the agenda of many states and stakeholders both in developing and developed countries” (Essalmawi, 2009: 3). This, Essalmawi argues, has opened the possibility for new ways of imagining the role of IP law for facilitating access to knowledge in ways supported by the A2K Movement. The claim for action (a) advanced by Balkin and Benkler – to identify and forge an A2K counter-movement – is seen to have resulted in:

“new trends [emerging,] advocating the application of IPRs in a manner that supports access to knowledge, in particular via maximizing the potential benefits of exceptions and limitations (E&L). More voices are calling for the development of new international treaties to enhance access to knowledge and to regulate E&L to become more applicable in the digital environment” (Essalmawi, 2009: 6).

Essalmawi concludes, stating the Bibliotheca Alexandria and A2K Movement “will continue working to participate in and contribute to this global momentum by encouraging stakeholders to share their own broad vision regarding global topics of interest in the form of research papers and articles.” (Essalmawi, 2009: 8). Here, a combination of means-goals (m-g) are stated: global momentum and stakeholder encouragement can be created and mobilized to advance IP and information policy reforms that contribute to access to knowledge.

In Figure 2 (below) I have summarized the various aspects of political discourse represented by the A2K Movement in these three texts. The arguments made in these texts as well as the broader literature on and by A2K Movement academic-activists cohere with the discursive framings traced and deconstructed earlier. In particular, ideals and norms surrounding the utility of access to knowledge in contributing to human capital creation are foregrounded. As well, rights to access and control knowledge/information via IP law are presented as crucial areas of concern for the A2K Movement. In the following section, I examine two legal texts drafted by and with input from A2K Movement actors in response to the existing international trade-based IP regime.

Figure 2: Structure of Political Discourse and Argumentation of the A2K Movement



A Critical Discourse Analysis of the A2K Treaty and the Marrakesh Treaty

The efforts of A2K activists to support Argentina and Brazil's proposal for the WIPO-DA led to two A2K efforts spearheaded by CSOs and academics: the Geneva Declaration on the Future of the World Property Organization (Geneva Declaration, 2004) and the Draft Treaty on Access to Knowledge (A2K Treaty, 2005). The Geneva Declaration was the result of a 2004 meeting of civil society and public interest advocates linking A2K with the WIPO-DA in support of the proposals of the Development Agenda (Helfer and Austin, 2011: 44-46). The Geneva Declaration was created to express concern that if the expansion of the TRIPS-based IP regime were "to be reversed there will need to be an international, informed, democratic debate about the trajectory we are on" (Boyle, 2004: 11). The Declaration states that "humanity faces a global crisis in the governance of knowledge, technology and culture" due, in part, to the "morally repugnant inequality of access to education, knowledge and technology undermines development and social cohesion" (Geneva Declaration, 1). The WIPO-DA is expressed as a means of rectifying this situation, adding development oriented concerns into "a change of direction, new priorities, and better outcomes for humanity" (*Ibid.*, 3). Picking up on the idea of an Access to Knowledge Treaty (A2K Treaty), which was part of the initial proposal for the WIPO-DA, A2K activities affirmed support for such a treaty, which "would have countries agree to adopt a minimum set of limitations and exceptions, invest in a knowledge commons, promote open standards, and allow copyright collecting societies in developing countries to direct a larger portion of their distributions to domestic rights-holders, among other things" (Bannerman, 2009: 28). The A2K Movement subsequently picked up the A2K Treaty, as activists and scholars set out to create a Draft A2K Treaty to inform negotiations in the WIPO and elsewhere.

The A2K Movement adopted this “top-down” legal approach as means to “embed a set of users' rights in information at the international level and to create international mechanisms to protect and sustain open models of innovation” (Kapczynski, 2008: 117). In keeping with the heterogeneity of the A2K Movement the Draft A2K Treaty also included “detailed set of rules written from multiple perspectives such as, for example, human rights, rights of copyrights users, the open source movement in software and other standards, and the access-to-medicines lobby” (Drahos, 2005a: 16). The Draft A2K Treaty was, therefore, an attempt to instill legal remedies and norms into the international IP regime and address issues of basic needs (Chon, 2006: 2908) beyond the economic reductionism of the TRIPS-based agenda. Such top-down measures were deemed necessary due to the inadequacy of the existing IP regime in meeting the needs of developing countries. Legal scholar Peter Drahos (2005b: 15) argues that disparity exists between the forums and forms of law used to address stakeholder concerns in developing and developed situations:

“developing country claims receive symbolic attention and soft law solutions wrapped in the polite language of false concern. Western powers solve their problems through hard treaty law that is born of realist maneuverings in a world where commercial and security interests have been united”

and

“developing country resistance to this emerging paradigm of globalized intellectual property rights is essentially a story of failure. International organizations in which developing countries have been influential such as UNCTAD and UNESCO have not been able to make significant gains in terms of international treaty making on key developing country issues such as technology transfer, the control of anticompetitive conduct or, more broadly, an economic framework that addresses the deep structural inequalities of the world economy. [...] Comparatively modest multilateral gains like the Doha Declaration on TRIPS and Public Health have all too easily been bilaterally given away. A different concrete world order has come striding out of the shadows of globalization, one in which developing countries continue to remain bit players”.

The A2K Movement sought to use an A2K Treaty as a means to address these inequities and assert development and human rights-based concerns into the international IP regime.

The A2K Treaty grew out of debates that Martin Khor of the Third World Network, which sponsored the events, described as being undertaken “to discuss the effect of intellectual property regimes on the public’s access to knowledge and to discuss proposals to deal with this, including through a possible treaty on access to knowledge” (quoted in New, 2005). Following these debates, James Love acknowledged growing NGO support for an A2K Treaty focused “around limitations and exceptions to patents, copyrights and other intellectual property laws; mechanisms to address abuses of rights, such as the control of anti-competitive practices; and opportunities to support new modes of production of knowledge goods, such as free and open source software, open access research archives, or public domain scientific databases” (quoted in New, 2005). In May 2005, CPTech (now KEI) released a *Draft Treaty on Access to Knowledge* (A2K Treaty, 2005).

Article 1.1 of the A2K Treaty states: “The Objectives of this treaty are to protect and enhance [expand] access to knowledge, and to facilitate the transfer of technology to developing countries” (A2K Treaty, 2005). The Preamble of the A2K Treaty reiterates the values (v), circumstances (c), and goals (g) identified in the earlier CDA of A2K Movement texts. In particular, the A2K Treaty recognizes the “importance of knowledge resources in supporting innovation, development and social progress, and of the opportunities arising from technological progress, particularly the Internet,” is “mindful of the need to overcome disparities in wealth, development, and access to knowledge resources,” and seeks “to enhance participation in cultural, civic and educational affairs, and sharing of the benefits of scientific advancement”

(A2K Treaty, 2005: Part 1). The A2K Treaty also reaffirms other access-related agreements, including the Doha Declaration (A2K Treaty, 2005: Article 1.3).

