Networked: An Investigation into the Economic Contribution of Manuel Castells

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NETWORKED: AN INVESTIGATION INTO THE ECONOMIC CONTRIBUTION
OF MANUEL CASTELLS

by

Darrick Brake

A dissertation submitted to the Graduate College
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
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Doctoral Committee:

Barry Goetz, Ph.D., Chair
Douglas Davidson, Ph.D.
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Timothy Ready, Ph.D.
The central focus of this dissertation is contemporary network theory as discussed by Manuel Castells with an emphasis on his theoretical discussion on economic theory. This research centers on critically evaluating the works of Manuel Castells and discuss how his ideas on the theory of networks and the “network society” in relation to changes in the economic structure and information capitalism have made significant contributions to not only information society theory but also economic and sociological theory. This research was done as a two-part process in which there is a comparative analysis of the unique and underlying contributions contained within Castells’ work in relation to other information society theorists and a content analysis of economic journal literature locating the theoretical praxis and usage of Castells’ theoretical perspective in the field of economics. This combined approach illustrates and highlights the most important and crucial aspects of Castells’ theoretical approach and its actual theoretical praxis within the field of economics. The results of this combined approach shows that the academic work of Manuel Castells not only is utilized and actively used within the economic journal literature but may actually come to represent the possibility of a new theoretical movement in economics and sociology.
DEDICATION

This dissertation is dedicated to my father (whom I think about everyday), my mother (who always makes me laugh), my sister (who shares my love for the social sciences), and Kimberly, whose constant and endless support throughout the entirety of this dissertation project was unwavering and inspirational in a way that no words could ever quite describe.
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I would also like to individually thank Dr. Barry Goetz for being a mentor and taking me under his theoretical wing. The knowledge gained from our conversations yielded more than just new insight into theory; it helped me become a better sociologist and an even greater person. I also feel the need to thank Dr. Douglas Davidson, whose knowledge and shared ideas of the theoretical world will stay with me forever. I want to give thanks to Dr. Bill Tregea, Dr. Gil Musolf, Dr. Bernard N. Meltzer, and Dr. Larry T. Reynolds, who were all instrumental in starting me on this theoretical wave that I continue to ride. My only hope is that someday I will be able to impact at least one student the way each and every person on this theoretical journey has impacted me.

I also want to give a very special thanks to Dr. Barry Goetz and Dr. Louise Jiezerski, who spent countless hours meeting with me and assisting in the editing, revising, and writing process. Your combined efforts put forward to maintain this dissertation and see it all the way through was the inspiration I used to accomplish this sometimes overwhelming task.
Darrick Brake
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CHAPTER 1
INTRODUCTION

The Problem

The main research question for this dissertation project is to investigate what impact Manuel Castells sociological theory of information capitalism has on the field of economics. Based on this research question there are two major foci for this project: (1) This project is focused on investigating how the field of economics is utilizing Castells sociological theory of information capitalism and Castells works, in general, through an examination of the economic journal literature; and (2) This project is centered upon assessing what impact does Castells theoretical perspective have on the field of economics.

By investigating the economic journal literature, my intent is to locate where economists are utilizing and discussing Castells’ concept of information capitalism. Not only am I looking at where the dialogue is, but I also hope to establish to what extent information capitalism is being utilized in the field of economics and its overall impact. In a much broader sense, this project is an attempt to reveal what kind of academic dialogue is taking place in the economic journal literature with any of Castells’ theoretical ideas and assess his overall impact on economics. This is the reason why a content analysis is being used to assess not only his theoretical contribution of information capitalism to economic journals but to search for any consistent ideas or themes that may emerge as a contribution to economics.

By performing an inductive, grounded theoretical content analysis that focuses on identifying subjects and subject headings in which Castells’ academic body of work is being
discussed in the literature on economics, my goal is to create a sort of theoretical map that will assist in explaining where conversations might be taking place. This type of assessment within the literature and field of economics will help identify the state of the dialogue and develop the topics or overarching themes to which Castells’ economic theories being applied. Again, this study is exploratory. Thus, the results from the content analysis performed will lead to emergent themes that can guide where the conversation of Castells’ economic theory (located in his theory of information capitalism) actually is within the economic literature on economics.

Not only will it provide the starting point of the conversation about Castells’ academic works in the literature on economics, but it will also help identify the emergent themes from the content analysis, which will be the backbone of assessing the general impact, use, and integration of information capitalism by Castells. Depending on the themes that develop, there may also be a statement of the context in which information capitalism is utilized in the field of economics and whether information capitalism is conceptualized as applicable. That is, what kind of application of theory is used in economic literature and economic development? Does Castells’ theoretical perspective have use in the economic literature? These areas of investigation will be invaluable in the assessment of Castells’ contribution as a general statement.

**The Purpose of This Study**

The central focus of this dissertation is Manuel Castells’ information capitalism with an emphasis on his theoretical discussion on economic theory within the literature on economics. There will also be a section of this research outlining the biographical history of Manuel Castells and his academic influences to give us some scope and depth about Manuel Castells’ life as an academic and person. He is more than just a set of interrelated theoretical statements. He was a theorist who has a history and intellectual development as well. In addition, there will be a brief
summary of Castells’ main ideas about information capitalism and the development of an information capitalist economy. The purpose in discussing his main ideas on the development of the new economic era is merely to familiarize the audience with his underlying and significant theoretical ideas and concepts.

A primary focus for this dissertation is an examination of the economic dialogue being discussed in economic journals in relation to Castells’ theory of information capitalism and, more specifically, any academic statements of his theoretical ideas and how they are being utilized. By paying particular attention to the state of the dialogue of economic research, my theoretical goal is to assess Castells’ contribution to this discussion. By performing a content analysis that focuses on economic journals and academic papers, the idea is to show Castells’ presence in the economic dialogue and to gain a sense of how his theoretical ideas and concepts are being utilized by other economists currently in that field.

**The Significance of This Study**

The information from this content analysis will assist me in discussing the contribution to the literature on economics and describe how Castells’ economic theoretical perspective is being utilized in economic discussions along with its journal location. This is an important statement because in this research study, I seek to add to the sociology of knowledge in that it is fundamentally seeking out the exact theoretical use contained within the field of economics regarding Castells and is assessing whether sociological theories of the economy, such as Castells’ information capitalism are making an impact in the field of economics at all.

Another significant area of inquiry regarding this study is Castells’ prominence and importance as a theorist in general. The literature review of Castells, for this study, illustrates the importance and prominence of Castells’ academic works. In fact, it shows that Manuel Castells
has already made a significant contribution across several different fields. However, one of the major areas of discussion missing from the literature is that of Castells’ contribution, if any, to the field of economics. This gap in information and knowledge is intriguing as a researcher because the literature suggests that on many levels, Castells’ presence can be felt across the social sciences and beyond. This same statement cannot be said for the field of economics.

This lack of general discussion about Castells’ contribution to the field of economics is important for this study because he has created a sociological theory that outlines a major change in the economic system and represents an information capitalist economic theory. It is because of this that one of the major facets of this research is to identify and explain the extent in which Castells has made an impact, if any, on the field of economics. If Castells has made an impact, what kind of impact is present, and what types of themes are mentioned; where is it located in the academic research on economics?

By identifying the use and utilization of his ideas within the literature on economics, a definitive statement about Castells’ importance and prominence in the field of economics within the literature can be made. This is something that has never been done before, and this study can potentially explain his inclusion or lack of inclusion within the body of literature, which makes a statement about Castells’ theoretical use and importance within a field that is not discussed or mentioned in the literature.

**Moving Forward**

Each chapter going forward represents a very specific purpose or goal in mind for this dissertation research. That is, each chapter represents several key and specific aspects for this project: There will be a comprehensive overview of Manuel Castells’ life and academic history (Chapter 2). Next, there will be an investigation into Castells’ theory of information capitalism as
a general statement and a section that compares and contrasts the unique aspects of Castells’ information capitalism in relation to other sociological information society theorists (Bell, Fordists, post-Fordists) as well as a focus on the emergent themes that illustrate Castells’ possible contributions that might be found in the content analysis (Chapter 3). In Chapter 3 there will also be a consideration of the importance of taking a sociology of knowledge approach for this project and summarizing and interlinking Castells’ information capitalist theoretical perspective with Geoffrey Hodgson’s research on historical specificity and major problems contained within the academic research on economics. There will also be a discussion of the implications of being connected to Hodgson’s movement against historical specificity and a literature review outlining Castells’ significance and prominence as a social theorist within other social science fields, with the exception of economics, a focus on the types and kinds topics, areas, and themes deemed as important or seen as his major contributing thoughts (Chapter 4). There will be a comprehensive chapter discussing the use of a grounded theoretical approach and establishing the outline, process, and procedures for performing a content analysis of economic journals (Chapter 5), performing a content analysis of the academic dialogue within the economic literature and discussing the results of the content analysis with the emergent themes representing the field of economics and the academic literature on economics (Chapter 5), and there will be concluding thoughts and analysis of all of the information contained within these questions, as well as an investigation of the dialogue that has emerged from Castells’ inclusion into the academic literature in the field of economics and academic literature on economics (Chapter 5). Finally, Chapter 6 will assess Castells as a marginalized theorist and his lack of inclusion into the academic literature on economics while paying particular attention to arguments made by Geoffrey Hodgson in How Economics Forgot History: The Problem of
Historical Specificity in Social Science and making a broad statement about the sociology of knowledge and how this might explain Castells’ exclusion from economic journal research.
CHAPTER 2

BIO-SKETCH OF MANUEL CASTELLS

Manuel Castells was born in the year 1942 in Hellin, which is a small town in La Mancha, Spain. Though born in a small town, his actual roots are in Barcelona. His parents only stayed in Hellin for a year or so before their civil servant jobs made them relocate. Castells’ father, Fernando Castells Adriaensens, was a finance inspector, and his mother, Josefina Olivan Escartin, was an accountant in the Spanish Ministry of Finance. During their time as members of the Spanish Ministry of Finance, the oppressive Franco dictatorship was in full swing. While Fernando Castells initially supported the Phalange Party and fought on the side of the Francoist forces, his disillusion and disappointment with Franco emerged shortly after he took office.

This disillusioned attitude would be an interesting time in their lives as “Castells’ parents were strongly conservative, to the degree that his father’s career as a civil servant seems to have been hampered by what political authorities considered insufficient enthusiasm for the party line” (Stalder, 2006, p. 11). This lack of party enthusiasm led the family to move and be uprooted several times over Castells’ life. However, the city of Barcelona would become his home for the remainder of his childhood and adult life. In fact, Barcelona is “city that remains close to his heart, and inspiring to his work, ever since” (Stalder, 2006, p. 11).

Influenced by his father’s disillusion with the Franco regime and fascism in general, Castells was very much into politics and the political nature of the world around him. Upon Castells’ entrance to college at the University of Barcelona at the young age of 16, his political side was already exposed. After having been there only a short time, “he joined the Catalan
Socialist Party, which was, like all oppositional parties, working underground and subject to severe persecution” (Stalder, 2006, p. 11). Even though he excelled in the areas of law and economics (his major areas of concentration at the time), Castells’ life was “fully taken up by politics. I still passed my exams, and I read a lot of history, politics, Marxist, and anarchist theory, Third World issues, political economy. I did imagine myself as an academic. I wanted to be a lawyer, to defend workers and just causes; but I wanted to write and had the hope of after the revolution I would really have time to write my novels, poetry, my theater” (Ince, 2003, pp. 9–10).

As a student of the arts as well as law and economics, Castells became frustrated that journals, newspapers, and plays on campus were being censored by the Franco regime and political police. Even more frustrated than before, Castells joined with the anti-Franco resistance on campus, which at the time, was only a small group of dedicated students frustrated and angry at the fascist regime. “In 1960, we were probably no more than 50 activists out of 14,000 students. But we were very determined, and very clandestine. The three main groups were the Catalan Nationalists, the Communist Party (the main one), and then a sui generic, radical group named the Workers Front of Catalan (FOC in Catalan)” (Ince, 2003, p. 9). Out of these three main groups, Castells joined the FOC because he viewed himself as an anarchist who appreciated Marxist theoretical ideas, at the time, yet hated the communists and communism’s authoritative personality. The FOC would later become part of the ruling party known as the Spanish Socialist Party.

Castells’ involvement in the politics of the anti-Franco movement at the University of Barcelona would lead to the organizing of “a general strike in May of 1962 at the university, and in a number of factories, to protest against the government in solidarity with the miners’ strike in
Asturias” (Ince, 2003, p. 10). This successful strike would cause fear and unrest with the Francoist Party and the fascist government’s perceived ability to control its citizens. The strike was viewed as a serious attempt at forming an opposition even though it was merely a small group of privileged college students who had very little political attachment to Franco’s regime or other political parties. As a direct consequence of being involved in this strike and its organization, Castells and his friends in the FOC group were “clubbed and most of his friends were arrested, tortured, and jailed for several years. Manuel was lucky in that he was able to cross the border to France clandestinely. He did not have time to finish his studies, and had no money and no connections” (Ince, 2003, p. 10). Castells was then a student in exile.

Castells’ saving grace as a student in exile was a connection to a FOC member in Paris, who at the time, was merely a construction worker living on the fringe. Through his connections and help, Castells was able to obtain political refugee status from the French government and a very meager fellowship for political refugees. His fellowship and connections allowed him to enroll at the Sorbonne where he was able to complete his degrees in public law and political economy. Though finishing his education was a major accomplishment and a goal Castells set out to accomplish, he could not help but to think of Spanish politics while in exile. Frustrated and “disappointed with Spanish politics in Paris exile, in the year 1964 Manuel decided that academics would become his future because it was freer than any other job, and was close to his intellectual and political interests” (Ince, 2003, p. 11).

While his academic pursuit was now his focus, his ideas on what field to study changed during this time. Initially influenced by law, politics, and economy, Castells changed his field of study to sociology. Unlike other theorists who let their audience guess who their major influences were, Castells gives us a very clear path and understanding of who that one person is
who had the most important impact. That person is Alaine Touraine. Upon entering into his doctoral studies at the Sorbonne in 1964, Castells was intrigued by studying the area known as the sociology of work. After having heard that this possible field matched his ideas and political perspective of being active in social change, Castells met Touraine, who was able to give him a fellowship to study class struggles and the working class and enabled him to do a sociological dissertation that focused on the mining strike in Asturias. Within a short time after having met Alaine Touraine the first time, Castells was able to “enroll in the doctoral program at the Ecole des Hautes Etudes en Sciences Sociales, the French elite social sciences graduate school in Paris” (Ince, 2003, p. 11).

The relationship between Touraine and Castells cannot be overstated. Castells states that “Touraine, a historian by training, was aiming to found a new school of sociological theory, and taught me everything I know, in the fundamental sense” (Ince, 2003, p. 11). His continued support and encouragement would help Castells stay focused and provide him with academic opportunities and financial and research possibilities as well. Touraine was more than just a mere mentor in this sense. As Castells explained, “Touraine became, and remains, my intellectual father. My entire intellectual life, career, and everyday life, were shaped and protected by Touraine. Without him I could never have survived the ideological repression of French academia. (For instance, Pierre Bourdieu tried to destroy me professionally)” (Ince, 2003, p. 12).

While still wanting to follow through, under the tutelage of Touraine, with his analysis of the strike in Asturias as a dissertation project, things would change yet again for Castells. Though he had Touraine as his dissertation advisor, he would not be looking at the mining strike in Spain. Instead, Castells would become “an accidental urban sociologist” (Ince, 2003, p. 12) because Touraine was able to secure a major research grant from the City of Paris to investigate
“patterns of industrial location in the metropolitan area of Paris” (Ince, 2003, p. 12). While Touraine had little to no interest in this project, the center accepted the terms of the contract because it was in need of money. Touraine’s lack of interest and the need for a research assistant who could handle the project culminated in Castells being strong armed into the position. Castells had statistical training that separated him from other graduate students, and he needed the full-time job that earned him higher wages. Castells initially resisted the money and the position being offered by Touraine on the grounds he would be part of a “capitalist technocracy and be solidified as part of a bourgeois field of urban sociology” (Ince, 2003, p. 12). However, Touraine offered him an ultimatum of either doing the project or risk losing all of his support. Manuel chose the urban sociological project.

Upon the completion of his urban sociological project and dissertation, which did lead to his initial understanding of the development of high technological firms in the 1960s, Castells was offered a position by Touraine as an assistant professor of sociology at the newly created Nanterre campus of the University of Paris. This newly formed department and institution was a proverbial “dream sociology department: the professors were Alaine Touraine, Henri Lefebvre, Michel Crozier, and Fernando Henrique Cardosa [later the president of Brazil]” (Ince, 2003, p. 13). This dream career and department would come to an end for Castells as the growing student movement that permeated campus grew into something much larger than initially expected. One of Castells’ students by the name of Daniel Cohn-Bendit became the leader and organizer for the student movement that organized in Paris of May 1968. Castells, while teaching sociological methods, lecturing on Marxist theory, and developing urban sociology in a more academic sense entered into the excitement of the student movement as a “semi-anarchist in the May of 1968 movement” (Ince, 2003, p. 13).
This new student movement was a major experience that Castells described as “one of the most beautiful of my life” (Ince, 2003, p. 13). There was a true sense of revolution and change in ideas surrounding life and feelings about the world. It was also a first for Castells as it represented a revolutionary movement without political interference. In fact, these “were two months of nonstop intellectual/political debate, demonstrations, the self-management of everything, and free love. Naturally, at the end, political realities clamped down, and the political revolution was crushed” (Ince, 2003, pp. 13–14). After having been caught in the protests by the police in mid-June of 1968, Castells was exiled from France to Geneva.

This would mark the second exile in his life. Upon arriving in Geneva, with some help from a friend, Isabelle Vichiniak, who was able to provide him with a temporary home, Castells was able to stay in Geneva until another position became available. Within a few weeks of living in Geneva, Castells, due to Touraine’s influence, was granted a six-month position to teach sociological methods in Chile. From 1970 through 1973, after having been granted a more solidified position at the Catholic University of Chile, Castells would find himself exiled again! Though he was already making positive contributions to Chilean society through his work on “democratic socialism in Chile,” the military coup by the Pinochet regime in 1973 would force Castells out of his position at the Catholic University of Chile (Ince, 2003, p. 14).

Following his third exile out of a country, his friend and fellow graduate student Fernando Henrique Cardoso invited Castells to Brazil as a junior professor. This would fall apart soon after he arrived in Brazil. Both academics were ready to begin new teaching and researching positions, but before “they could implement the project they wanted to do while there, the military intervened in the university and expelled Cardoso and all the leading Brazilian intellectuals: this was Manuel’s fourth, symbolic exile” (Ince, 2003, p. 14). Castells ended up
back in Paris as an associate professor at the Ecole des Hautes Etudes en Science Sociales due to intense lobbying on behalf of Alaine Touraine. At this time, Castells’ work as an urban sociologist came to define his academic career. With the help of Henri Lefebvre and Michel Foucault, Castell now represented the leading and defining figure in the Marxist urban sociological movement. His reputation for being involved in international movements was well discussed and documented, and his opposition to Franco and Spanish fascism remained up until Franco died in 1975 at which time Castells returned to Spain. This was a true homecoming, as he returned not as a previous exiled individual but instead “as an active participant in, and researcher of, the urban social movement which carried the transformation toward democracy. This reached a high point between 1977 and 1979, when a series of electoral victories by the left marked the break with the past and swept many of his comrades to power” (Stalder, 2006, p. 12).

In 1979, Castells left Spain and took a temporary position at the University of Wisconsin and made the decision to leave Western Europe permanently. His new travels in the United States would eventually lead him to take a position as the initial and newly appointed professor of sociology and of city and regional planning at the University of California Berkeley. This new position would be important for Castells as this “new post brought him up close and to a very different revolution taking place in Silicon Valley during the 1980’s and 1990’s. He kept his position for almost a quarter of a century, until he resigned in 2003. Since then, his main academic appointments have been as research professor at the Open University of Catalonia in Barcelona and the professor of communication technology and society at the Annenberg School of Communication, University of Southern California” (Stalder, 2006, p. 12).

When describing the experiences and life of Castells, it is easy to see that he has “traveled incessantly; he has held more than 25 visiting professorships in the Americas, Europe,
Russia and Asia and has become an advisor to governments and international organizations. During all that time, and despite many political positions, Castells has remained first and foremost an empirical social researcher. He has not joined a political party since fleeing Spain nor associated himself strongly with any particular political leader” (Stalder, 2006, p. 13).

Castells’ commitment to academic work and the production of scholarly information is something that has only grown since fleeing Spain in the 1960s. Castells has a “steady stream of books, articles, and research monographs, only interrupted in the late 1990’s during a hard but ultimately successful struggle against cancer” (Stalder, 2006, p. 13). Though not made particularly public, Castells’ battle with cancer was a defining moment for him, as it served as the inspiration and motivating force to write the entire three-volume trilogy, *The Information Age*. His possible prognosis of only living for about three years even after treatment put Manuel in a bind in that how would he spend his final years (Ince, 2003, p. 19). His choice was to feverishly work on the decade of information on the changes brought about by technology and globalization became his focus.

After having endured treatments and a major surgery over several months, Castells returned to his work with a more favorable prognosis and has been relatively cancer free ever since. While writing his major theoretical piece on information and the information age, he was able to refine and cut his work down into a more presentable and tangible academic body work that would take world by storm. As Castells stated, “I was stunned by the extraordinary, immediate impact of the trilogy around the world. Between the publication of the first volume in English in November 1996 and early 2002, it has been reprinted 15 times—including a 2000 edition that features a 40 percent new first volume and a substantially revised third volume” (Ince, 2003, p. 20).
While the trilogy of *The Information Age* marks one of Castells’ significant contributions to the sociological world, he still publishes and creates new works even today. Since the revised edition of the three-volume work, he has published several major books, including *The Internet Galaxy* (2001), *Mobile Communication and Society* (2006), *Communication Power* (2006), *The Network Society: From Knowledge to Policy* (2006), *Aftermath: The Cultures Economic Crisis* (2012), and *Networks of Outrage and Hope: Social Movements in the Internet Age* (2012). These updates, add-ons, and new formulizations of previous ideas and creation of new and original content mark a commitment by Castells to continually seek out new possibilities when it comes to theoretical ideas, concepts, and beyond. In the next section, I will very briefly investigate the culmination of Castells’ ideas on the network society and informational capitalism that developed out of *The Information Age* trilogy.
CHAPTER 3
CASTELLS AND SOCIOLOGY

The purpose of this chapter is to integrate and place Manuel Castells’ information society theory into a larger sociological theoretical context that will begin illuminating his overall contribution to the theoretical topic of informational capitalism in sociology. This will be accomplished by comparing his unique theoretical aspects to the sociological economic theories of post-industrial society and post-Fordism. This chapter will begin with an overview of the importance and significance of these two theoretical perspectives to the field of sociology and will be followed by an explanation of what these theories set out to accomplish (their relevance and purpose) and a brief summarization of post-industrial society theory and post-Fordism.

These summaries will include brief overviews of the intellectual work on the topic of western economic change and transition in regard to economic development, which will be of interest because the final sections of this chapter are dedicated to exploring the key, core, ideas and perspectives of Castells’ informational capitalism that separate his sociological theory of economic change from that of post-industrial society theory and the post-Fordist perspective. The culmination of these unique theoretical areas that define Castells’ importance to the field of sociology and his contribution to sociology, this, in turn, will also provide three major theoretical themes that will be of central importance in Chapter 4 as the topic of Castells as an economist is discussed.
Bell and the Post-Industrial Society Thesis

Before having summarized the main aspects of post-industrial society theory, it is important to examine the major underlying purpose in stating and creating a new theory on the topic of economic change and transformation. While there is speculation from other sociologists on this very topic, Daniel Bell, the “theories major creator” (Waters, 1996; Lichtenstein, 2006; Roszak, 1971; McAdams, 2015; Woodward, 1980; Bills, 2004; Webster, 2006; Kumar, 1978; Cohen, 2009) states his theoretical perspectives creation and impetus in his own direct words. That is, Bell states clearly that “the thesis I advance in this book (The Coming of Post-Industrial Society) is that in the next thirty to fifty years we will see the emergence of what I (Bell) called ‘the post-industrial society.’ As I emphasize, this is primarily a change in the social structure, and its consequences will vary in societies with different political and cultural configurations. Yet, as a social form it will be a major feature of the twenty-first century, in the social structures of the United States, Japan, the Soviet Union, and Western Europe. The concept of post-industrial society is on the level of abstraction” (Bell, 1973, p. X) but the consequences are indeed very real.

In his book, The Coming of Post-Industrial Society, Bell uses the United States as his primary focus for the structural changes that he outlines. He doesn’t do this because he has more knowledge of the United States but because Bell sees more of the structural changes transforming U.S. society. Moreover it “allows Bell to deal with the particular, and gain advantages of immediacy and recognition while retaining the context of sociological generalization” (Bell, 1973, p. X), which will be important as he advances notions about the overall transformation of U.S. structures within the concept of a post-industrial society.
The post-industrial society thesis also makes a defining statement about the issue of determinism in Bell’s theoretical perspective. “Unlike Marx, who believed that the fate of England (his example of capitalist industrial society) foreshadowed the fate of all such societies, I (Bell) do not believe in a deterministic trajectory. A post-industrial society is not a ‘substructure’ initiating changes in a ‘superstructure.’ It is one important dimension of a society whose changes pose management problems for the political system that arbitrates society, just as changes in culture and life-style bring about confrontations with tradition, or the rise of new social groups, and the visibility of disadvantaged groups, raises issues of power and distribution of privilege in a society” (Bell, 1973, pp. X–XI). This distinction is important to make as post-industrial society theory’s underlying theoretical stance is not trapped or mired in determinism nor is it inflexible as the flow of changes throughout social structures continue to change.

The theoretical perspective of post-industrial society is one that is to be viewed as a twenty-first century theory. Methodologically, this is a theoretical stance that “is an attempt to use a new kind of conceptual analysis, that of axial principles and axial structures, as a way of ordering ‘bewildering’ number of possible perspectives about macro-historical change. It is an effort, empirically, to identify the substantive character of structural changes in the society as these derive from the changing nature of the economy, and the new and decisive role of theoretical knowledge in determining social innovation and the direction of change. It is a venture into the future” (Bell, 1973, p. XI). This notion of a venture into the future is a significant point to make as post-industrial society theory’s overarching theoretical perspective is steeped in the notion of social forecasting.

In fact, the development and importance of social frameworks and predicting their future is of central importance to the post-industrial society theoretical perspective. That is, “social
frameworks are the structures of the major institutions that order the lives of individuals in a society: the distribution of persons by occupation, the education of the young, the regulation of political conflict, and the like. The change from a rural to an urban society, from an agrarian to an industrial economy, from a federalized to a centralized political state, are major changes in social frameworks” (Bell, 1973, p. 9). These social frameworks are intriguing because frameworks are indeed a structural facet of societies, but they are difficult to change, or in the case of post-industrial society, reverse.

In fact, for the post-industrial perspective, “it is for this reason that they can be more readily identified. But such changes in frameworks are on a large scale, and they do not allow us to specify the exact details of a future set of social arrangements. When such changes are under way, they allow us not to predict the future but to identify an ‘agenda of questions’ that will confront the society and have to be solved. It is this agenda that itself can be forecast” (Bell, 1973, p. 9). This statement becomes the major impetus for creating and investigating the notion of a post-industrial society. The combination of social frameworks and social forecasting come together to explain the defining changes and responses of a new era in relation to labor and economics. This statement about the importance of frameworks and forecasting comes from “the idea of the post-industrial society, is a social forecast about a change in the social framework of Western Society” (Bell, 1973, p. 9). The theory of the post-industrial society will be briefly presented in the section below.

**Post-Industrial Society**

The theory of post-industrial society begins with a unique underlying principle in that Bell sees social structure being separate from politics in general. The changes that take place and are described by his theory of post-industrial society are ones that only happen within the social
structure. The social structure he discusses includes aspects like employment, occupations, class and class differences—especially in reference to social stratification. He leaves out any discussion mentioning politics and political structure and even cultural elements of social structure. This is an important set of precursor ideas to highlight because Bell’s major academic work titled *The Coming Age of Post-Industrial Society* (1973) “is an account of changes taking place in one sector of society only—and one must not presume, says Bell, that these are the most consequential parts” (Webster, 2006, p. 39).

A defining aspect of Bell’s theory of post-industrial society is that different work and employment types come to define a particular society during a specific time period. Bell creates a set of distinctive stages that come to define different eras of employment and occupations. From this perspective, the most common type of work and employment comes to define the major features of a society. Thus, Bell suggests in that earlier preindustrial societies, agricultural labor was the focus, while industrial societies were centered on factory work, and finally in the post-industrial societies, the concept of service-based employment takes hold.