The A2K Treaty includes a comprehensive re-consideration of the international trade-based IP regime. For example, it includes sections on “Provisions Regarding Limitations and Exceptions to Copyright and Related Rights” (Part 3), “Patents” (Part 4), the “Promotion of Open Standards” (Part 6), “Control of Anticompetitive Practices” (Part 7), the rights of “Authors and Performers” (Part 8), the “Transfer of Technology to Developing Countries” (Part 9), provisions regarding researchers and publically supported research (Part 10), and an “Obligation to Finance Free and Open Knowledge Goods” (Part 11).³² In general, the A2K Treaty frames access to knowledge as a response to restrictive IP law and employs discourse similar to general A2K Movement texts, including a focus on the “knowledge commons” and “public domain” (A2K Treaty, 2005: Part 1). These goals are described as

“Recognizing further the importance of knowledge resources that are created for the benefit of all, and the need to protect and expand the knowledge commons, Determined to protect, preserve and enhance the public domain, which is essential for creativity and sustainable innovation.” (A2K Treaty, 2005: Part 1).

The importance of “Expanding and Enhancing the Knowledge Commons” is the focus of a detailed section, Part 5. In Part 5, the knowledge commons is approached through provisions focused on “Access to Public (sic) Funded Research” (Article 5.2), “No Copyright of Government Works” (Article 5.3), “Archives of Public Broadcasting” (Article 5.4), “Access to Government Information” (Article 5.5), and the establishment of “Knowledge Commons Databases” (Article 5-6). However, the A2K Treaty does not state *why* a “knowledge commons” is desirable or necessary.

³² Curiously, Part 12 entitled “Enforcement of Rights and Obligations” contains no text or mechanisms.

As well, the A2K Treaty does not specifically invoke the UN Declaration on Human Rights nor other human rights instruments; however, it is committed to a view that “access to knowledge is a basic human right, and that restrictions on access ought to be the exception, not the other way around” (Helfer and Austin, 2011: 46; see also, Hugenholtz and Okediji, 2008). The A2K Treaty attempts to embolden states to take advantage of flexibilities in the international trade-based IP regime to meet often-overlooked publically oriented purposes. For example, as Sunder argues (2007: 103), the Treaty helps “promote an international legal regime that would reward traditional knowledge holders for their role in preserving biodiversity and ancient knowledge—that is, for their role in preserving the public domain.” It does so, however, through the lens of liberal conceptions of ownership and authorship, as it does “not expressly recognize the inventiveness of traditional knowledge, or the attendant intellectual property rights claimed by the world’s poor as authors and inventors of new knowledge” (*Ibid.*). The top-down and state-centric nature of the A2K Treaty narrowly defines rights and often does so in ways “far narrower than their counterparts in international human rights documents” (Beutz Land, 2009: 43). Moving beyond the A2K Treaty, actors from the A2K Movement have sought to extend the underlying principles and concerns represented in the text while attending to its limitations and the changing international IP environment.

One such early effort was legal scholar Lea Shaver’s (2008b) conceptualization of an “Index of Access to Knowledge”. This Index could be used to measure and assess A2K outcomes and their impact on specific areas of concern. The Index of Access to Knowledge includes five “key” dimensions: “education for informational literacy, access to the global knowledge commons, access to knowledge goods, an enabling legal framework, and effective innovation systems” (*Ibid.*, 3-4). Such an index was proposed to enable an entry point for

policymakers, development practitioners, and information professional unfamiliar with A2K, and to allow A2K activists and scholars to critique and improve the theoretical frameworks and guiding concepts behind the A2K Movement (*Ibid.*, 4). The A2K Index could also be used to call attention to human rights concerns and development issues that are overlooked by top-down perspectives of A2K activism. As Shaver (2011: 11) notes, “it is no simple matter to determine the best approach, from a policy perspective, or to specify when a government’s failure to take access into account rises to the level of a violation of the right.” Connecting normative values regarding the role of access to knowledge with measurable and assessable dimensions of the A2K Movement provides greater clarity for individuals and communities to employ A2K rhetoric for their own ends.

Similar normative appeals contributed to the creation and ratification of the *Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled* (Marrakesh Treaty, 2013). Communications scholar Sara Bannerman describes the Marrakesh Treaty as “the first international copyright treaty put in place primarily to create principles of access rather than principles of protection” (Bannerman, 2016: 178).³³ Mihály J. Ficsor, former Assistant Director General of the WIPO, describes the success of the Marrakesh Treaty as “due to [...] gradually-built-up new consolidation through joint efforts of the delegations supported by a tactful and efficient professional and diplomatic contribution by the WIPO Secretariat” (Ficsor, 2013: Para. 7) and inline with the WIPO-DA. The Marrakesh Treaty grew out of a need to provide access to knowledge to published works for people with visual impairments and a recognition that the existing exceptions of the international trade-based IP regime and market-oriented mechanisms were failing to address inaccessibility issues

³³ For a detailed description of the creation and debates surrounding the Marrakesh Treaty, see Bannerman, 2016: 178-180 as well as Kaminski and Yanisky-Ravid, 2014.

(Kaminski and Yanisky-Ravid, 2014: 267-271). The Marrakesh Treaty gained normative force from the UN's *Convention on the Rights of Persons with Disabilities* and the desire to “guarantee the human rights of people with disabilities to access cultural works and educational material” (Harpur and Suzor, 2013: 746).

The Preamble of the Marrakesh Treaty makes this clear by “recalling the principles of non-discrimination, equal opportunity, accessibility and full and effective participation and inclusion in society, proclaimed in the Universal Declaration of Human Rights and the United Nations Convention on the Rights of Persons with Disabilities” (Marrakesh Treaty, 2013: 2). The Marrakesh Treaty further articulates the importance of access to knowledge, “including the freedom to seek, receive and impart information and ideas of all kinds on an equal basis with others, including through all forms of communication of their choice, their enjoyment of the right to education, and the opportunity to conduct research” (Marrakesh Treaty, 2013: 2). Access to private knowledge/information is represented as a “balance” between the rights of IP holders and the broader public interest (Marrakesh Treaty, 2013: 2). The Marrakesh Treaty, therefore, helps to reaffirm the historic “balance” between public and private rights within a concern for the human rights of peoples and communities disadvantaged and marginalized by the international trade-based IP regime. This “balance” is done while also “Recognizing the importance of the international copyright system and desiring to harmonize limitations and exceptions with a view to facilitating access to and use of works by persons with visual impairments or with other print disabilities” (Marrakesh Treaty, 2013: 3). Using language reminiscent of the UNDHR as well as the discursive representations of the A2K Movement, the Marrakesh Treaty

“Emphasiz[es] the importance of copyright protection as an incentive and reward for literary and artistic creations and of enhancing opportunities for everyone, including persons with visual impairments or with other print disabilities, to

participate in the cultural life of the community, to enjoy the arts and to share scientific progress and its benefits” (Marrakesh Treaty, 2013: 2).

Importantly, in the Marrakesh Treaty access to knowledge is framed as necessary for involvement in political economic as well as socio-cultural life. As Bannerman argues, whether or not the establishment of the Marrakesh Treaty serves as a means for further reimagining and re-negotiating the international trade-based IP regime (Bannerman, 2016: 178), the success represented by the Marrakesh Treaty demonstrates how the discursive representations as well as deliberative and argumentative positioning of the A2K Movement can be used in concert with human rights-based claims and serve as a counter-movement against the properitization and corporate concentration of knowledge/information advanced through *creative transformation*.

Throughout this CDA of academic-activist texts as well as A2K-oriented treaties, the A2K Movement represents informational political opposition against the *creative transformation* being advanced by the transnational expansion of informational capitalism. Informational capitalism and the Creative Transformation rely on proprietary and individualized forms of knowledge management and IP law in order to transform knowledge-based resources into informational commodities. The A2K Movement resists universalized and overly restrictive forms of IP law to promote social and publically oriented concerns about the overreach of exclusionary IP policies. The international trade-based IP regime diffuses norms and legal mechanisms to restrict access to knowledge, impose artificial scarcity, and impairs the ability of non-rights holders to appropriate and reuse knowledge/information for their personal and communal development. To do so, the A2K Movement posits and advances counter-movement concepts and ideals, which destabilize the purportedly universal characteristics of the international trade-based IP regime. The concepts of the public domain and the informational

commons as well as ideals promoting sharing, openness, and access are used to oppose the extension of IP law created to further the private interests of corporate informational capitalist actors. Through these concepts and ideals, the A2K Movement argues that innovation and progress are impaired, often invoking human development and human rights-based claims to make knowledge/information more accessible.

Conclusions - A2K as a Counter-Movement: Rejecting and Reinforcing Creative Transformation

This chapter has presented the findings of a discursive tracing and deconstruction of the concept of “access to knowledge” and its adoption as part of an activist-academic counter-movement of A2K. This chapter has traced the emergence of access to knowledge within debates surrounding the appropriate scope and role of IP law as well as in educational and pedagogical initiatives to improve student outcomes and the fostering of human capabilities. Access to knowledge and the concepts underpinning the A2K Movement focus on leveraging knowledge/information to promote economic and socio-cultural “progress” and “innovation”. In particular, the A2K Movement advances access to knowledge as a means of countering restrictive and proprietary international IP law regarded as detrimental to economic, innovative, and development potentials. A2K concepts and the A2K Movement itself exist in dialectic and dialogic relationships with respect to the international trade-based IP regime.

A2K is an “umbrella” used to protect against the overreaches associated with the perfect storm of informational capitalism and Creative Transformation’s shift towards proprietary and commodified knowledge/information. This umbrella covers heterogeneous and diverse counter-movement activities, where development and human rights concerns may be foregrounded in opposition to economically reductionist reifications of knowledge/information. However,

concepts and ideals that the A2K movement relies upon – such as the public domain, the informational commons, access, openness, and collaboration – are simultaneously resisted, recast, and appropriated by the economic orientations of informational capitalism. For example, A2K’s roots in the FLOSS movement and the rise of the Californian ideology associated with purportedly revolutionary digital and networked technologies leave the movement open to appropriation by the structures and processes of the political economy of informational capitalism. In this chapter, a deconstruction informed by critical legal studies and CDA of key A2K texts and theories has been presented as a means of analyzing the extent of the discursive overlap between the informational capitalist “movement” and the A2K “counter-movement.”

The A2K Movement purports to safeguard distinct and diverse ways of life from the perfect storm manifested through *creative transformation* by rejecting ideological and universalistic conceptions. Viewed as a counter-movement against the economically reductionist tendencies of *creative transformation* and the international trade-based IP regime, the A2K Movement offers the potential of reshaping these dominant movements to better address specific economic and local circumstances. A2K activism played a crucial role in the adoption of the WIPO-DA, which has helped to legitimize development-oriented norms and concerns into the international IP regime. A2K and publically oriented social justice concerns have helped destabilize TRIPS-plus trade agendas, such as the failed Anti-Counterfeiting Trade Agreement (ACTA) and the yet to be ratified TPP (Heine and Turcotte, forthcoming). Transnational debates and negotiations over IP law and associated knowledge management regimes are increasingly contested on development and human rights-based grounds. Nancy Fraser’s attempt to bring Polanyi’s double movement thesis into the contemporary situation demonstrates the existence of a “curious disjuncture”: “While today’s crisis appears to follow a Polanyian structural logic,

grounded in the dynamics of fictitious commodification, it does not manifest a Polanyian political logic, figured by the double movement” (Fraser, 2013: 121). Instead, various counter-movements seek to assert their respective goals, (re)negotiating internal and external logics.

The A2K Movement typifies this “third movement” between economic, social, and emancipatory concerns (Fraser, 2013). A2K discourse reveals the existence of each of these types of counter-movements: the A2K is comprised of a curious mix of adherents proposing access to knowledge activism as a means of furthering “innovation and progress” within the overarching logic of the Creative Transformation, as well as socially and publically-oriented activists working to ensure that human development is highlighted. The groups advancing human rights-based claims in response to the international trade-based IP regime struggle against political economic restrictions to attaining a better life. For example, Correa (2010) as well as Bowery and Anderson (2009) highlight how the A2K Movement is made of an uneasy confluence of proponents of innovation and progress within informational capitalist structures as well as the ongoing work of activists to ensure that historically marginalized peoples and communities are not further disadvantaged by the diffusion of *creative transformation*.

In particular, the liberal legal conception of the public domain, public sphere, and information commons adopted as a means-goal (m-g) for the A2K Movement is problematic. These representations contribute to a discourse within which “the claims that A2K advances (the defense of a public domain or of the commons, for example) are presented as possessing a universal range” (Krikorian, 2010: 73). Carlos Correa highlights how such an expansive notion of the public domain may be detrimental to communities and cultures not based on Western liberal legal traditions:

“Under this definition, with a few exceptions, traditional knowledge would be considered part of the public domain. Hence, no authorization would be needed to

use it, nor should any compensation be paid for doing so. Indigenous and traditional communities would have no right to prevent the use of the knowledge they hold” (Correa, 2010: 240).

Bowery and Anderson (2009: 500) have similar concerns in mind, stating this valorization of public domain models of access to knowledge “would be simply a means of shoring up the old categories, maintaining historical exclusions and papering over these problems.” Such concerns are exemplified by A2K discourse debating whether the “public domain” concept is fundamental for *all* aspects of access to knowledge and stakeholder interests. However, the liberal legal foundations of the public domain remain embedded in the A2K Movement’s conception of an “information commons.”

The public domain and information commons are presented as different means to achieve the same end: access to knowledge in the face of a restrictive and socially unjust IP regime. As Krikorian (2009: 97-98) states:

“Whether they invoke notions of the public domain, or knowledge goods and knowledge spaces as commons, A2K actors are trying to formulate a debate outside of a dialectic of opposition, in which they can set at least part of the terms and in which —intellectual property represents only one amongst several options, one tool amongst others.”

The A2K Movement seeks not to present one unifying concept as a universal alternative to the international trade-based IP regime. The public domain and “commons” concepts are, therefore, presented as alternative frameworks for theorizing the accessibility of knowledge/information. However, Benkler’s idea of an “information commons” extends the public domain transnationally through the use of networked communication technologies. The information commons concept does account for local or individuated forms of knowledge/information exclusion; the primary focus is to ensure that “information” is easily accessible and transmittable. The concept of the information commons is debated within A2K discourse in order

to ensure that negative affects of access to culturally specific resources are curtailed and that knowledge/information of marginalized groups are not further misappropriated. As Benkler puts (2010: 232) it:

“The debate here, from the perspective of the A2K movement, will be over the relative centrality of the distribution of dynamic, productive capabilities for learning, growth, and effective production in the domains of information and knowledge as engines of justice over time in the distribution of social and economic power and material goods.”