These changes in employment types occur due to an increase in productivity that allows each new, subsequent typology to emerge into the next stage. In addition to increases in productivity, another major factor in transitioning from one society to another is that work is centered upon getting more from less due to an increase in the use of rationalization in the workplace. This means that in a similar vein to the work of Max Weber, Bell is attempting to explain—or at the very least explore—major societal changes through increases in rationalization and increased productivity. This conceptualization would help in defining the changes and shift from a pre-industrial society to a post-industrial society.
For example, in the pre-industrial era, the main focus was people attempting to farm and perform agricultural duties that allowed for subsistence. People were centered on survival and just trying to live from day to day. Once agricultural improvements, such as increased irrigation, advances in farming techniques, and a better understanding of planting and harvesting crops, etc. began changing farming and agriculture in way that would allow people to be less dependent on individual farming and subsistence, people could leave the farm with the knowledge of adequate food security and production and join an exodus to cities where they could now rely on produce from outside the city and begin working on the new expansion of industrial factories. As this process continually moves forward because of the increase in agricultural surplus thanks to increased ability to use technology and new agricultural techniques with fewer people necessary to work in the field, the more it allows former farmers to leave the agricultural world and enter into the new and emerging factories. This initial process never stops and as it progresses forward we see very few people employed in agriculture and yet productivity in that area has perpetually increased because of our use of new technology.

After having progressed through this era, we begin to see a change in employment once again. In the industrial era, there is a focus on factory labor and industrial jobs. The factory system that emerged is definitely unique in that it has an underlying message of less is more or do more with less. This means that industrialized society continues to function at a higher and higher pace with greater increases in production because the new techniques utilized by the factories themselves are meant to sustain increases in productivity. There are examples of this principle throughout factories.

For instance, electricity allows for continuous mass production that allows for consistent whole-scale production of goods that was not possible earlier. Other examples can be found in
steam. This reduces physical labor and manpower, replaces it with machinery power, and creates the potential for more output. There are also companies that need little to no workforce as computers can now control entire assembly lines. These examples illustrate that the process and function of industrialization can be conceptualized as one in which mechanization and automation of factory processes that ensured continual increases in productivity. The general logic extending from this process is one that focuses on creating and doing more with fewer workers now and in the foreseeable future.

The industrial age brings with it increased and consistent productivity that allows for more than mere production to meet basic or general demand. It can create a surplus that marks a significant change. Now, with this surplus, products once thought out of reach or too expensive, such as luxury items or seasonal items, can be purchased whenever individuals are willing to purchase them. It also allows for basic everyday items to be a staple that factories can regularly produce and free up excess money to be spent on services instead of mere goods. “The expenditure of industrial earned wealth can create employment opportunities in services, occupations aimed at satisfying new needs that have emerged, and have become affordable, courtesy of industrial society’s bounty” (Webster, 2006, pp. 39–40). This allows industry to create more wealth and generate more profits to other things with such as continue to refine the industrial process which supports the less is more principle.

As the need for more people decreases in the industrial era, the fewer employees that are needed overall means the focus can be on services and providing services as employment. As more services are offered and are obtainable with the decreases in need for industry, the more people can turn to employment in service sectors and service industries.
As long as this process of narrowing and decreasing the need for employment power in the industrial era decreases, the availability of services increases, and employment in the service sector increases, we will continue to enter into a post-industrial age. There are five major changes that will continue as we navigate through the post-industrial age:

1. There will continue to be a decrease and decline in the number of employees working in industry and industrial work and employment for the foreseeable future. This era could be represented as one in which automation by computers and robots are indeed the future as well.

2. While industrial employment continues to decrease, there will be increases in production and output due to Bell’s concept of rationalization and focus on efficiency.

3. There will be increased wealth and profit from the increase in rationalized and efficient industry that will translate to people spending their money on services once out of reach or on new services that never existed in the past.

4. There will be a continued focus on letting industrial employees go as industry needs fewer employees to perform the basic functions of industrial duties.

5. There will also be the continual creation of a never-ending supply of new job opportunities in sector jobs and employment. This happens as a result of newly generated wealth that comes from the post-industrial society in which more wealth equals more needs for basic services and services previously not thought of before.

This notion of a post-industrial era is not an unfamiliar statement about the social world. Others, such as Colin Clark in the 1940s and Victor Fuchs in the 1960s, were making similar statements in that they discussed “that there has been a marked decline in (broadly agricultural
and extractive industries) and secondary (manufacturing) sector employment and a counterbalancing of tertiary, or service sector jobs” (Webster, 2006, p. 40). Bell is extending this argument that was presented decades earlier in that he sees the service sector and the end of the industrial age as the new post-industrial society. However, before going too far, consider the fact that service employment and service-sector jobs, in general, do mark the end of a series of employment morphing into different sectors over time. The rational and reasoning behind this is a straightforward process in that the concept of more for less is the main driving force behind automating and using technological advances in agriculture and then later in industry. This eliminates the role of farmhands and the individual workers or the working class who found themselves in factories all the while seeing increases in wealth during this transition.

Making basic employees redundant and not necessary is not necessarily a negative development. That is, Bell sees this as a positive development because it allows for the end of the industrialized era and its focus on manual labor and also suggests the beginning of the end of Marxist political notions centered on the proletariat. This is a point made by asking the following question: “How can the proletariat struggle be waged when the proletariat is disappearing?” (Webster, 2006, p. 40). While this is happening, we see automation and technological advances that diminish and discard the working class, but it allows society to receive continually expanding wealth. In response, society receives extra resources, expanded resources that it then uses to create and develop new ways in which to use these new resources which expands and provides extra resources in turn, and so on.

This is the main impetus for what would lead to a continual increase in creating and sustaining service-sector jobs and employment in the post-industrial society. With more wealth flowing throughout society and new areas of services being created to match new interests and
unimagined possibilities that did not previously exist, the expansion of the service sector will not only grow, but the needs of those seeking out services and wanting new services is truly limitless. That is, as long as there is money present and readily available, there will be services. Also, this type of employment has a very unique feature that it makes it difficult and challenging to automate. Since this type of employment is person focused and centered upon person-to-person-interactions it includes many intangibles that machines simply cannot replicate or automate in a feasible way. For example, how is it possible to automate or streamline a nurse, doctor, or teacher?

The overarching point is that for the foreseeable future, there is going to be an expansion of service jobs and employment and that these services will increase and expand as more production and wealth is able to be attained through agriculture and industry. Not only this, but service-sector jobs are seen as more permanent because they are difficult to automate, so eliminating employees becomes more difficult. What follows next is the concept that society has undergone an evolutionary process: Once a pre-industrial epoch and then an industrial epoch. However, these have lost their distinctive attributes as we have moved toward a mature post-industrial society. This new epoch of the post-industrial society marks the end of employment displacement solely due to technology and technical innovations. In the post-industrial epoch, employment and jobs are more secure.

So far, the discussion of the post-industrial society has focused on the changes in historical epochs. However, there is a question of where the advent of a so-called information society and its role in defining our current social world can be seen. That is an easy question to answer in that “the post-industrial society is an information society” (Bell, 1973, p. 467) and that the emerging service economy now represents the arrival of an information era—an information
society. These very blunt statements about the information society and its development within the post-industrial society can be seen in the general characteristics of everyday life in the different epochs. This can be explained because “in pre-industrial society life is a ‘game against nature’ where [o]ne works with raw muscle power; in the industrial era, where the ‘machine predominates’ in a technical and rationalized existence, life ‘is a game against fabricated nature.’ In contrast to both, life in a post-industrial society [that] is based on services…is a game between persons. What counts is not raw muscle power, or energy but information” (Bell, 1976, pp. 126–127).

Another way to conceptualize the argument of an information society as being a post-industrial society is that in the pre-industrial era, the focus was for individuals to just survive and make some sort of basic living—basic subsistence. In this era, the focus was on raw muscle and physical labor. As the industrial era was ushered in, the focus switched to machines and mechanized production. In the service economy associated with the post-industrial society, the material necessary to perform the basics of work is centered on information and ideas. In this structure of a game against persons, it can be argued that it is one in which information is the fundamental everyday resource that is necessary. This is illustrated in the service economy through the basic idea that service and services are information work. Hence, service work equals information work in this era of the post-industrial economy.

Moreover, the expansion of services and the service economy will lead to the creation of even more information in the future. Post-industrial society theory discusses this very concept in stating that “it is possible to distinguish between three types of work, namely ‘extractive,’ ‘fabrication,’ and ‘information activities’” (Bell, 1979, p. 178), the balance of which has changed
over the centuries such that in PIS, the “predominate group [of occupations] consists of information workers” (Bell, 1979, p. 183).

However, even though the post-industrial era is an information society, there is an immense opportunity for this society to be an appealing place in which to live. This can be broken down into four major categories:

1. Since service work is highly associated with white-collar work (white collar as compared to the previous historical era especially the industrial era) and due to its focus on working with actual people, as opposed to machines, there should be an increase in job satisfaction.

2. In the service economy, service-sector jobs are considered professional jobs and professional careers that require the proper skills and proper abilities to perform these kinds of employment. This means that “the ‘central person’ in PIS is the professional, for they are equipped by their education and training, to provide the kinds of skills which are increasingly demanded in the post-industrial society” (Bell, 1973, p. 127).

3. At the center and core of the post-industrial society, are the professional and technical services it can provide because of its demand and need for scientists, researchers, engineers, etc.

4. There is a very particular segment of employment and employment service that is important for the post-industrial society. That is to say, the professionals who work within health and health care, education at all levels, research and government development, are the employment services that will clearly indicate and illuminate the expansion of a new intelligentsia. This will be present in universities, research and development firms, and government.
As the service economy and information society demands more and more professional employees, there is a greater emphasis placed on intellectuals being in the workplace, and as meeting minimum qualifications becomes more common place—along with the need for credentialing on the rise—we see a greater push toward an information/knowledge-based society or an information society. The positive notion of the information society within the post-industrial society means that there will be an expansion of professionals in a quantitative manner. This indicates that there will be more information circulating than any epoch before this one and that the nature and type of work professionals participate in will also undergo qualitative changes.

The major reason for this change in professionals stems from their expertise of knowledge, which makes them more disposed toward planning. As more and more intellectuals and knowledge-based professionals enter into the information society and service economy, we see a major perspective change at the societal level in that people are no longer content to stand and be idle regarding planning and decision making. The post-industrial society is less about leaving things to chance and more about the development of “a more intentional and self-conscious development trajectory, thereby taking control of its destiny in ways previously unimaginable” (Webster, 2006, p. 42).

This is not the only change that takes place within the post-industrial society. A second qualitative societal-level change can be seen in the notion that services and providing services represents the concept of games between people by professionals, the strength and quality of this relationship comes to represent the post-industrial era. The idea is that researchers, academics, scholars, etc. are not profit-driven individuals. They are not concerned with the money made from a student; they are concerned with an individual student’s overall success. Extending from
this perspective, post-industrial society views society as a very person-centered and person-focused society in which a professional’s knowledge transitions into a caring society. In the new post-industrial society, people are not treated as singular, individualized units, which was the fate of the worker in the industrial era). People benefit from the person-centered services of post-industrial professionals that are premised on the needs of clients and the people with whom they interact and provide services.

This new social consciousness ushers in what can be described as “a new consciousness in PIS which, as a communal society” (Bell, 1973, p. 220), promotes the idea of community rather than the individual as the central focal point. This, in turn, will get people across society to start paying attention to large-scale social concerns like the environment and environmental destruction, proper and humane care of the elderly, the achievements of education that must be more than vocational but functional as well, all of which will take precedence over mere matters of economic competition and the value of the dollar as bottom line. This idea represents a new fundamental shift that society has undergone a change in which there is a de-emphasis on “economizing (maximization of return for self-interest) ethos towards a ‘sociologising’ mode of life (the effort to judge a society’s needs in a more conscious fashion…on the basis of some explicit conception of the ‘public interest’)” (Bell, 1973, p. 283). The post-industrial perspective of the current social world being in the throes of a post-industrial society also suggests that, overall, we are now living within a far superior historical era than in the past. (This is not a shock considering Bell has an evolutionary approach within his theory.) Our current society, as it now exists, exists at a higher level than other historical eras, and a social world in which a society can continue to produce and increase its production as time moves forward, are indeed moving forward.
PIST: A Theory of Social Change

This is an important point to make about the theoretical perspective of the post-industrial society because this version of the essential and fundamental economic change and development happening in the United States appears to represent the possibility for social change. This is a point that Powell and Hendricks (2009) make. “The changes occurring in post-industrial society, particularly when considering its socioeconomic and demographic components, have become key transformations for understanding the social conditions which make up intergenerational struggles and conflict. These tensions are explained as conflicting attitudes toward social change, including struggle over scarce resources and legitimacy (including social status). This means that post-industrial society theory can be seen as a theory of social change which has identified transformations in the spheres of economics, work, politics, and social relations” (Powell and Hendricks, 2009, p. 44). In fact, the post-industrial thesis is focused on four major areas of social change that represent the characteristics of the possibility of a different future: A possible positive future.

First, it was mentioned that the shift from industrial work to service employment would be one that represents a movement toward white-collar jobs in which individuals feel more job satisfaction with over time. This means that blue-collar employment and working-class jobs would be deemphasized, or at the very least become less relevant, as the service economy shift begins to take hold in society. This is an acceptable proposition for the post-industrial society theoretical perspective as the large-scale change from industrial to service economy entails macro-level changes that will have far-reaching impacts for everyone.

Second, post-industrial society theory focuses on the increasing demand and use of service employees and professionals in everyday work and employment. While this seems
evident from the expectation of a large-scale massive labor shift, the creation and utilization of professionals, especially white-collar workers, also demands a need for higher education and a profound advancement in basic employable skills. The increasing demand for white-collar work (service jobs), is one that demands higher educational skills and technical skills. This suggests that one of the major changes that the post-industrial perspective acknowledges as the key for the future centers on the topic of education.

The expansion of the need for education and higher education for the sake of the new and emerging economic system demands high-skilled labor. The post-industrial perspective sees an expansion in education and a societal-wide expectation of educational expansion that will grow over time to meet new labor skills demands. This is viewed as a positive because these new skills and demands mean that more educational access will be granted to society in general because the expectation for basic employment in the new and emerging mainstream economy will have to be met.

Third, according to post-industrial society theoretical perspectives, the notion of equality is at the core of its explanation of economic change and development. The shift toward a white-collar society means that everyone will be working similar service-sector jobs that are more person-centered, more caring, more professional, and produce higher job satisfaction. People will no longer work in a situation that is devoid of human contact and focused on lack of connections because of machines, as in the industrial period before this one. People will be expected to have more skills and education, which is something that will be more accessible and make individual employees more valuable as their higher education skills make them “professionals.”

Fourth, and perhaps one of the greatest statements to come out of post-industrial society theory, is that communities will be more informed because of the increase in education. This, in
turn, leads to a more educated general population and communities that will think and consider the types of issues and problems that confront people’s lives. The general public, consisting of professionals—educated professionals—will be informed and demand better communities and better social worlds. This statement is profound in that the economic change from industrial to a post-industrial society need not be a dystopia; it is not the end. Instead, the emerging economic change and social changes that society is undergoing is one of possibility and hope for the future as the sociological theory of post-industrial society views it.

**Post-Fordism’s Thesis**

Similar to the post-industrial society theoretical perspective, it will be of importance to examine the central defining purpose of stating and creating a new Fordist theory of economic change and transformation. This is an area of interest to David Harvey as he makes a general statement on the purpose of Fordist and post-Fordist thought. Harvey begins his investigation into the purpose of the Fordist theoretical orientation. “If there has been some kind of transformation in the political economy of late twentieth-century capitalism, then it behooves us to establish how deep and fundamental the change might be. Signs of radical changes in labor processes, consumer habits, in geographical and geopolitical configurations in state powers and practices, and the like, abound. Yet we still live, in the West, in a society where production for profit remains the basic organizing principle of economic life” (Harvey, 1989a, p. 121). The point for Harvey in this statement is that there is transformation and change occurring at different levels, but how does one go about studying these shifts?

Harvey clarifies this idea in that economists need a way “to represent all the shifting and churning that has gone on since the first major post-war recession of 1973, which does not lose sight of the fact that the basic rules of a capitalist mode of production continue to operate as
invariant shaping forces in historical-geographical development. The language (and therefore the hypothesis) that I shall explore is one in which we view recent events as a transition in the *regime of accumulation* and its associated *mode of social and political regulation*” (Harvey, 1989a, p. 121). In representing his own ideas on the development of these changes in capitalism in the west, Harvey is being influenced by the regulation school, particularly the “basic arguments of Aglietta, Lipietz, and Boyers” (Harvey, 1989a, p. 121) that he briefly summarizes.

For Harvey, regulation school is concerned with “a regime of accumulation that ‘describes the stabilization over a long period of the allocation of the net product between consumption and accumulation; it implies some correspondence between the transformation of both the conditions of production and the conditions of reproduction of wage earners.’ A particular system of accumulation can exist because ‘its schema of reproduction is coherent’” (Harvey, 1989a, p. 121). The problem with this statement is explaining how to bring the behavior of all different kinds of individuals into a configuration that allows the regime of accumulation to continue to function. The regulation school theorists claim that in order to deal with this problem, “there must exist, therefore, ‘a materialization of the regime of accumulation taking the form of norms, habits, laws, regulating networks and so on that ensure the unity of the process, i.e., the appropriate consistency of individual behaviors with the schema of reproduction. This body of interiorized rules and social processes is called the *mode of regulation*” (Harvey, 1989a, pp. 121–122).

This kind of terminology and specific language is useful because it represents a heuristic device. It assists with “focusing our attention upon the complex interrelations, habits, political practices, and cultural forms that allow a highly dynamic, and consequently unstable, capitalist system to acquire sufficient semblance of order to function coherently at least for a certain period
of time” (Harvey, 1989a, p. 122). For Harvey, there are two major areas of any capitalist system that must be negotiated if that market system is to remain possible—to remain viable. First, we have what “arises out of the anarchic qualities of fixing markets, and the second derives the need to exert sufficient control over the way labor power is deployed to guarantee the addition of value in production and, hence, positive profits for as many capitalists as possible” (Harvey, 1989a, p. 122). These two areas of fixing markets and regulations are areas that regulation school theorists, or Fordist theorists, were initially focused on throughout the post-war recession.

However, this changes with the post-Fordist theoretical concern. That is, “I (David Harvey) broadly accept the view that the long post-war boom from 1945-1973, was built upon a certain set of labor control practices, technological mixes, consumption habits, and configuration of political-economic power, and that this configuration can reasonably be called Fordist” (Harvey, 1989a, p. 124). The issue is that there has been continued change ever since the post-war boom that now has to be considered, or in Harvey’s case, reconsidered. “The breakup of this system since 1973 has inaugurated a period of rapid change, flux, and uncertainty. Whether or not the new systems of production and marketing, characterized by more flexible labor processes and markets, of geographic mobility and rapid shifts in consumption practices, warrant the title of a new regime of accumulation, and whether the revival of entrepreneurialism and of neo-conservatism, coupled with cultural turn to post-modernism, warrant the title of a new mode of regulation, is by no means clear” (Harvey, 1989a, p. 124). This is the challenge for post-Fordist theorists to explore and identify whether we are indeed undergoing another round of significant change in which there is a new regime of accumulation and a new regime of regulation.

While there is always a danger in assessing transitions and whether they are indeed real or impactful, for that matter, is always a risk. However, “the contrasts between present political-
economic practices and those of the post-war boom period are sufficiently strong to make a hypothesis of a shift from Fordism to what might be called a ‘flexible regime of accumulation’ a telling way to characterize recent history” (Harvey, 1989a, p. 124). This flexible regime of accumulation and the proceeding transitions associated with these major shifts will be explored in more detail below as the post-Fordist perspectives basic tenets and ideas are summarized and presented.

**Post-Fordism**

One of the defining characteristics of the post-Fordist era and demise of the Fordist era, or regime, is the expansion of globalization. The term globalization means more than the growing interconnectedness of the globe and the expansion of interaction among nation states. Globalization now represents the growing interconnections across the globe and the interconnection between humans and the vast, open global markets that exist. It has become a partial economic explanation for the development of interconnected companies, growing and expanding markets, and organizations. However, globalization also represents a larger cultural and social shift toward something quite different than the previous Fordist era. The type of capitalism that spread into the rest of the globe in the post-Fordist era is one that deeply penetrated into other nations and regions and created networks and relationships across the globe. Another critical aspect of globalization and its operation is creation and continued growth of TNCs or TNCs. Though TNCs are not new, in fact, they have existed since the early twentieth century, their importance in shaping the globalized world cannot be minimized in that they account for the largest portion of current global corporations.

These TNCs are not only large in scale and size, but globalization has expanded their role and dimensions in the world in four major ways. The first major area of importance is that of the
globalization of the market. TNCs now operate from the perspective that all markets are worldwide and that this global market is open and available to those who are able to participate and to those who have the resources to be a part of it. Globalization of the world’s markets into larger areas has created ever-expanding markets that continue to get larger and larger yet are restricted in that only those with enough resources can support a global market presence. This has also made competition fiercer over time because economic battles are fought between global corporations with resources that allow for global reach.

A second area of interest is the globalization of production in which TNCs continue to participate in the global economy their activities and organizations must be organized on a worldwide scale. This means that TNCs must resort to having global production strategies. This explains why there are multiple offices and production facilities that are distanced from marketing and other essential aspects of the corporation in multiple cities throughout the globe. This is done to maximize their position among and against other companies. It gives them a comparative advantage and allows them to minimize costs and potentially maximize profits too. This also means that TNCs must be aware of and consider information issues at the forefront of what they are doing. Having global marketing, employing multiple strategies that appeal across the globe and managing worldwide production facilities are all things that need complicated information services and information technology. Information technology and global production strategies mean that we see the emergence of “circulation activities that connect ‘various parts of the production system’ together. That is, an essential condition of the globalization of production which has been the globalization of information services such as advertising, banking, insurance and consultancy services which provide an emerging global infrastructure” (Webster, 2006, pp. 71–72).
Third is the notion of the globalization of communications in which there has been an explosion in the amount of growing communication interconnections because of globalization. This includes the expansion and growth of both communication and information networks that now span the entire globe. There has been an expansion in telecommunications, and their reach across the globe has developed and constructed a massive yet immersive environment that has a global reach, which is shaped and organized, largely, by media TNCs. While there is a lot of academic literature outlining the negative consequences of this expansion, the main point that post-Fordists want to focus on is the increase in shared common images created through a shared symbolic environment. This point, on the immediate surface, seems unimportant; however, it means that globalization is now so widespread and powerful that it possesses the ability to merge great distances by creating shared symbolic space. This shared symbolic space has an impact on the global economy in that contained within these ideas of shared space are the advertisements, marketing, and suggestions about global consumption and global goods that information technology can now disseminate across the entire globe. Though this is not the only facet that describes global market success and global reach, it does retain a component that means that without these advances in communication technology, it would be less successful and hence less profitable.

The fourth and final dimension to discuss is that of information infrastructure. Each of the aforementioned dimensions of globalization suggests that there is a common feature among all sectors. That is, they all require the expansion and development of information infrastructures and information networks to deal with the operation of a corporation on a global scale. As globalization expanded and continued to grow for the future, new ways of dealing with
information and information networks had to be derived. There are three areas that define the
information infrastructure that developed because of globalization:

1. There had to be an expansion of all kinds of services, such as finance, banking,
   marketing, advertising, etc. Without this expansion in services, TNCs would not be
   able to operate. Information and networks of information now make up the backbone
   of these corporations. The types of services that developed create, distribute, and
   generate all kinds of incoming and outgoing information that corporations now are
   dependent upon.

2. Globalization now requires a massive expansion in information technology and
   communication technology. These advances will assist in the coordination of services
   and coordination between all aspects of the corporations that now span the entire
   globe.

3. There has been a rapid expansion in the amount of information now being created and
   generated through information networks and information infrastructure.

These dimensions of globalization are major challenges for the Fordist regime and
Fordist era. The major challenge comes from the idea that Fordism was not realistic if untenable
for the future. That is, Fordism had an organizational focus on the nation state as a central feature
of society and its importance. This concept of the nation state began to fall apart—or at the very
least became undermined—when TNCs began to expand into the rest of the globe and became
international TNCs with an extensive network of flowing information being transferred across
the globe. Fordism was predicated on the idea that nation states would be able to use
governments to create and implement policies and policy decisions that would impact territories,
and there would be little to no competition from outside countries or nations. This is an increasingly difficult type of system to maintain into today’s globalized world.

The nation state, though still important in terms of providing and implementing crucial everyday components to people’s lives, such as education, welfare, and new legislature, has a declining significance. There are two areas that illustrate this very point. First, the expansion of TNCs and their ability to hide exactly what is owned by which nation signifies that it is increasingly confusing to ascertain who or what nation owns any given property. Second, the Fordist regime and nation states have decreasing significance as there is more pressure for nation states to participate in the global economy and world markets. If nation states are losing their relevancy in terms of making investment decisions and TNCs are focused on attempting to seek highest profits possible on their capital placed around the world, then individual nations (or countries), must feel a necessary pressure to participate in the global system.

The trends of a transitioning post-Fordist era illustrate changes in the following areas when compared to the Fordist regime: There has been an increase in global corporate strategies, an often vicious and cutthroat world of competition in the global marketplace among TNCs vying for new regions and territories, the demise of the nation state in the traditional Fordist in that it now preoccupies a lesser role in financial decisions and implementation of policies. This along with the creation of a recession lasting throughout the 1970s because advanced capitalism is thought to be responsible for ushering in a new regime and hence a post-Fordist era. The notion here is that the stability of the Fordist era ended, and it had officially become obsolete in terms of explaining the current economic situation.

An important facet of this radical change was the movement to weaken and potentially abolish trade unions, labor movements, and collectivist ideas that permeated in the work and
employment culture at the time. With a need and demand for organized labor changes, the post-Fordist era begins with a radical change. Industrial policy and industrial relations were focused on minimizing the impact of labor unions and restricting power of trade union movements. Adding to this is the new concept of corporate downsizing in which the focus is cutting labor and employees while creating jobless growth. A common feature of the post-Fordist regime is the ability to increase production and productivity by either expecting more effort from employees or expecting more from technology and technological capabilities, or, in many cases, both.

A second feature can be found in the organization of corporations. That is, post-Fordist TNCs are losing their vertical organization. Instead of focusing on producing as much as possible within one single unit, the new focus is on contracting out as much as a corporation can without losing any of the basics of what is required to produce in the first place. This process is known as outsourcing, and it makes sense when coupled with corporate downsizing because both require fewer overall employees and fewer full-time employees due to signing limited contracts or temporary contracts, and it eliminates redundant employees and positions.

The concept of vertical organizations on the decline is something that is certainly happening already within the corporate structure, but the disintegration of this type of structure is only possible through the advent of a developed and fully functioning intercommunication system that will allow cross communication on a global level and the need for a very complex and sophisticated computer system with facilities that can allow for the coordination of numerous types of activities. This new type of communication infrastructure, based on advances in communication technology, and the need for a different type of employee, one that provides and understand the new an incoming information, is an essential component of the post-Fordist
regime. There are several defining features that illustrate the changes and overall impact of this new technological change and focus on information as the new key to the post-Fordist regime.

The first feature that represents the changes in the new and emerging information infrastructure centers on the mutual relationship between globalized production and the way in which products are marketed and advertised. Some post-Fordist theorists such as Froebel, Heinrichs, and Kreye have suggested that “we have witnessed the spread of a new international division of labor, one overseen by transnational corporations capable of managing production, distribution and sales worldwide, and coordinating sites in dozens of international locations” (Webster, 2006, p. 78). This merged aspect of production and marketing could not have been possible in the Fordist regime because the development of new information technology and communication technologies had to be firmly in place before this was a possibility.

Second, the emerging global economy is dependent upon information and information services that inform and help predict the decisions made in regard to global financial markets and trade. Without massive information networks that can provide up-to-date, reliable, and comprehensive reports on areas, such as stocks, trading, market changes and growth, and interbank communication, etc., there wouldn’t be a consistent way in which to engage in global economic participation that would consistently allow for accumulation in the post-Fordist regime.

Third, it is of importance that the general improvement of productive processes and the products that they create not only a greater efficiency or be more efficient but also require the possibility and potential of continuously seeking out and searching for new technologies that prove to be cost-efficient and effective yet still retain their ability to improve quality. Improvements like these are not limited to mere automation and mechanization of the factory
floor or production process. These improvements can be seen in robotic areas of production where timed machines do work on the factory floor or in the office setting. There is also an increase in computer control of functions that are away from the production facilities proper and computerizing standard office work and procedures and processes.