Again, however, the theoretical debates found in A2K discourse do not translate into the activism of A2K advocates. The specific means used to achieve access to knowledge are to be determined by specific actors and organizations themselves (Essalmawi, 2008; 2009). This should not be surprising given the A2K Movement’s heterogeneity and reluctance to adopt ideological positions; however, this betrays the fact that *not* being conscious of one’s own ideological orientation is representative of a utilitarian ideological position towards access to knowledge as an end in and of itself.

The discursive tracing, deconstruction, and CDA analyses of the A2K Movement presented in this chapter demonstrate how liberal legalistic presuppositions and biases – especially with respect to the naturalization of FLOSS and Californian ideology in the ideals of sharing, openness, and access – have shaped the discourse and debates of A2K. In order to ensure that informational inequality and socio-economic inequities are not reinforced, the discourses and ideals supporting the A2K Movement need to be rearticulated to account for development concerns and human rights supportive of co-operative, communal, and development-focused alternatives to informational capitalist structurations.

The heterogeneity of the A2K Movement and the internal reflexivity demonstrated in A2K scholarship provides optimism that the calls to confront Creative Transformation through

claims for the need to improve human capabilities and leverage human rights norms can be advanced. As Britz, *et al.*, (2013: 107) have recently argued: “those advocating for information-based rights – such as the free software, access to knowledge, and open access movements – must adjust their focus to include not only achieving access, but also the fostering of capabilities.” Sen’s capability approach to development highlights how:

“merely providing access is not sufficient. Instead, we must work towards re-framing our information rights frameworks and agendas to ensure individuals are provided the opportunities – the capabilities – to actualize codified access into actual human well-being” (*Ibid.*, 112).

The successes that the A2K Movement, as well as the ICT4D movement, has had in helping to legitimize claims for the necessity of access to knowledge and technological infrastructure demonstrate the potential of counter-movements to resist and (re)negotiate the terms of informational capitalist expansion.

Linking human rights with access to knowledge in the informational economy is in line with these efforts (Jørgensen, 2006). The links between human rights and A2K emanate from the access to medicines campaign and demonstrate potential avenues for collaboration with respect to access to knowledge more generally (Beutz Land, 2009). The irreducibility of human rights means that “affirming the array of rights protected under human rights law also guards against differential valuation of rights” (*Ibid.*, 44). A2K’s concern with global health, socio-economic inequity, and social injustice links with human rights-based claims for access to knowledge as a fundamental right (Love, 2013). Shaver argues that linking A2K’s attention to development to human rights can address diverse A2K concerns, including the right to health, education, the management of agricultural and traditional knowledge, and the right to science and culture (Shaver, 2011). These linkages should be made to ensure that A2K activism and subsequent informational political struggles do not overemphasize the IP-based knowledge management

regimes of informational capitalism and the associated negative affects of Creative Transformation. A2K, the capability approach to development, and human rights-based claims can be deployed to counteract the political economic concentration of Creative Transformation and informational capitalism's reliance on leveraging the sharing, openness, and access of knowledge/information for private economic purposes.

CONCLUSION

WHOSE DIGITAL FUTURE? INFORMATIONAL CAPITALISM, ACCESS TO KNOWLEDGE, AND THE DIFFERENCE HUMAN RIGHTS MAKE

In a little over thirty years, the Internet and digital technologies have become driving forces used to reshape global economic and social practices. These communications and network technologies are evolving at a time when post-World War II economic systems and structures are being adapted, and in some cases replaced, to meet emerging realities and circumstances. The rise of informational capitalism is simultaneously a manifestation and an accelerator of these changes. Traditionally industrialized economies are being reshaped by these circumstances and we are witnessing the evolution and promotion of a parallel form of economic activity: the global “knowledge-based economy” (OECD, 1996) oriented around a logic of *creative transformation*, which works to appropriate knowledge-based resources at the service of informational capitalist accumulation. It is important not to overestimate the impact of the emergence of the so-called knowledge-based economy nor disregard the negative outcomes and consequences of ongoing technological and socio-economic shifts. While this *creative transformation* continues to diffuse transnationally, it remains a complementary part of overall global economic activity. Financial services and natural resources remain the largest sectors of the global economy (Fuchs, 2011: 207-211). Yet, these political economic transformations are resulting in a Creative Transformation, which is influencing the structurations and spatializations of economic, political, and social life.

The knowledge-based industries that this Creative Transformation depends upon remain evolutionary and in flux, leading domestic governments and IOs to increasingly recognize the

importance of knowledge-based resources for economic growth and human development. IP law is the primary legal mechanism for capitalizing upon these knowledge-based activities. Through the international trade-based IP regime, Creative Transformation leverages creative and communicative acts for innovation and growth. The ownership of and control over intangible resources enables marketplaces where commodification and growth can occur. As knowledge-based economic activity continues to evolve, the intersections of IP law and Creative Transformation are increasingly important policy areas where innovative, economic, and development effects converge under informational capitalism.

Informational capitalism was developed and extended outward from the Anglo-Saxon “centre” of the UK and the US through international law. Neoliberal orthodoxy presupposes that market-based economic relations are the most efficient and beneficial form for political economic structurations. Beginning in the 1970s in Chile and later in the UK and US, neoliberal economic reforms sought to prioritize market-based calculations and modes of political economic practice: deregulation, the weakening of the so-called relationship bargained between labour and capital under “embedded liberalism” (Ruggie, 1982), transnational expansion of financial and trade markets, and the extension of the “market” into previously non-economic social and cultural realms all served as catalysts for constructing and entrenching a free-market transnational political economy. Importantly, ICTs and knowledge/information resources were deployed to extend market relations globally while implicating social, cultural, and political life ever more into the informational capitalist system.

In the mid-to-late 1990s, international governance institutions worked at the behest of dominant developed states, such as the US and Japan, to negotiate and implement international trade and legal mechanisms designed to support transnational flows of capital. Through the

WTO's TRIPS Agreement, an international trade-based IP regime was formed, which served and promoted the interests of rights-holding corporations and industries through their domestic governments. The TRIPS Agreement established international legal rules and sanctions to govern and protect IP-protected goods and services, thus providing the legal force necessary for establishing and extending transnational capitalist industries based on leveraging knowledge-based resources as informational commodities and assets. Creative Transformation was made possible via these reforms: new and established industries could enact new forms of "accumulation by dispossession" (Harvey, 2003; 2004) based on the private appropriation and capitalist restructuring of socially constructed and constituted knowledge-based resources (cf. Boyle, 2008). The appropriation of these creative resources for informational capitalist ends, enabled the creation of new economic activities, which have helped to (partly) rejuvenate macro-economic systems while simultaneously transforming existing and traditional ways of life and political economic relations.

The broad framework for a globalized IP regime has been established through a combination of work within the WIPO and the WTO system and is largely consistent with the policies of the world leader in the generation of IP-based goods as well as the Internet realm, more generally: the US. In the WTO system, the TRIPS Agreement links IP protections with the international trade system and was largely created at the behest of the US and in line with the desires of the country's pharmaceutical, entertainment, and software industries. Industry lobbyists used their influence with US legislators to advance an international trade-based IP regime that coheres with their specific interests (Drahos and Braithwaite, 2002). This international trade-based IP framework extends US domestic policies regarding the forms and duration of IP rights globally under the assumption that the IP policies that work for developed

nations and content providers encourage international development through increased innovation and creativity. The diffusion of an Anglo-American consensus on IP law serves as part of the Polanyian “movement” of Creative Transformation. This position overlooks the fact that developed countries, including the US, have had often ambivalent positions regarding IP protections during their own historic development.

Contemporary developing countries have different domestic policy needs regarding IP. There is a large body of literature that argues that the existing global IP regime works to the detriment of developing and least-developed countries (cf. Wong and Dutfield, 2011). In response, counter-movements have increased as developing countries, such as Brazil, China, and India, have partnered with developing country and civil society allies to assert the need for equitable and development-oriented IP. The work of developing countries and like-minded civil society organizations has resulted in the WIPO-DA, which seeks to promote a sustainable and mutually beneficial IP regime that meets domestic and international development needs (de Beer, 2009). The important role that the international IP regime plays in the governance of the knowledge-based economy (Coombe and Turcotte, 2012a) complicates matters of approaching IP within a framework of globally coordinated informational capitalism.

With the ongoing evolution of informational capitalism, the historic circumstances within which IP law has been developed have been disrupted by technological and social changes. Laws created during the broadcast and monopoly eras of print, television, and the sale of physical copies of intangible content are increasingly threatened by a situation where digital goods can be distributed quickly, easily, and with little financial return for rights-holders or producers. It is important for *creative transformation* mechanisms to calibrate an effective and appropriate IP regime that meets the rights and needs of creators and industry without impairing downstream

innovation, technological advances, and civil, political, social, and cultural rights. Domestic governments and international organizations have worked ensure that IP frameworks are developed and evolve according to changing social, economic, and technological circumstances with the international trade-based regime. As I have argued, the goal of *creative transformation* is to foster the social, economic, development, and legal circumstances necessary to facilitate creative interaction, business innovation, and the nurturing of creative resources.

The OECD (OECD: 1996) heralded the arrival of a “knowledge-based economy.” It subsequently reiterated and elaborated the rising importance of creative activity in a greater “knowledge society” (2006) based on control, protection, and investments in “knowledge-based capital” (2013). I have argued that the rise of the knowledge-based economy and informational capitalism are symptomatic of the changes understood to result from Creative Transformation: previously negotiated political economic structurations and relationships are reworked and replaced according to the supremacy of the market. Economic exchange is privileged as a universalized and ideal outcome of economic regeneration. Through the logic of *creative transformation* Schumpeter’s creative destruction is extended into economic and social realms, while Creative Transformation reorients the political and economic aspects of the overall system as well as the relationships between and amongst individuals, communities, corporations, and countries.

Informational capitalism serves as a critical theoretical framework for analyzing the changes facilitated by Creative Transformation. As a political economic reality, informational capitalism has evolved as a means of incorporating and adopting social practices and forces of *creative transformation* into the immaterial and intangible realms. Scholarly critiques of informational capitalism stem from critical analyses (May, 2002) of so-called “information

societies” (Bell, 1976) and “network societies” (Castells, 2009), which theorize the revolutionary potential of digital and networked technologies. More recently, a dialectical view of informational capitalism has been developed, which downplays this optimism and recognizes the continuities and discontinuities that “information-based capitalism” (Fuchs, 2009) has with previous political economic arrangements of capitalism, more generally. Rather than assuming that contemporary and emerging political economic structurations are radically usurped by the deployment of digital and networked technologies, dialectical readings of informational capitalism recognize that while markets of economic activity are shifting, broader capitalist logics are being extended and reinforced. As well, informational capitalist critique recognizes the dialectic relationship between knowledge and information (Fuchs, 2009), which I describe as knowledge/information.

Mitigating the knowledge/information dialectic is crucial to Creative Transformation. The processes of Creative Transformation simultaneously rely upon the generation of knowledge/information in ostensibly non-economic realms of communication and culture as well as their appropriation or dispossession by economically oriented actors. These informational economic relationships fundamentally depend on legal tools and regimes, such as international IP law, supportive of the propertization, commodification, control, and artificial scarcity of knowledge-based resources (Oguamanam, 2009). Recognizing the dialectical nature of knowledge/information highlights the fundamental tensions obscured by *creative transformation*. In line with the dialectical critiques of Innis (2007) as well as Horkheimer and Adorno (2006), this dissertation argues that the reduction of knowledge-based resources to informational commodities and assets displaces the social and subjective aspects of knowledge/information at the service of codified and, therefore, exchangeable and appropriable forms of capitalist goods

and services. Creative Transformation relies upon the “accumulation by dispossession” (Harvey, 2004; 2007) of previously non-commodified knowledge-based resources, which threatens to undermine socio-cultural life as well as the viability of further political economic accumulation. Informational politics have arisen in response to this mis-appropriation. Counter-movements based upon ‘hacktivism’ and ‘freedom of information’ ethos resist this informationalization of knowledge-based resources and argue for a form of ‘information commons’. However, these actions, such as the CC movement, reinterpret the liberal and individualistic tendencies of Creative Transformation and do not attend to pluralistic concerns about the effects of informational capitalist expansion. The Californian ideology that Barbrook and Cameron (1996) have described, remains at the heart of *creative transformation* and overemphasizes technologically determinist, (neo)liberal, and libertarian conceptions of knowledge/information. This ideology is reinscribed within Creative Transformation and the international trade-based IP regime.

Attempts to construct and extend international IP law have historically been challenged on alternative political economic and socio-cultural grounds (Johns, 2010; Halbert, 2005; Sell and May, 2001); a trend which has been taken up by various stakeholder groups seeking to influence the shape of the “knowledge-based economy” (cf. Oguanamam, 2009; Sell, 2009). As critical scholars have noted elsewhere, capitalism’s recurrent reinvention causes periods of economic distress and uncertainty for individuals and industries whose livelihoods are being replaced or augmented by technological or political economic change (cf. Reich, 2015; 2013). Thompson’s research into the technological and economic changes of early 19th Century Britain, demonstrates how communities whose way of life are threatened by exogenous shocks often engage in counter-movements designed to protect their interests and ways of life. As

informational capitalism has expanded and been entrenched via transnational neoliberal economics and supportive legal regimes, counter-movements similarly arise seeking to reconfigure and negotiate unfolding political economic structures, many focusing specifically on the ways in which IP law re-orient and commodifies social and cultural life and displaces alternative ways of existence.

Civil society groups, the governments of so-called developing states, and critical scholars have helped spur counter-movements that challenge the technologically determinist and economically-reductionist tenets of *creative transformation*. The simple belief that “advances” in technologies, and particular ICTs, will result in widespread benefits for global populations are contested by historical and contemporary evidence demonstrating the utopian fallacy these beliefs are premised on. FLOSS communities, ICT4D initiatives, and the access to medicines campaign reflect counter-movement critiques of the political economic impulse towards market-based solutions premised on creative destruction and *creative transformation*. The expansion of the informational economy is driven by the imperatives of *creative transformation*, as entrepreneurial actors desire to “disrupt” and “replace” supposedly out-dated legal and political economic structures with systems derived from and supportive of the business models, marketing, and venture-capital seeking activities of informational capitalist actors. Counter-movements reinterpret these impulses in various ways; attention to human development and non-economic rights-based concerns pose alternative ways of reconceptualizing Creative Transformation and the diffusion of informational capitalist activity. The pluralistic concerns of informational political counter-movements reflect a tension within the international trade-based IP regime and its liberal and individualistic underpinnings.