A fourth feature of the information infrastructure within the post-Fordist regime is the enhancement of competition and competitive nature of corporations. For companies to stay ahead, it has become absolutely essential to be at the forefront of cutting-edge technologies. The pressure to utilize technology at the highest level appropriate for the industry is much more than merely using the newest and most innovative technology on the factory floor. Equally as important is the notion that a corporation’s networks are fully developed and used to their maximum capability. That is, networks must be utilized within and between the entire organizations to reach maximum efficiency that will increase other aspects of the corporate organization. For instance, a corporation can eliminate wasted time trying to link subsidiaries and suppliers, it can make shipping more efficient, and it can also communicate market information at a much faster rate. In addition to effective and efficient information network technology is the notion that corporations must have excellent databases that store and compile the data they regularly use on their everyday operations, their customers and orders, and anything else that may assist in creating information that might make the outcomes more effective, more efficient, and hence more profitable.

The sum of these four processes can be viewed as something called time space-compression. Time space-compression basically closes the distance between areas and regions and even time between the different regions across the globe in regard to the global economy. Traveling by airplane initially allowed the closing of this gap, but for those in TNCs, now the
creation of global networks of information and vast improvements in communication technologies has decreased this gap in space and time. Now we see the establishment of information networks that no longer take time into consideration; there is no time restriction. These four processes that represent the information infrastructure and the changing post-Fordist regime also signify a common trait of flexibility, which is a mainstay of post-Fordist theory.

While there is some dissension on the importance and extent of other factors and processes mentioned among other post-Fordist thinkers, the universal factor that seems to be discussed across the literature is that of flexibility. Flexibility has steadily become the new expectation and new norm of the post-Fordist regime. This is a point that is very much opposed during the Fordist regime that represents a very structured system that focused on being reliable and steady. As David Harvey discusses, “most thinkers influenced by Regulation School theory, the regime of ‘flexible accumulation’ is different from its predecessor in three ways” (Harvey, 1989a, p. 147):

1. Flexibility of employees = in the post-Fordist era the employee no longer sees staying at the same company for life as an option, that is, once they are so called ‘equipped’ for an occupation or career they are not locked into it for life. They also do not conceptualize themselves as holding any one particular job or holding only one job description. The nature of work is changing because of the flexibility that exists. For instance, there is an increase in wage flexibility in which one is paid for the work they actually do as opposed to a regular wage or expected universal pay rate. Another example comes from labor flexibility in which a person works at several different jobs over a life time and is increasingly a contract employee. A final example can be
seen in the increase in time flexibility where being a part-time employee or being offered flexi-time is becoming the new norm.

2. Flexibility of production = this is the concept that “Fordist methods are outdated by the spread, thanks to information networks, of more versatile and cost-effective production such as ‘Just-in-time’ (JIT) systems which wait until orders are taken before the factory manufactures, hence saving on warehousing and, of course, on unsold products” (Webster, 2006, p. 80).

3. Flexibility of consumption = the idea here is that information technology and technological improvements in production facilities at factories can now produce a wide range of goods and products unlike the Fordist era where factories were maximized to produce one thing very well. Now factories are equipped to make more types of products and create short runs of produced goods and hence modern day production facilities are more versatile and able to handle production changes unlike the Fordist regime of the past.

These three major elements of flexibility are not universal. They exist in varying degrees among corporations. They are more representative of combined elements that are expressed in varying degrees, but their impact can most certainly be felt. These elements combined represent the post-Fordist era in that the order placed by a customer is a customizable order that is made and produced by a multi-skilled set of employees in a flexible yet networked environment informed by an advanced information process. Thus, this entire process is not just a production process. As previously stated, this is just as much a production process as it is an information process. At each and every level, the entire process depends on information processing.
This post-Fordist era is not only an information network society but it is also one in which we see a decline in mass production. Instead of large production facilities and factories located in one region or local area, what has emerged is a global set of interconnected (through information networks) factories and facilities that span the globe. These facilities are high tech with the latest and most sophisticated operating and factory processes that technology can provide. They employ only a few hundred employees at a time as full-time employees; the rest are usually contract employees. They also have facilities and factories in more locations across the globe than thought possible in the past. There is also the emergence of a shrinking overall industrial labor force where the industrial worker, on the whole, is on the decline.

There has been an increase in service-sector jobs, females entering into the workforce in both service and industrial labor but as flex employees or temporary contract employees. This, along with the decline of unions and trade unions, has prevented a new union for modern-day employees to emerge for future union battles. Furthermore, there has been a steady increase in corporate downsizing and keeping core personnel to a minimum with an increase in contract employees, part-timers, and sub-contracted workers. This is now called the emergence of a contingency workforce in which employees are utilized when necessary and cost effective and then dropped from projects or contracts when they become unnecessary. The new employee who shares in more security, if one wants to label it, is the emerging information specialists, and information employees that preoccupy management roles and even lower information roles such as low skilled managers, clerical workers, etc.

Employment and occupations are not only the areas impacted by a fundamental change toward a post-Fordist era. Unfortunately, this era has also transformed entire geographical regions. It separated geographic parts of the United States at their core because of the decline in
areas that were united by similar work that disappeared and the dissolution of political and class solidarity as well. The decline of manufacturing and the rise of service occupations is a story of both worker shifts and gender shifts in the United States, especially in the North. This is a very observable pattern in the United States, where the rustbelt-to-sunbelt trend has been well documented and studied. There has also been major upheaval in terms of politics and social attitudes toward the changing regime. The older notion of industrial workers, their solidarity, union connections, and shared collectivist action has not appealed to the average post-Fordist citizen of today. Instead, what has emerged is a new excitement about individualism and the possibility of the open global market and what it offers.

A final note to mention is that the emergence of an information infrastructure in the post-Fordist regime represents a new era. The use of information and technology in this era plays an important part in bringing about the change from a Fordist regime to a new post-Fordist society. As Fordism and its focus on production slowly continue to fade, there is the advent of a consumption-based society that marks the decline of the mass industrial worker and emergence of a more individualist focus that centers on consumption. For these new individuals, information takes on a primary role in their lives. First, consumers must know what they need to actually consume. This creates and generates information because this knowledge deals with information from marketing and advertising that reaches the consumer. Second, consumers want to purchase items and goods through consumerism that allow them to make unique statements about themselves. Here, information plays a role because of the symbolic dimensions of consumption in which individuals use consumable objects and relationships to make personalized statements about themselves. This closes the cycle in which consumers are generating more and more information.
Post-Fordism and Social Change

If the post-industrial society theory’s notion of a very positive outlook on the economic changes brought about in the last few decades seemed optimistic, then the post-Fordist view is indeed the antidote. First, employees are becoming less secure, less stable, and more vulnerable to being out of work than ever before. Flexible employment and the focus on making employees replaceable and easy to discard with temporary contracts—or severing connections to employees entirely—is much different than the job satisfaction and security of being a white-collar employee in the post-industrial society theoretical perspective.

Second, the previous protections offered by unions and labor organizations has disappeared. The industrial era ushered in the creation of large-scale unions that were meant to protect and watch over employees in a myriad of different industries has vanished. The advent of a service economy and more professional white-collar jobs severed those ties to unions in favor of a more individualized labor market. Adding to the problem is that current workers are more skilled and educated as expected in the post-Fordist era. However, they have failed in their mission to form a more connected community that tackles and assesses problems in general, let alone discuss the problems forming at work or at the company.

Third, this notion of community is also challenged by the post-Fordists as the change toward more localized areas of employment created entire geographic regions dependent upon one single industry. At first, this would suggest that the post-industrial society idea of stronger communities was right. However, increases in globalization wreaked havoc on these geographic regions and created industrial and post-industrial dead zones. This did two distinctive things: It destabilized entire communities regardless of blue-collar or white-collar implications, and it
helped further destroy communities by displacing or shifting community members and illustrating the disposable nature of employees and their skills.

Fourth, there is certainly a new expectation of more skills and higher education in terms of employment and employable skills. In fact, the information society demands that the labor force has new and sophisticated technological knowledge that must be learned and credentialed. The only issue is that this expectation did not materialize nor did education accessibility—at least, not at the level that the post-industrial perspective suggested. This means that there are disparities between those with an education and access to education versus those without it.

Fifth, the equality that the post-industrial society perspective offered in the previous section is not entirely off base or incorrect. However, the post-Fordist perspective sees the emergence of a much different world from the post-industrial society perspective. The stability of the worker, job satisfaction, white-collar movement to form communities and development of a white-collar society, along with the focus of a positive economic change that encourages equality, does not fit the post-Fordist perspective.

While the post-Fordist perspective differs from the post-industrial perspective, post-Fordism still has connections to Fordism and regulation school theory. That is to say, post-Fordists still view modern-day white-collar workers as the new working class or blue-collar everyday employee. While the nature of the work is different and the education expectation is higher, they still suffer with the same problems. They have no unions and no labor protections as far as flexible labor is concerned. They are not a community for themselves but are individualized and represent a community of individuals by themselves, they are disposable, and have to contend with contingency labor much as the working class jobs had to deal with scabs breaking strikes or threatening union solidarity. From this viewpoint, the post-Fordists are in the
same vein of thought as the regulation school in that they need to reestablish unions and labor organizations. The same can be said for modern-day manufacturing jobs that never disappeared but instead reemerged in different regions across the globe.

The post-Fordist perspective still has the tendency to call for more regulation at different levels for the economic system. There is a need to place stricter regulations and rules on work and employment at all levels—state, country, and world—on work, employment, trade, etc. From this perspective, there are post-Fordists operating from within the regulation school perspective and arguably the Fordist perspective in general. The idea here is to work cumulatively to regulate and control the various aspects that would impact the economic system. Thus, the mechanism for change would be laws, rules, regulations, and the use of current political systems and political power to manage the economic system and economic changes. The point is that even if we now live in a post-Fordist society, the mechanisms for change may not be that different from what the regulation school theorists suggested many decades ago.

In the next section, we will assess the linkages among Manuel Castells’ information capitalism, the post-industrial society theoretical perspective and the post-Fordist perspective. These linkages, though very limited in scope, will assist in illustrating the unique and defining aspects that separate Castells’ sociological theory of economic change from both theoretical perspectives discussed in this chapter. By the end this section, Castells’ unique sociological contribution to theories of economic change will be established as will three initial yet important themes as we move forward in assessing Castells as an economist.

**Assessing Castells’ Contribution**

Overall, post-industrial theory and post-Fordism have linkages to the information capitalist perspective of Manuel Castells. There is limited agreement in the sense that while
certain aspects or criteria of both theories have similar statements, there are finer details or basic assumptions that vary. The commonalities between theories represent more superficial connections than absolute statements representing perfect theoretical agreement or theoretical import that is to be expected from two differing perspectives. However, these aspects represent theoretical sameness, which, at the very least, suggest that aspects of post-Fordism appear within the general theoretical perspective of Castells. The differences illustrate that there are stark differences as well. Many of these differences deal with conceptual disagreement, definitional disagreement or the fundamental nature of some operating statement or underlying principal such as with historical developments, the nature of societal breaks and foundations of new eras or time periods, etc.

Like the statements about post-industrial society by Bell, there are connections between both theories, but their strength is relatively weak. These finer details and nuances appear to be splitting hairs at some points, while others are completely separate fundamental statements about the nature of the global economy and information capitalism that has developed or is developing. The most significant point to take away from this analysis of both perspectives is that while there are shared elements between post-Fordism and Castells’ information capitalism the aspects of post-Fordism that appear within Castells’ main body of work represent academic launch points in which he is utilizing a part or mere component of that theory, yet he is using it to make a finer point that distances himself from that perspective at the same time.

This is also the case for all perspectives offered in this section as information theories of the economy. Castells is utilizing partial ideas, concepts, aspects of theories, and partial explanations from each and every theorist. Each theory offered in this section’s discussion represents a perspective in which either superficial elements or partial elements make an
appearance within Castells works. While this is not an uncommon approach to establishing and creating new theories, it becomes significant in that Castells is not necessarily abandoning or saying that these theories are not relevant because aspects can be found throughout his basic works on information capitalism and network economy. Though he is often critical of these elements included or discussed or focuses on distancing himself through making opposite claims, changing concepts, or discussing complete fundamental differences, these theories have linkages in that he is utilizing them as jumping points for discussion that he refines and then recreates into his own theory.

This means that one of Castells’ major unique contributions to the theoretical literature on the information society and economic development is that while he distances himself from these theories, the elements of alternative theories help him build a comprehensive statement about the emerging information capitalist system that he discusses at length. This does not mean that Castells’ theory is not unique or that it is merely a refinement of everything else that was done before. It means that he is building from the established theories and has considered aspects of those theories within his own. The use and integration of concepts from other information society theories, whether there are elements that are retained, refuted, or partially abandoned, or become conceptually different, is unique for this specific academic discussion and topic. For the topic of economic information theories, it is indeed unique and original and represents a Herculean effort of both understanding the previous literature on the theoretical topic, yet it also distances itself through creating a new theoretical perspective.

Castells’ theoretical contributions beyond this statement about the creation of an integrated theoretical perspective are numerous but can be summed up in several statements. First, his discussion and history of the creation of networks specifically represents an innovative
perspective that differs greatly from other information theorists. While they discuss, or mention at a superficial level, the notion of networks, Castells’ discussion of their overall impact on society and the globalized world represents a comprehensive discussion on the topic. This is a significant break from mere mentions of networks or the brushing over of their development and history. Castells has detailed accounts of the development and history of networks, but it is his discussion of the changes brought about because of networks that greatly distances him from his contemporaries.

Adding to this is his attempt to present a comprehensive historical overview of information technology and communication developments. While this does not chronicle every single development, it at the very least makes an attempt at getting the audience and reader to reconsider these developments and their historical significance and impact. This was not a component from other information theorists. This part of the theoretical discussion was often cut short or absent from the conversation, which suggests that these developments merely just exist or occurred at some point. Castells’ framing the development as a referential point adds to the theoretical uniqueness from other contemporaries. This historical component is not merely skipped over or assumed that its significance is an implied statement but yet never stated as with other information theorists.

Another unique aspect that represents Castells’ information capitalism theory is that it possesses the quality of theoretical fluidity. It is not built upon mere steps and stages that imply a linear progression. The constant change that represents the nature of networks and their flexibility to change and adapt also translates into the theoretical perspective. As new elements of the theory emerge in the future, as changes happen, the nature of network theory and information theories for Castells will morph and change at the same time. This means that
Castells’ theoretical perspective is one in which the fluidity of the theory continually makes it a new theory. This perspective is one that has constant movement and motion, which means that it adds a level of complexity compared to other information theorists, yet it may be more off putting because of the constant updating and upkeep necessary for such a theoretical perspective. However, this fluidity also gives this theoretical perspective everyday significance and importance as it is in constant flux and represents the emerging world. This also gives Castells’ information theory flexibility that can feel the pulse of what is truly happening and emerging in a fast-paced, globalized world.

Castells also distances himself from the other information theorists mentioned in this chapter in that he is not making a statement about technological determinism. For Castells, technology and its development has always been a part of society. Its creation and use is not new; it is not unique, and it has always been a part of the social world. What makes current information technology and communication technology unique is the profound effect it is having on the social world. Other information theories and theorists discussed are describing a history of technology and communication that either did not exist before or merely appeared. Castells is not from this perspective nor does he share in this more limited approach. He does not mention technology and its use as a new phenomenon. The same can be said for technological determinist accusations made against Castells. While he does focus on the importance of technology and its development, there are other factors involved in the developing network society that needed to simultaneously occur with the advent of a more technologically advanced society. Without development of the microchip, declining statism, changes in the nation state, facets of globalization, and the spread of networks that allow for connections between the entire globe, there would be no network society or information capitalism.
Castells also navigates his theoretical perspective away from classic ideas on gradualism that seem to plague other information society theoretical perspectives. That is, this notion of a smooth, slow, and steady process of social change is one that Castells take exception to because while there is certainly historical stability, there are times when these stable intervals are punctured by major events that occur with rapidity and mark a new stable era. As previously stated, this statement of punctured eras in history places Castells in a unique theoretical conceptualization of change into differing eras or new points in history. The notion of only a gradual, slow, and steady change and the opposite perspective of a tumultuous and persistent arrival of a new era before, during, and after a new era is too dichotomous for Castells. Instead, Castells is less about abandoning gradualism or instability and more about calling for a perspective that is the theoretical middle ground. His conceptualization of societal-level change into a new era or historical time period that is both stable and temporarily unstable at the same time represents a further distancing of Castells from other information society theorists such as post-industrial society theory and post-Fordist and Fordist perspectives.

Another aspect of Castells’ theoretical perspective that further differentiates his theoretical ideas from other information theorists is his importance of the nature of a technological revolution. While post-industrial society theorists like Bell and post-Fordists like Harvey certainly understand and present technological and informational changes as a part of their theoretical perspectives, they still suffer in that their more gradualist perspectives make the topic seem like just another step or stage in a fairly linear process; it is just another new era or new age. Castells’ emphasis on this topic differs greatly in its understanding, underlying significance, and overall importance. Let me clarify this statement.
The significance of Castells’ puncture into a new information technological revolution is on par with the same changes that occurred during the Industrial Revolution of the eighteenth century. It has the same relevance in that it induced a pattern of discontinuity in the material basis of the economy, society, and culture. This is an important point to make in relation to other information theorists perspectives discussed early in the chapter because Castells is attempting to establish a different theoretical perspective in relation to the technological transformation that our current age is undergoing. This is indeed a unique contribution in relation to the other information theorists mentioned throughout this chapter because Castells is presenting these changes in a manner that goes against the status quo idea that changes were bound to happen or the idea that technological changes occur every day.

This is an unacceptable position for Castells as he views the transformation of our material culture by the works of a new technological paradigm organized around information technology as the most significant puncture point in our current age. This current technological revolution is one that penetrates deep into the basis of all human activity yet is just as process driven as any other previous revolution. This revolution does differ in that it relies on technology, information processing, and communication to function. However, while the technological revolution is dependent upon knowledge and information, this was also the case for other revolutions throughout history. The concept of information at the heart of a new era or historical change is not a new idea; it is not innovative. Information has always been a major component of all revolutions from the past. It did not begin with the current technological age.

This has further distances for Castells’ theoretical perspective because this statement about the importance of the technological revolution as outlined by Castells means the following. First, it emphasizes the relative importance of technology—its development and impact without
committing to the basic tenets of technological determinism. That is to say, technology is of
great importance, but it is not the only important aspect of the theory. Castells emphasizes the
significance of technological, informational, and communication innovations, but this
development is reliant on information, which is the same as previous major historical changes.

This deflects away from the argument that Castells is merely a technological determinist
or that technology is the only thing that matters. His focus on pointing this out and discussing a
balanced version of information and technology in his theoretical perspective is a marked
improvement over the post-industrial and post-Fordist theorists who are vague on this very
notion of a deterministic perspective and might even be accused of playing into a determinist
argument to make their own points.

Second, Castells’ insistence that information, technology, and communications
development is reliant on information is not a new or innovative component of social change or
society provides us with another unique contribution. The concept that information has always
been a component of social change and historical change allows Castells to make the claim that
this technological revolution is indeed a puncture—a breakaway from the past without over
committing to technology’s sole importance. Again, this is important because it helps close the
doors on strong and weak determinism arguments. It also separates Castells’ from other
information theorists like Bell and the post-Fordists such as David Harvey because it is not just
the change in technology that brought about a new historical era. It is the change and application
of information itself.

Third, this concept of information and information processing is translated into
information application. That is to say, information went from mere possibilities and
development to having real and applied praxis in our everyday lives. Technology developed out
of information and information technology is now a prominent feature of the current
transformation in technology that we are experiencing. As more information is generated,
developed, processed, and integrated into our everyday lives, social institutions, and
organizations, we begin to see more prominent changes in our everyday world that reflect these
new changes toward a technological society.

This is another area that separates Castells from the post-industrial and post-Fordist
perspectives because the level of historical change brought about the technological revolution is
a systemic change at the macro-level. It has penetrated into all domains of human life; it is more
than merely a change in the economic system, organizations, political structures, etc.

Our current technological change is larger in scope and scale than what other information
theorists such as Bell and Harvey describe and discuss. It is on a scale that is not quite
understood by other information theorists in general. This is the case for all aforementioned
information theorists because they seemed confined to examining the scope of technology and
information on a relatively small scale by focusing on just a handful of structures or institutions,
if not a singular structure or institution. Castells’ departure toward an information theoretical
perspective that attempts to take this large-scale penetration into the fabric of our human
existence represents a more comprehensive approach on the topic than other information
theorists such as post-industrialists and post-Fordists are willing to take or undertake, which is a
indeed a major contribution of his works.

There is a similar departure for Castells in his discussion of geographic origin points in
which the technological revolution took place. Without going through a complete summary of
the chapter on Castells, the point that needs to be made on this topic of origin points is simply
this: While perhaps in the future, these origin points by geographic region may be debated or
even contested, Castells has at least attempted something quite divergent from other information theorists in that he makes a genuine attempt to explain where these changes in information, technology, and communication began.

This is significant for Castells’ contribution to information theory because his explanation of these origin points and the impact that they have on the rest of the globe represents a partial or potential starting point for investigating the history of the technological revolution. Though this may not be perfect, it represents a first attempt at including this discussion as part of an information society theoretical perspective. It also deflects against the argument that information society theorists skip this vital piece of history by assuming that the technological changes are already here or by not even describing the process of technological change. Castells is able to defend his position on this topic and develop the possibility of a historical explanation for the technological revolution.

Another area of contribution that differentiates Castells from the post-industrialists and post-Fordists deals with his critique and criticisms of the developing Information Age. While most information theorists, at a very minimum, discuss and describe the future, or at the very least make some sort of initial prediction about the Information Age, the variation of the insight they offer is often limited at best. For instance, the post-Fordist perspective mentions the possibility of growing inequality but never quite states where or how this will develop outside of speculation dealing with the division of labor in society.

In these instances, information theorists are at least hinting at the potential for an Information Age or a technological revolution that comes with social problems, social disparities, and growing or spreading inequality. However, they are short sighted in their focus as the predictions are limited in scope and depth for the future of the Information Age. This does
not mean that theorists such as Harvey, Schiller, and other post-Fordists are incorrect in their assessments or suggestions of problems extending through or can now be found in the future.

The theoretical difference between Castells’ theories and limited theories of social change and future predictions is that other information theories like the post-industrialist and post-Fordist perspectives are describing very specific areas in which they see problems arising for the future. Again, they are limited and short sighted at best. Castells offers a critique and criticism of the Information Age that sees growing and rapidly spreading global inequalities but in a more multifaceted approach. He finds problems with the changes brought about by the change in new and necessary technical skills—information skills that are central in today’s society.

Castells sees structural and institutional problems emerging in areas like education, employment, basic skills for labor involvement, the new division of labor, information and its controlling interests, power of global corporations, global economic laws, poverty and economic inequalities, the digital divide that involves technology and information access, misery and the leaving behind of entire populations, social and economic development, crime and international crime, and so forth.. The point with Castells’ criticism and critique is that it is more comprehensive and acknowledges global social problems across several different types of social institutions. This is considerably different from information theorists who over emphasize or only solely focus on one institution and issues deriving from the Information Age.

There is further distance from someone like Bell and his theory of post-industrial theory. Bell acknowledges that work and labor is certainly changing toward a service economy that is dependent on information and growing technologies. The only issue is that Bell sees this fundamental change as being positive because the new skills this change requires will be
available and accessible as the need for new skills are necessary for the change in the division of labor. The anticipation of these changes means that education and skills from educational programs will be there to supplement deficiencies and possible gaps in education and skills. Bell also believes that service jobs should lead to a higher job satisfaction rate because we have to interact with humans and forge human relationships as opposed to relationships with machines in the Industrial Revolution.

He also sees the development of a more socially conscious society emerging due to a growing and expanding highly educated population that will increase for the future. This means that there will be more involvement in citizens taking control of decision making processes and social development that is more responsible for social well-being. Bell sees this era of educated professionals as decentralizing profit motives and becoming a more caring-centered society. Society through the Information Age is poised to become a communal society not focused on profits or self-interests but rather on judging society’s needs in a more conscious fashion steeped in public interests. It is because of this that Bell views our current historical era and its development as a far superior historical era than the past.

This is quite the opposite of Castells’ critical analysis of the Information Age for several reasons. First, Castells does not view the changes in the division of labor as being an all-inclusive process. Some people be left out of the establishment of an information-based employment and labor system, and entire global populations and global communities will be left out of this new developing era. Second, there will be educational disparities, and some populations will be left out because they do not have proper educational access to change and morph with the advent of an information-based economy. Third, there will be a digital divide in which access to basic technology and communication technology will be lacking or nonexistent.
This further separates societies from one another as exposure to and interaction with the technology and communication that will certainly define the future will be out of reach for many across the globe.

Fourth, while citizens can certainly be at the center social movements and social change, the idea of a new and emerging professional culture that encourages community and society over profits and self-interests is possible to a certain extent. However, Bell’s overemphasis on this as a possibility almost seems naïve or overoptimistic about the nature of the Information Age. The communal society that Bell expected did not happen in Castells’ theoretical world because while the nature of employment and labor might have changed, it is still a capitalist economic system; it is a global capitalist system, and these systems are driven by profit motives and self-interests. Fifth, the nature of the information economy is exclusionary. It leaves people out, behind, or without access to participation in the new economy.

It is theories like Bell’s that look to technology and information as an optimistic outcome that has nothing but profound positive possibilities that plague information society theories. This conceptualization of technology improvement does deserve some merit as technology and the information that develops, creates, and processes ideas into new advances certainly occurs. There are also positive possibilities that can be derived from the Information Age in terms of overall impacts on institutions and social structures. However, this perspective by Bell leans too heavily into the unrealistic or overly optimistic side of things without a sense of criticism for the coming age.

Just as the post-Fordist and post-industrialist theorists of the information society were too focused on a singular outcome or solitary critique, Bell’s argument of leaning on the positives shows the same sort of theoretical imbalance when it comes to assessing the outcomes of a new
era change. Castells’ critique and criticism of the Information Age represents an attempt to look at the various multitudes of impacts—both positive and negative—developing for the future. His discussion includes numerous institutions and social structures and defines problematic aspects in several areas, often in each institution he mentions. This does not mean Castells is a dystopian theorist solely bent on showing the negatives of the Information Age. Instead, Castells’ critique, his criticism of the new era, marks a more balanced approach that is comprehensive, multifaceted, and perhaps in many ways more realistic than those of his other theoretical contemporaries.

Overall, “the theory of the network society is both highly ambitious and comparatively modest. It is ambitious in the sense that it strives to provide an integrated sociological framework through which to analyze key dynamics constituting the present. It does so by resolutely refocusing the analysis away from places and structures to flows and networks” (Stalder, 2006, p. 199). The type of reorientation offered by this theoretical perspective is one in which the task of macro-sociology may very well be reinvigorated in a current time when such an undertaking has become distasteful or at the very least unpopular. This is an excellent indicator that we are currently undergoing a time of great theoretical transition in that the changes currently occurring are starting to solidify and take a new shape. This is the case even if the shape has no definite form or has yet to fully develop.

This is not an inherently bad situation in that “the many backward-oriented definitions—‘post-industrialism,’ ‘postmodernism,’ ‘post-Fordism,’ ‘postnationalism,’ ‘risk society,’ ‘disorganized capitalism,’—which have dominated social theory since the 1970s are being replaced by new forward looking concepts around networks and their particular dynamics of
continuity and change, fragmentation and integration, unpredictability and repetitiveness” (Stalder, 2006, p. 199).

This is not to say that the creation or development of network theory can be reduced to one single, solitary academic or author, nor does it imply consensus as to suggest that there is merely one approach. The “deepening understanding of emerging network patterns and their constitutive logic cannot be attributed to one person or even one approach. It is the result of a collective endeavor of many sociologists developing varied analyses around notions of networks, mobility, complexity, and nonlinearity that are very much ‘in the air.’ Yet, Castells’ theory of the network society is the most coherent and comprehensive account of this new order and systemacity” (Stalder, 2006, pp. 199–200). While this normally would imply some grand theory deserving of accolades or adoration from others or seeking approval, keep in mind that Castells’ theory is one of modesty as much as it is ambition.