The historic and contemporary politics of IP law, discussed in Chapter One, demonstrate this tension between liberal, Anglo-American and alternative conceptions of the needs for and forms of IP law. The Anglo-American perspective, which has been diffused via the TRIPS-based regime, promotes utilitarian arguments for the private monopolization of rights-protected commodities and is premised on beliefs in the need to “balance” individual and public-oriented freedoms in order to promote “progress” through creative activity in social, cultural, scientific, and technological industries. This utilitarian perspective underlies informational capitalism, which depends upon a form of IP law that maximizes the benefits of rights-holders and investors who prioritize the mass sale and adoption of privatized knowledge/information (Oguanamam, 2009). Knowledge/information are privileged for its potential capacity to promote capitalist accumulation and receive the vast majority of investment and attention, while alternative non-market based forms and conceptions of knowledge/information management are overlooked and operate at the margins of informational capitalist activity.

The economic reductionism of the TRIPS-based regime is contrasted by efforts to (re)assert the social and cultural basis of knowledge and creativity, through conceptualizations of “knowledge as a commons” (Atteberry, 2010) and forms of “relational creativity” (Craig, 2011; Craig, Turcotte, and Coombe, 2011) operating in the contexts of a “digital frontier” (Fraser, 1999; May, 2002). As instances of a Polanyian double movement, informational political counter-movements challenge the political economic underpinnings of informational capitalism by positing and demonstrating the viability of alternative and essential forms of creativity and knowledge generation. These counter-movements resist Creative Transformation’s privileged forms of commodification, structuration, and spatialization.

The international trade system, via the multilateral TRIPS Agreement and other bilateral and plurilateral trade agreements, largely governs the global legal regime for IP. The TRIPS Agreement focuses on the protection and enforcement of IP rights surrounding “technological knowledge” (TRIPS, Article 7) as the primary orientation for this transnational legal structure. “Knowledge” in this sense is what I describe as “information”: “knowledge” that has been codified via communications media in order to be transferrable across space and time. Under the TRIPS regime, the information of the knowledge/information dialectic is protected and privileged in order to maximize the utilitarian benefits of creative activity. This focus on technological knowledge or the information aspects of knowledge/information subordinates the socially constituted aspects of knowledge contained in the knowledge/information dialectic. IP law, therefore, affirms that “information” is to be privileged as an economic asset, downplaying the relational qualities of “knowledge,” which can be governed in alternative ways and promoted via different incentive structures. Retheorizing IP law as governing knowledge/information, rather than information *per se*, allows the socio-cultural basis of creative activity and the generation and maintenance of knowledge-based resources to be better understood.

The existing international IP regime has been created according to the utilitarian and economically oriented ideals of *creative transformation*. Domestic law and international trade agreements that coordinate the laws of signatory states have become the focal points for dealing with IP-protected goods and services. These mechanisms were created at the beginning of the growth of informational capitalism, as new technological, social, cultural, and economic processes challenged existing industries and business models. This regime is based upon the principles of: 1) extending the proprietary rights of creators, authors, and distributors into the digital realm; 2) creating responsibilities for ISPs and online content aggregators, including

Internet search engines, to police the content and websites that they link to; 3) making consumers and citizens legally responsible for how they use the Internet and access content; and 4) providing corporations and industry with legal tools to protect their digital properties and litigate disputes surrounding unauthorized uses.

These principles cohere with *creative transformation*—they seek to increase incentives for content creation and innovation—however, the ongoing evolution of informational capitalism and the prevalence of the socio-cultural aspects of knowledge/information disrupt the basis and bargains that the existing IP regime is based upon. Legislators, policy makers, and civil society are increasingly concerned that the current IP regime does not meet the realities of an evolving Internet and may be undermining the historic rationale and principles that have guided IP law (May, 2010). The increasingly contested nature of IP negotiations has resulted in a web of international trade and IP agreements based on WTO objectives, which lie outside of established multilateral forums. In particular, the US and EU have been actively seeking arenas where they are able to push their own domestic concerns and agendas (Drahos, 2002). When viewed in this broader context the recent ACTA and TPP negotiations appear to be instances of this so-called “TRIPS-plus” (Sell, 2010, 2007) trajectory. This trajectory seeks to further extend the economic and technological reductionism of Creative Transformation. The ACTA and the TPP negotiations cover a wide swath of international IP issues and promote a global IP agenda that works to bring IP law designed for the physical world to digital environments; however, this raises the possibility of impeding Internet-based innovation, economic growth, and human development.

In many respects, the expansion of this international trade-based IP regime overlooks the concerns of rising states and civil society as well as public interest rights. Amongst the public

interest concerns are access restrictions that can hamper technological innovation, economic growth, and access to cultural resources as well as individual privacy considerations (Gillespie, 2007). Unbalanced IP regimes can have a detrimental effect on the innovation they are meant to promote, by affording too much protection (and thus market share) to existing or large IP holding groups. Developing countries have also become increasingly concerned with the trajectory of IP negotiations based in international trade agreements. Developing country governments and civil society actors rightly point out that the proprietary IP regime undermines the human rights of peoples across the world, as exemplified by the access to medicines campaign. Counter-movements perceive this regime as working to ensure the preeminence of developed countries. The flexibilities that developing countries negotiated through the TRIPS Agreement are being bypassed via bilateral and plurilateral trade agreements that they have been excluded from, further extending the political economic superiority of IP-exporting countries and IP-based corporations.

To varying degrees, online knowledge-based industries depend on creative and communicative resources to generate profits. Software publishers and social networking providers develop platforms and applications that allow users and consumers to access online materials and communicate with one another. The entertainment industries depend on the creation and dissemination of music, video, news, publishing, and other informational content. Various types of business models are used to generate profit from the goods and services that online knowledge-based industries create. Different forms of IP law are used to provide incentives for the creation of these goods and to protect creators from illegal uses and misappropriation. However, the digital and networked nature of informational capitalism is calling into question current IP law, foregrounding the existence of the knowledge/information

dialectic. The digitization of creative goods and services challenges existing corporate and legal systems dependent upon the control of knowledge/information. The networked orientation of the Internet enables digitized goods to be globally disseminated, often without regard to the legal ownership of the goods in question. Increasing uses of digital and networked technologies are affording ever-greater amounts of social and economic collaboration, leading to new forms of creative expression and production as well as technological innovation (Coombe and Turcotte, 2012a).

IP along with other legal and policy regimes help foster circumstances where creativity and innovation may occur. Legal and property regimes are necessary but not sufficient conditions for fostering innovation and creativity for knowledge-based industries and informational capitalism. At a fundamental level, the creative process requires a fertile ecosystem where knowledge and information resources can be developed, disseminated, and built-upon: “knowledge is the most important input into knowledge” (Stiglitz, 2008: 1698). Creativity and innovation are partly dependent upon distributed, disaggregated, dynamic, and relational interactions (Craig, Turcotte, and Coombe, 2011).