Castells does not seek the creation of a theoretical perspective that involves the advent of theoretical hubris or the encouragement of intellectual dogmatism as others theories have fallen prey to in the past. This is the major reason why Castells’ information theory and network theory are fluid and open by design. It is also the reason his perspective is not “a single, unified perspective, the theory of the network society is best thought of as a set of interrelated propositions whose relations with one another can be (re)arranged according to the practical analytic task at hand. Instead of postulating a new hierarchy of causes and effects, the theory points to the continuous interdefinition of self-consciousness and creative actors, constituting three irreducible hey highly interdependent sources of dynamism: the capitalist economy, politics, and culture” (Stalder, 2006, p. 200). This same logic about the network society is reapplied and used in his own theoretical perspective.
This logic provides the true outline and unique character of Castells’ theory of the network society. Castells’ theory has fluidity and flexibility; It does not have a static or fixed hierarchy; it has no definite beginning and certainly does not discuss an ending. It is not one directional or have a unilateral purpose. Instead it undertakes the tasks of representing many different viewpoints, and it is easy to reshape both small and core aspects of the theory. This is intriguing because it allows the theoretical perspective to add or remove concepts that make it a perspective that encourages the disposable theory type, yet among all of this, the theory is able to be fully integrative and comprehensive. These combined aspects for Castells, along with his nuances and detailed differences away from the information theories, illustrates that this theory “as a whole is larger than the sum of its parts because it manages to identify, empirically and theoretically a unifying trend across the many domains it covers: the emergence of a new type of social organization, informational networks, superseding vertical integrated hierarchies as the dominant carrier of dominant social processes. This new morphology provides the signature of the new era, hence the network society” (Stalder, 2006, p. 200). This is perhaps Castells’ greatest contribution to the literature on the topic of the information society.

**Themes Based Upon Analysis**

The first theme that appears out of the comparison between Castells and the other information society theorists is that of information capitalism. There are several different aspects of the concept of information capitalism that appear in this theoretical analysis. First, Castells focuses his theory on discussing, describing, and outlining a historical overview of information technology and technological developments, which is something most information society theorists do not include in their approaches. Second, Castells is illustrating the central importance of these technological and information developments and its impact on economic
change. Third, information capitalism does not stay static, and its theoretical fluidity is based on the impact and changes contained within the capitalist system as the advent of new technologies and information becomes available. This is a defining and key aspect that separates Castells from other theorists.

Fourth, the same can be said about gradualism and static theory development in that the relationship between technological and informational changes that represent economic because the fluidity of the theory is being informed by information capitalism and its changes. Fifth, the development of information capitalism represents a new era—an era in which significant and major changes are occurring in the economic world around us. The development of this new era, an information society and information capitalist era, is another central defining feature of Castells’ theoretical perspective. Sixth, the transformation brought forth by technological and information technological change is a significant one to say the least. Castells’ emphasis on how deep and penetrating this change is separates him from other theorists in that this change into a new era is not one that merely happened but one that has limited impact.

A seventh point is that information and information technologies are changing the way we live our social lives. We are more dependent on information and its applications now than ever before. As the nature of this change continues to impact our lives, the use of information and technology will steadily increase in our individual lives and in our structures and institutions too. Castells’ outline and historical explanation of this development as a process represents a final major point in his differentiation from other information theorists in relation to information capitalism.

The significance of these cumulative points is that their uniqueness and differentiation from the other theoretical perspectives mentioned in this chapter represents a theme that one
would expect to find within the academic literature on economics. That is to say, discussions
centering on or utilizing the concept of information capitalism and its development is an
anticipated theme that should appear within the academic literature on economics. Any
conversation outlining the importance of information capitalism, its use, its development, or the
advent of information capitalism as a process should be located within the academic literature on
economics if this unique contribution is indeed significant or important.

The second major theme that appears within this theoretical analysis is that of networks
and network organization. This is based on several unique facets of the conversation that was
outlined in the section on Castells’ contribution to information society theory. The first
contribution in this area that is important is the basic discussion of the importance of networks.
Unlike the post-industrial perspective and post-Fordist perspectives, Castells is not only defining
and discussing networks but he is also outlining and summarizing their development and impact
on the Information Age. He is also creating a comprehensive outline to explain networks as
impacting and spreading throughout the globe. On the surface this does not seem unique, but in
terms of his timeframe as an early 1990’s theorist, this was groundbreaking. Castells did not
assume this was something that just happened but instead outlines the growing connections that
networks have been able to bring to the global world.

A second theme can also be seen in his outline of a theory that is flexible and fluid in
nature. The development of networks and their increasing interconnectedness across the globe
has made a fluid and flexible theoretical perspective necessary as a means to describe and
discuss economic change on a global scale. Networks and network development have created
this need and justified its fluidity and flexibility. This also makes sense for Castells because his
theory is meant to account for and adjust to changes in the networks and network connections that represent the significant changes in globalization that are currently underway.

Another theme can be found in the way in which Castells’ ideas of networks are discussed deals with network organization and its impact on social structures and institutions. As growing interconnections between institutions and social structures are impacted by networked connections, we see a growing complexity between these structures and institutions. The same can be said of interconnections among the globalized world, global institutions, and social structures. Networks are a central and persistent feature of these growing connections in general. The same can be said for the development of networks and their impact on the organization of these social structures and institutions. The area of network organization and network development should also be present as a result of the importance of networks that Castells outlines in his theoretical approach.

Castells’ concept of networks and network organization (or geometry) illustrates yet another theme that separates him from other information theoretical perspectives such as post-industrial society theory and post-Fordist theory. The importance of networks and network organization is a major contribution to information theory in that Castells offers one of the first major forays into describing the creation, origin, and development of networks. Not only this, but networks are utilized within his theoretical perspective as an explanatory mechanism for economic change and persistent fluidity and flexibility of economic changes.

A final theme is that of global development and conversations about global capitalism. Since Castells is making a theoretical statement about changes in the global economy and economic shifts in the global capitalist system, Castells’ impact can be seen in this area.
This makes sense because sociology and information theories should or will have some component of topics dedicated to the topic of global economic change or economic shifts. These three major thematic areas of information capitalism, networks and network organization, and global capitalism are all emerging themes within the context of this portion of the analysis and are possible hypotheses for this research study.

Overall, the analysis of Castells’ unique contribution to information theories illustrates that there are three major overlapping themes that define the contribution of Castells’ works to sociology and other sociological theories of the information society. Those themes are information capitalism and its development, networks and network organization, and global capitalism, though it must be mentioned that this might be less relevant as it represents Castells’ older and declining work on urban cities and urban sociology. The significance of these themes cannot be overstated because if the analysis is correct in indicating Castells’ important and unique contribution of information capitalism to sociology, then there is the potential that economists are also talking about these same themes and possibly even mentioning Castells as a contributor as well. This very idea will be explored in the next chapter as there will be an exploration of the three aforementioned themes in reference to how economists are talking about these areas in their own discipline. There will also be an investigation into the possibility of Castells’ contribution(s) to economics; hence, the question and title of Chapter 4 is “Castells as Economist?”
CHAPTER 4
CASTELLS AS ECONOMIST?

Castells’ Contribution to Economics and How Economists Discuss Relevant Themes

The theoretical discussion outlined above was one that illustrated the unique aspects of Castells’ theory of western economic change and his conceptualization of information capitalism theory in relation to other sociological theories such as post-industrial society theory and post-Fordist. In this section, the focus is to analyze the three thematic areas of networks and network geometry, information capitalism, globalization and TNCs within the context of academic literature on economics. This is an important research task to accomplish in that we are interested in what economists are saying about these three thematic areas and their overall significance and importance within the field of economics. The outcome of this literature review will be a vital part of the research process for this study because the discussion of these thematic areas will help define and determine the possible hypotheses for our deductive, grounded theory, content analysis that will examine the academic literature on economics in relation to Castells.

Networks and Network Geometry from “Economists”

The thematic area of networks is one that preoccupies a “significant and important role for economists” (Roberts & Hite, 2007; Payne, 2006; Mosco, 2009; Mason, 2015; Finlayson, 2003; Drainville, 2004; Froebel, Heinrichs, & Kreye, 2007; Peterson, 2006; Grewal, 2008; Gadrey, 2003; Jackson, 2009; Davern, 1997; Munshi, 2014; Kocsis, 1999; Gandal, 2002) because it has an extensive connection to many different facets within the field of economics. For example, there is use by those in the investing and financial sector of economic studies.
Economist Ajit Balakrishan discusses the significance of networks and the changing nature of economics through network change. He makes this point when he states that the new “basic unit of economic organization is a network. Power, is no longer concentrated in institutions like the state or organizations like capitalist firms, or even controllers of symbolic life. Instead, it is found in networks that control production, distribution, financial circulation, power, information, communication, images and experience” (Balakrishan, 2012, pp. 101–102).

This is also stated by labor and production economist Don Robotham (2005) in his book titled *Culture, Society, and Economy: Bringing Production Back into Economics*. “Theories of ‘disorganized capitalism,’ of ‘economies of signs and space,’ and of ‘networks’ are closely connected to risk society but go further. These theories have the advantage that at least implicitly they accept the reality of the emergence of monopoly and finance capitalism since the beginning of the twentieth century as the dominant national and global political economic reality. Although these types of theories do not discuss monopoly capitalism at length, nevertheless the very concept of a capitalism which is ‘disorganized’ presupposes the prior domination of the ‘organized,’ monopoly capital variety” (p. 76).

The main point of these theories now becomes “the argument that this monopoly capitalism—glossed as ‘organized capitalism’—is only one version of modernity and moreover one that is superseded by the reassertion of neo-liberalism, recent technological developments and the ‘flows’ of globalized capitalism. It is because of network theory and theories of disorganized capitalism share the common assumption that, an economic path is unfolding which supersedes monopoly capitalism that they justify as being treated together” (p. 76). In this example, Robotham is suggesting that networks and network theories have the potential to fill an important gap in economics that allows for a reassessment of monopoly in a capitalist context. In
this sense, networks and network theories can provide a theoretical perspective that can assess economics beyond disorganized capitalism.

Another clear example of the importance of networks in economics comes from a political economist who claims that network theories “reveal a genuine concern that, while elements of traditional capitalism persist, one needs to be open to the view that we are experiencing the creation of a fundamentally new type of society. The importance of making the most profitable use of the means of production, including labor, continues, and the social relations of production, if increasingly organized around communication and information, remain distinctly capitalist. However, the enormous accelerating capacity to create communication and information networks challenges capitalism’s ability to manage and contain them. The volume of information and communication that falls out of the orbit of value extraction—from the simple act of downloading material free of charge, to sending a video message to the world on YouTube, to carrying out criminal activities like money laundering under the cover of cyberspace—threatens singular dominance of the capitalist mode of production” (Mosco, 2009, p. 75). This statement of the implied possibility of a new network economic-based system is an area of study that Mosco brings several theorists into an economic discussion of possibility for the entire field of economics.

On the surface, this would mean that networks are mentioned and considered important for Mosco and political economists. However, Mosco (2009) goes on to state that network theorists, in general, are those who “question the continued dominance of traditional capitalism, the network(s) begin to replace the commodity as the central axis of social development. We live in a changed world, marked by the tension between information that wants to be free and a capitalism that wants it for the singular purpose of creating surplus value” (p. 76) the
investigation of and understanding of this relationship is one that economists will have to discuss and take into account for the foreseeable future.

While a general statement that networks are indeed important to economists has emerged, there is one specific area that dominates network discussions within the academic literature on economics. Network geometry that refers “to ‘timeless time,’ ‘space of flows,’ ‘space of places,’ ‘networked spaces’ and its importance to economists” (Grewal, 2008; Gadrey, 2003; Peterson, 2006; Roberts & Hite, 2007; Duffield, 2007; Mosco, 2009; Sassen, 2004; Harvey, 1989b; Harvey, 1999; Thrift & Crang, 2007). There are multiple instances within economics where network organization (geometry) is of central importance. For example, Vincent Mosco discusses how spatialization is not only an important concept across economics but also in political economy studies. He makes this point when he claims that “the starting point for rethinking political economy starts with spatialization, or the process of overcoming the constraints of space in social life” (Mosco, 2009, p. 14). In fact, spatialization is not a new concept in economics; political economists have been studying this process for quite some time.

Mosco states that “political economists start from how communication content audiences, and labor are turned into marketable commodities. But they do not reduce all communication into to this single process. From the earliest development of a political economy approach, spatialization has taken its place alongside commodification” (Mosco, 2009, p. 14). This is even the case for classical political economists, “such as Adam Smith and David Ricardo, who found it necessary to devote considerable attention to the problems of how to value the spaces taken up by land and our built environment. Furthermore, their development of a labor theory of value was connected to the problem of how to define and measure labor time” (Mosco, 2009, p. 14). The same can be said for Karl Marx as he “came closer to spatialization when he noted that
capitalism annihilates space with time. By this he meant that business makes use of the means of transportation and communication to diminish the time it takes to move, goods, people, and messages through space” (Mosco, 2009, p. 14). Mosco’s point in briefly illustrating the history of classical economists and their theoretical development of ideas within the context of spatial relations and spatial relationships is that economists, classical economists, and even political economists have been utilizing and discussing spatial-related topics from space of flows, to space of places, and time compression since their inception.

Economists are now moving their studies and investigations into networks and network organization (geometry) even further as changes in space and time continue to emerge. Space time compression and issues of narrowing space or shrinking of physical space is one of great concern to economists because now there is a focus on the “declining importance of physical space, the space of places, and the rising significance of the space of flows to suggest that the world map is being redrawn according to boundaries established by flows of people, goods, services, and messages, creating what Doreen Massey refers to as a transformed ‘power-geometry’” (Mosco, 2009, p. 14). This notion of power-geometry brings up the importance of communication and spatialization that not only has demolished previous boundaries and barriers but also has promoted and led to the process of globalization and the worldwide restructuring of institutions, including economic institutions throughout the world, which is a point that Gadrey (2003) makes when she states that economics “to a large extent is structured around a network of financial flows…that global financial markets are embodied in information networks” (p. 13). Grewal (2008) makes a similar but more bold statement in this regard as he states that network geometry and the space of flows has not only increased the globalization of technology and its
impact but also its relationship to the “globalization of commerce (the global economic system) is one the most significant features of our age” (p. 225).

Other economists, such as V. Spike Peterson, see a more direct connection to network organization (geometry) and globalization. That is, Peterson views “globalization as especially visible in flows of symbols, information and communication through electronic and wireless transmissions that defy territorial constraints. It is not only the new scale and velocity of transmissions of but the different (symbolic, non-material, virtual) nature of these processes that we must address, as intangible symbols contravene notions of time and space as well as conventional analyses of material goods. The unprecedented fusion of symbols/culture and commodities/economy in today’s GPE requires an understanding of ‘culture’ and ‘economy’ as constituted. Given the newness of these developments, we must begin to specify and examine the notion of a ‘virtual economy’” (Peterson, 2006, p. 94). Again, in a similar notion to other economists, the central feature of Peterson’s statement is that of network organization (geometry) redefining time and space and the need to investigate or reinvestigate the connection between changes in culture and economy toward a virtual economy constituted through the use of networks and network concepts.