The historic evolution of the Internet’s software infrastructure exemplifies the innovative potential of relational creativity. The Internet evolved through a mix of public and private initiatives as well as open and proprietary ownership schemes have contributed to the historic progression of the Internet (Mazzucato, 2013). The underlying protocols of the Internet have remained open and interoperable while incorporating the needs and concerns of corporate actors (Lessig, 2006). Securing the Internet for the purposes of business and economic interaction has resulted in increased development and investment, spurring increased usage and expansion of the network. For the Internet economy, “how we regulate and manage the production of knowledge

and the right of access to knowledge is at the center of how well this *new economy*, the knowledge economy, works and of who benefits” (Stiglitz, 2008: 1695; original emphasis).

Dominant political economic arrangements exist and privilege particular interests and actors while making other groups and ways of organizing political, social, and economic life subordinate. The PEC has historically been concerned with these interrelated power dynamics and efforts to understand as well as overthrow arrangements that work at the disservice of marginalized groups or ways of life. Under informational capitalism, the commodification, structuration, and spatialization of economic activity based on knowledge/information result in ‘monopolies of knowledge,’ exacerbating and entrenching political economic inequality. In response, the maintenance of or opposition to existing and dominant political economic arrangements are constantly in flux, as marginalized groups as well as hegemonic actors work to reform these situations in their favour.

Innis’ concept of “monopolies of knowledge” refers to ways in which specific communication technologies facilitate particular social, economic, and political arrangements and are deployed to promote and protect dominant interests. In theorizing his conception of monopolies of knowledge, Innis refers to ‘knowledge’ in the broad sense described in Chapter 3. For Innis, ‘knowledge’ covers “what we would normally classify as knowledge per se, literary and science, for example, and what is more generally assumed to be information, such as economic records and census data” (Heyer, 2003: 76). Therefore, the ‘knowledge’ that Innis describes in his theorization of monopolies of knowledge represents the knowledge/information nexus. As Robert Neill argues, value, as described by Innis, is produced “through institutional formation ... [and]... embodied in the structure of economic activity, and therefore an explanation of economic advance is impossible unless the determinants of values can be

specified” (Neill, 1972: 49). Mosco’s amalgam allows for each of these processes to be analyzed dialectically in order to understand how they operate separately and in relation to one another. In the communicative and cultural industries value is generated at each stage of production as knowledge-based resources are commodified and consumed. The commodity is created through market-based systems that employ wage labour in order to transform resources into exchangeable goods and services. The attendant ‘informationalization of labour’ threatens to reduce human activity to appropriable inputs of knowledge/information resources. The use value of these resources is transformed into exchange values in order to extract profit from their consumption and marketability. This process assumes and relies upon privatized IP regimes that equate knowledge-based resources with other, more tangible commodities; in both cases, the production of commodities dependent on common capitalist relations of production (Schiller, 2011; 2000). Creative Transformation presupposes that knowledge-based resources are best treated as ‘property’ to ensure more efficient economic processes. The belief in *creative transformation* assumes that labourers as well as the owners of capital will be justly rewarded for their efforts, thus spurring further development of the knowledge/information necessary to support the capitalist system (May, 2002: 33). Knowledge/information is, therefore, commodified in two regards: “first are those instances where information is the final product; second are those in which information is an intermediate component of production” (Schiller, 2007: 21). Knowledge/information can be exchanged as a commodity or as a tool for generating other commodities. Generating a monopoly of knowledge – in Innis’ terms – allows for control over the capitalist deployment of these resources and goods as well as over how others are able to interact with them in given circumstances.

Each communication technology contains both a spatial and temporal bias. The efficiency of capitalist markets relies upon the transcendence of these biases in order to support production and exchange. Technologies, as well as organizational systems, that can transcend these biases and limitations are therefore privileged and sought out:

“The geographical landscape of capitalism (as opposed to that of capital) is plainly shaped by a multitude of interests as individuals and groups seek to define spaces and places for themselves against the backdrop of macroeconomic processes of uneven geographical development that the rules of capital accumulation and state power jointly effect” (Harvey, 2014: 159).

Monopolies of knowledge become concentrated as control and deployment of technologies and organization systems are entrenched in order to serve the interests of particular groups. Spatial environments as well as physical working conditions are constructed in order to facilitate favourable efficiencies and sustain specific productive activities and processes (*Ibid.*: 149).

Therefore, monopolies of knowledge are dependent upon the production of commodities and work to generate and sustain favourable spatial and temporal arrangements.

Creative Transformation works to eliminate time/space biases by structuring economic, geographical, and social relations for their own interests. As Robert Babe (2009: 110) argues: “Political economists view structures of domination and oppression as not only servicing concentrated political and economic power, but as being supported and defended by these centers of power, and as blocking new structures which might challenge that power.” However, these structurations are constantly in flux as various subordinated interest groups as well as technological, economic, social, and political pressures challenge existing political economic arrangements.

IP law and informational capitalism must be designed to protect the property of rights holders and industry while allowing economic restructuring to take place. This necessitates a

pluralistic approach to knowledge/information governance that attends to the interests and concerns of a diverse array of stakeholders. A calibrated framework for informational capitalism must facilitate and maintain a robust online ecosystem, be developed through inclusive, representative, and transparent policy-making forums and processes, and be based on evidence regarding the legal tools necessary to support open and international digital trade. IP law remains a single—yet important—component of how the digital future will progress. The future evolution of the informational capitalism remains uncertain; however, attending to the dialectical nature knowledge/information allows socio-cultural concerns to be addressed in relation to broader political economic structurations. Incorporating the subjective and social aspects of knowledge/information points to a calibrated form of knowledge/information management that can facilitate diverse forms of communicative and cultural expression as well innovation, economic growth, and human development.

A rights-based framework illuminates the competing demands placed upon individual, communities, and states by neoliberal informational capitalism, while also providing space and scope for alternative socio-economic arrangements, political, and representational recognition. The expansion of commodification and market-based calculations into the realms of knowledge/information extends the logic of neoliberal informational capitalism; however, at the same time subjective experience and agency against these extensions results in the emergence of new hybrid subjectivities premised on negotiated ways of life and relationships with the market, state, and informational economy.

For example, scholars focusing on the accumulation by dispossession of ‘traditional cultural expressions’ or ‘traditional knowledge’ argue that informational capitalism cannot preserve or sustain such knowledge/information without attending to the pluralistic and

community-oriented perspectives of distinct communities and their livelihoods. Informational capitalist expansion into the realms of plant genetic diversity also supports this position. Farmers' rights have been undermined by proprietary knowledge/information management regimes that privilege the interests of private corporations to control how seeds and crops can be grown from year-to-year. The accumulation of dispossession of traditional farming and plant breeding techniques by large TNCs wrongly assumes that that knowledge/information that falls outside of the international trade-based IP regime is the "common heritage of humankind" and can be mined for informational capitalist accumulation.³⁴

In response to Creative Transformation, a growing network of state governments, transnational activists, civil society organizations, and indigenous communities, amongst other agencies, opposes the global diffusion of purportedly universal IP standards. In particular, the A2K Movement seeks to become an informational political counter-movement, which works to redress the proprietary control of knowledge/information under informational capitalism. To explore the ideological underpinnings of A2K, this dissertation traces the discursive roots and the emergence of a concept of "access to knowledge" and its adoption as part of an activist-academic counter-movement. In Chapter 5, I locate the rise of 'access to knowledge' in debates about the appropriate role of knowledge/information management via IP law. In particular, access to knowledge is tied up with concerns about education and opportunities for advancing individual political economic standing. This idea links the A2K Movement to other counter-movement activities, which seek to redress the political economic inequities of informational capitalism by leveraging the 'human capital' of individuals to promote 'progress' and 'innovation'.

³⁴ Rosemary Coombe explores the ideological and the rhetorical ways that IP legitimates the accumulation by dispossession of Creative Transformation, highlighting the ironies of attempts to use IP as a means to address issues such as biodiversity (Coombe and Griebel, 2013).

A2K acts as an umbrella for finding cover within the perfect storm of informational capitalist expansion and the Creative Transformation. The A2K Movement works to incorporate pluralistic concerns from various stakeholder and community counter-movements as a normative framework for resisting *creative transformation*. Yet, the concepts and ideals that the A2K Movement often focuses on – such as the public domain, the informational commons, access, openness, and collaboration – fall in line with the ideological underpinnings of Creative Transformation. For example, A2K’s reinterpretation of aspects of the work undertaken by FLOSS communities coheres with the tenets of the Californian ideology and a belief that ‘access’ to knowledge/information can redress to the inequitable outcomes of informational capitalism.

A2K activism has undoubtedly been crucial to helping to advance more development-oriented discussions about the international trade-based IP regime. The creation of the WIPO-DA helps foreground these concerns and has helped to destabilize the economic reductionism and orientation of the TRIPS-plus trade agendas. Fraser’s theorization of Polanyi’s double movement thesis for contemporary situations helps highlight the “curious disjuncture” that exists under informational capitalism. The A2K Movement is, perhaps, better understood in Fraser’s terms as a “third movement,” as it incorporates various economic, social, and emancipatory concerns (Fraser, 2013). The discourse of A2K reveals the existence of pluralistic counter-movements: the A2K Movement is made up of a combination of groups and communities working to leverage access to knowledge to encourage “innovation and progress” under the auspices of *creative transformation*, while also consisting of groups asserting human rights and development claims to counter Creative Transformation and the universalizing tendencies of informational capitalism. In particular, Correa (2010) as well as Bowery and Anderson (2009)

demonstrate that the A2K Movement consists of competing visions for the future of informational capitalism.

The dynamic nature of the Creative Transformation complicates the internal consistency of the A2K Movement, which is made up of emerging forces of opposition unified against the negative outcomes of the international trade-based IP regime. As a Polanyian counter-movement, A2K helps highlight how despite the utopian claims of *creative transformation*, universalized regimes for knowledge/information management overlook local specificity and alternative ways of social, cultural, political, and economic life. The hegemony advanced by Creative Transformation does little to address the concerns of people, communities, and states on the margins of informational capitalism. The critical reflexivity of the A2K Movement is, perhaps, its greatest source of optimism. Against an uncritical positioning of *creative transformation* as the inevitable outcome of informational capitalist expansion, A2K foregrounds the internal inconsistencies and contradictions that result from treating knowledge/information from purely economic and utilitarian ways.

As the Creative Transformation continues to be propagated and resisted through a Polanyian double movement, we are witnessing informational political activities that strike to the heart of informational capitalism's future. The informational politics of Creative Transformation highlight that it is uncertain as to 'whose digital future' we are currently creating. From one perspective, the expansion of informational capitalism based on the proprietary and individualistic control over knowledge/information points to a future where monopolies of knowledge are created, reinforced, and deployed at the service of political economic concentration. On the other, informational political counter-movements highlight alternative futures where knowledge/information are protected, managed, and used to generate more

equitable futures based on collaboration and socio-cultural reciprocity. Importantly, as we see from the A2K Movement, such aspirations will not occur by merely replacing one hegemonic ideal for another – freedom of access in place of *creative transformation*. Pluralistic and alternative structures and conceptions about the access and control of knowledge/information must be entertained and advanced. The international trade-based IP regime must be made to cohere with human development and human rights-based claims. The interconnectedness and interdependency of human rights provides a normative framework for redressing political economic inequities. Economic, political, social, and cultural rights must be preserved and protected to resist and rectify reductionist and deterministic valuations of knowledge/information.

Coda: Limitations of the Dissertation

The results of this dissertation are limited by characteristics of the research design and methods I have employed to acquire materials and interpret the results of this research. I have adopted a macro-level approach, which attempted to assemble a comprehensive corpus relating to informational capitalism, the knowledge-based economy, international trade-based IP law, and the A2K Movement; the longitudinal results and effects should not be overstated. My argument surrounding the double movement of Creative Transformation highlights changing political economic structures in a transnational context. Being based at a research institution in the global North, the effects of this “transformation” seem quite apparent. However, as I have argued, the Creative Transformation impacts distinct peoples, culture, and communities in particular ways. Further research on specific locations within and across the developed and developing “world”

will better highlight how Creative Transformation is constructed and maintained as part of transnational informational capitalism.

In this dissertation I have analyzed a variety of topics from an interdisciplinary framework, which leads to conflicts between ways of thought and scholarly approaches. I have worked to remain critically aware of these differences and focus on the similarities of approaches with respect to how they conceptualize and operationalize political economic influence. Rather than adopt a canonical or foundational approach, this dissertation hopes to advance communications and cultural studies literature by demonstrating the interconnections between and across disciplines. The theoretical framework I have used is fundamentally critical and questions the basis and assumptions of the literature I have engaged with. At the same time, my own presumptions have implicitly shaped how I have approached these materials and interpreted my results and conclusions. The emerging nature of the topics I am addressing, as well as my argument about the existence of an ongoing double movement, make it difficult to completely capture the nuances and shifting dialogues contributing to Creative Transformation. This dissertation has worked to uncover, trace, and deconstruct the prevailing and often unacknowledged or unquestioned assumptions of “both sides” of the double movement. This dissertation has created a framework for future research into how these norms and ideologies are reshaped and recontextualized across time and in specific circumstances.

In particular, the theory of Creative Transformation that I have advanced provides a framework for analyzing the ongoing political economic changes facilitated by informational capitalism. By focusing on the central role that IP law plays in the knowledge-based economy, this dissertation helps to highlight how knowledge management regimes, in general, and IP law, in particular, contribute to and exacerbate political economic inequalities. The counter-

movement activities manifest in informational politics demonstrates the contingent and contested nature of these changes. Recent and continuing efforts to reform IP law domestically and as part of international trade negotiations will continue to be problematized by international stakeholders seeking to advance alternative social, economic, and political claims. The activities of the access to medicines campaign and the A2K Movement demonstrate the viability of counter-movement claims against *creative transformation* and the role that human rights-based claims can play in challenging technological determinism and economic reductionism. By reinterpreting Polanyi's Great Transformation in light of the accumulation by dispossession of knowledge-based resources advanced through informational capitalism, this dissertation helps foreground the contested nature of knowledge/information within ongoing efforts to create a knowledge-based economy. In doing so, I have demonstrated the existence of pluralistic concerns and stakeholder groups engaged in a double movement, which continues to (re)negotiate and (re)define the social and economic consequences of the political economy of informational capitalism.

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