While the last several examples of networks and network organization (geometry) have referred to purely economic structural changes or new developments in economic structures in regard to networks. There is also an area of interest by economists studying structural changes in the economy and the complications or consequences that arise out of the economic change and advent of network and network geometry relationship. We see an example of this from Drainville (2004) in the book *Contesting Globalization: Space and Place in the World Economy*. He writes that network theories “have tended to argue that improvements in managerial and
production practices, as well as radical changes in transportation and communication technologies (e.g., wire, coaxial and fiber optic cables, wireless broadcasting, earth satellites) have opened up a planetary ‘space of flows’ that now exists above and beyond (or outside and between) the ‘spaces of places,’ where political struggles about the collective organization of daily life were hitherto located” (p. 23).

This is an example of the idea of political struggle in that networks and the ‘space of flows’ in that the more communication society has available to them and larger public reach actually impacts social structures. This is a statement made by Alan Finlayson when he discusses the concept of media and politics. For Finlayson, “the media is not all there is to politics, all politics must go through the media to affect decision making…politics is fundamentally framed in its substance, organization, process and leadership, by the inherent logic of the media system, particularly by the new electronic media. Tied to this capacity for opinion polling, direct marketing and the rapid-response techniques of opinion management the political space begins to be closed down. There is still conflict, still a plurality of positions, but they are tied into, framed by, media processes” (Finlayson, 2003, p. 47). In this example, similar to Sassen’s point, the space of flows, a new aspect of network organization or network geometry, has changed every day social structures. This is a common example throughout the academic literature on economics as changes in space and time have brought on a myriad of significant changes even beyond social structures.

In fact, other economists argue that networks and the concept of the space of flows has a hand in dismantling communities. Don Robotham makes this very point when he claims that the space of flows is just as much about community or the dismantling of communities as anything else. In fact, the “notion of a ‘space of flows’ is part of this idea of communitarianism. In this
sense, a communal identity is the primary ontological reality, it follows that social and economic relations which operate outside of and beyond communities necessarily operate in an alienating ‘space’—a void which never achieves the ‘meaning-full’ interactions of ‘place.’ This ‘space’ is simply a ‘space of flows’—a realm of alienation impacting on ‘fully autonomous’ communities from outside. It is able to subordinate, exploit and even crush communities, without penetrating and profoundly transforming their very nature and inner social characteristics” (Robotham, 2005, p. 109). This point is established within the context of a book on economics that discusses the concept of understanding labor relations and changes in communities both global and local from an economist’s view point. Again, the notion of network organization and geometry of space plays a defining and significant role in this discussion.

A similar example can be found in Balakrishnan’s economic work on studying and assessing the impact of information and networks on global economic systems. For Balakrishan (2012), “networks have the power to socially include or exclude people, communities, economies and entire countries, based on the present and increasing social and informational inequalities in the world” (p. 102). This is a similar point to Robotham’s idea of exploited communities because Balakrishnan is discussing the exclusion or possible exclusion of communities although he is discussing global communities and widespread geographic regions instead of Robotham’s concern for local communities. The overall issue is one that involves the changing nature of economies. That is, both local and global communities, due to networks and network geometry, now brings the local and global together as the space of places begins to narrow but with possible consequences, but there is also new hope in that the advent of new potential resistance local and global social problems develops social movements.
The notion of developing social movements and resistance to financial exploitation is important to economists in relation to networks and network geometry that look at the defining economic characteristics of society on the whole. In the case of economist Paul Mason, his work is centered on the global and economic social problems that stem from a network society. For example, “by creating millions of networked people, financially exploited but with the whole of human intelligence one thumb-swipe away, info-capitalism has created a new agent of change in history: the educated and connected human being. As a result, in the years since 2008, we have seen the start of a new kind of uprising. Opposition movements have hit the streets determined to avoid power structures and abuses that hierarchies bring, and to immunize themselves against the mistakes of the twentieth century” (Mason, 2015, p. xvii). In Mason’s example, networks and the growing interconnections associated with their rapid expansion have created a more aware and information-connected society that refuses to let a new power structure take over financial exploitation and economic exploitative practices.

This is a very relevant point that Mason discusses because his work is centered on discussing economic changes and new developments within the context of a post-capitalist economic world. This also follows the overall important theme of networks and network organization (geometry) within economics because the rise of new communication technologies and the erosion of boundaries due to globalization has created a space of flows in which every day individuals can now connect and interact with a plethora of information. This new interaction with information has led to new social movements and social awareness of economic exploitation and unnecessary hyper-exploitative economic practices.
Economics and Emergent Themes From Networks

From a review of the literature on networks and network organization (geometry) within economics, there are three distinct but important areas that have emerged as central to economic studies and research. First, networks and network theories are of importance to economists. Studying, researching, or applying theories of networks was present throughout the entirety of the economic literature and spanned the gamut, including business and finance economics, political economy, economists of geography and spatial relations, global economics, international economics, and even development economics. This is especially interesting because it suggests that network theories and the concept of networks, in general, were important from more theoretical views and abstract notions of networks to more applied uses of networks in the body of economic literature. It also suggests that networks not only span the entirety of the literature but the overall use of networks appears to be common and even encouraged.

Second, economists are focused on utilizing and discussing the changes brought on by networks and the emerging changes in network geometry. The terms and concepts of space of flows, timeless time, space of places, and power-geometry were all mentioned and deemed as significant and important to the study of economics. In fact, the larger point made in reference to network geometry was that going forward into the future, economists need to continue to discuss and study the changes brought about by changes in spatial relations and spatialization-related topics and issues. Along these same lines, it was discussed at length that while spatial changes and the impact they have on the economy and economic systems is an area of interest rooted in classical era economics, the addition of networks—either information/communication or the expansion of diminished or erased global boundaries—presents a further challenge and needs special attention to make sense of economic changes.
Third, this examination of the literature illustrated that networks and network geometry are indeed changing social structures and institutions. These changes are occurring on multiple levels and scales. This is apparent in the literature when there are discussions of global economic expansion, the destruction of local and global communities, the possibility of financial exploitation and hyper-exploitative practices, or new social movements that utilize the networks and new garnered information to resist and fight against social injustice and economic inequality. In all of these cases, the central feature is that significant structural change is present and being brought about because of networks and network expansion and because of important changes within the network geometry concerning space, time, and place. Economists acknowledge and warn that further economic studies need to be done in these areas and that consequences of these changes have very real and present dangers associated with them. From the economic perspective, network geometry and networks have varying consequences that are indeed worthy of and warrant more study for the future. Just as the classical economists were concerned with structural changes and networks, so too should modern-day economists. This perspective was apparent within the body of economics literature.

**Information Capitalism and Economic Literature**

Economists are also very focused on having discussions on the notion of information capitalism or informational capitalism within the literature. This notion of an “information capitalist society and information based economic system is of great importance and significance for economists” (Murray, 2004; Fernandez-Kelley & Shefner, 2006; Papademetriou & Martin, 1991; Kincaid & Portes, 1994; Gadrey, 2003; Robotham, 2005; Drainville, 2004; Mosco, 2009; Balakrishnan, 2012; Duffield, 2006; Payne, 2006; Gandal, 2002; Stiglitz, 2003; Stiglitz, 2000). This importance of an informational economy is discussed at length in the economic literature.
For example, Mark Duffield (2006) discusses the importance of “an emerging global informational economy” that started decades ago (p. 337). That is to say, the information economy is one that has spread the notion of globalization in a way in which economists see “the consolidation of several distinct but interrelated regionalized economic systems as the center of the formal economy. Moreover, rather than continuing to expand in a spatial or geographic sense, the competitive financial, investment, trade, and productive networks that link these regionalized systems have been thickening and deepening since the 1970’s” (Duffield, 2006, p. 337). This is a significant point to make as economists are not only interested in the concept of an information capitalist economy but that interest has existed been a part of the literature for several decades.

This is the same point made by development economist Martin J. Murray (2004) in his book *The Evolving Spatial Form of Cities in a Globalizing World Economy* in which he assesses global economic changes among major global cities and their impact of an information economy. As the local becomes more global—or glocal—cities across the world over the last several decades had to adjust, assess, and reassess the ways in which cities function and develop. This is especially the case in regard to providing basic services and having basic functioning structures. The issue is that the changes in economic functions and other social structures are being directly impacted by “a globalizing world economy that is increasingly dominated by informationalised economic activities” (Murray 2004, p. 3). (These shifts and changes brought about because of the emerging information economy are ones that have been recognized by economists for decades, yet these changes still bring about more emerging changes.

Kincaid and Portes (1994) bring up the significance of the information economy as it has brought about major changes in the mode of production and development across countries
throughout the globe. “Innovations in informatics, telecommunications, and transportation technologies have resulted in a quantum leap forward in the decentralization of production and administrative tasks within these (information economic) kind of systems. In effect, this reverses the trend toward centralization that was a major characteristic of the early history of capitalism” (Kincaid & Portes, 1994, p. 12). Kincaid and Portes (1994) give us a realistic example of this very process. “When a new fashion design can be transmitted electronically from New York to Hong Kong, production started the following day, the ‘friction’ of space that formerly constrained industrial practices has been almost eliminated. More than the ingenuity of inventors, the dynamics of the new technologies respond to the economic needs of firms in an increasingly competitive world” (p. 12). The idea of an information economy has a profound effect on decentralizing production and opening the world economy to a more competitive market with which to from which to operate. This varies greatly from the industrial period in which the notion of centralization of production was the key. In this example, we see that information capitalism and information economies are changing modes of production.

Beyond even this basic point about changing modes of production, Kincaid and Portes (1994) identify three new emerging areas that have come to represent an information capitalist economy. First, there has been “a technological revolution of historic proportions, with its basic nucleus in information technologies. Second, the formation of an international economic system working as a unit in real time, supported by a technological infrastructure that makes such simultaneity possible. Third, fundamental socioeconomic restructuring, in both dominant and dependent societies, that has established a new basis for capital accumulation and political legitimacy at the center while imposing significant social costs on both types of societies” (p. 58). All three of these areas make a statement about the information economic system. That
is, information technology is at the key of developing information capitalism. In fact, it is dependent on the creation of new and innovative technologies. The rapid use and transmission of these technological advances in information and communication allow for the development of a global information economic system. The establishment of a new basis for a capitalist accumulation wealth is dependent upon the advances made in relation to the changing information-based modes of production that focus on decentralizing instead of centralizing as in the past.

Another example of the information economy as a change in the mode production comes from Jean Gadrey’s study of different economic theories that claim we are now living in a new economy. While this book does challenge differing notions of new economic movements, Gadrey recognizes that there are important elements to discuss in reference to the creation or emergence of an information economy. She makes this very point when stating that “the productivity of units and agents fundamentally depends upon their capacity to generate, process, and apply efficiently knowledge-based information; the information technology paradigm is ‘based on flexibility’; in the long term productivity is the source of the wealth of nations, and technology, including organizational and managerial technology, is the major productivity-inducing factor; these technologies and the new organizational forms that they make possible encourage the trends towards industrialization and labor flexibility; finally, new form of capitalism is to a large extent structured around a network of financial flows…of global financial markets embodied in information networks” (Gadrey, 2003, p. 13).

Again, there is a focus on information economy as a change in production occurring as new information technology allows for the flexibility necessary to allow a global informational economy to emerge that impacts both labor and organizational processes. These processes
encourage industrialization and labor flexibility that come to define and represent a network of financial flows that is global but rooted within the context of an information economy. Thus, the information economy represents a new mode of production centered on technology and information-knowledge advances.

This is a reoccurring theme within the academic literature on economics as Mosco discusses economic transitions within the context of information and technological advances related to capitalism. For Mosco, “capitalism is undergoing a transition from monopolistic to flexible forms of regulation that make extensive use of communication and information technology to integrate people into society through control over the labor process and over patterns consuming material and immaterial products” (Mosco, 2009, p. 56). This notion of communication and information change that Mosco describes as happening within capitalist economic systems closely describes the post-Fordist viewpoint that many economists subscribe to as their own theoretical perspective. However, Mosco will continue in his analysis of information economic theories and suggest that “systemic alternatives to the regulation approach assert more explicitly a turn to a post-Fordist period. This includes work, heavily influenced by radical geography that aims to integrate post-Fordist with post-modernistic scholarship to produce an analysis of the transformation in the global space of flows: material, informational, and cultural” (Mosco, 2009, pp. 56–57). This is a significant point because Mosco will advance the notion that information capitalism and information economies might represent a movement beyond post-Fordist style thinking in the academic literature on economics.

In fact, Mosco suggests that for political economists and economists in general, “claim that the terms ‘information age’ or ‘information society’ represent a new form of capitalism, simultaneously strengthening some of the fundamental tendencies of the system by expanding
markets while also challenging them. In this respect, information society is more than just a
description of a type of capitalist society, one with relatively more economic activity bound up
with information. Rather it refers to a society whose activity raises major questions about the
viability of capitalism because it opens new forms of production, both within and outside the
system and its legal structure” (Mosco, 2009, p. 76). In this example from Mosco, there is again
a central theme of the significant changes brought about because of information capitalism, but
the central defining area of concern is still that of production and modes of production along with
economic structural change.

Drainville (2004) also views the changes in the mode of production as a central feature of
information economy perspectives. This is the case for Drainville (2004) in relation to his
summary of information, space of flows, and modes of production. “The global ‘space of flows’
is not, as was the ‘space of place,’ a contested terrain, where social relations relativize power and
create contingent, historically specific and contradictory modes of production and regulation. It
is not a place for the ‘quotidian’ making of social rules, where every day in every context, people
acting individually or collectively produce or reproduce the rules of their society. Rather it is
conceptualized as an immaterial vacuum where disembodied processes flow unimpeded and
technology itself is a ‘mode of social development,’ set behind actually existing actors, either
busily networking or flex timing with the flow, or folded into themselves, in identity politics”
(p. 24). In this example, Drainville continues along the path of other economists across the
entirety of the discipline in that modes of production and their shifts, development, or changes
are the central defining feature of information capitalism and informational economy
discussions.
Drainville makes a suggestion that is claimed by many others about information economics discussions in that modes of production are important and that technology that stems from information communication technologies and technological advances has produced a new and emergent all-around mode of social development across the social spectrum. Thus, mode of production and modes of social development are significant for Drainville. This continued theme will become the most significant point illustrated throughout the entirety of the economic literature on information capitalism and information economy.

**Information Capitalism Themes That Emerge from Economic Literature**

There are three very important emergent themes that can be derived from the economic literature assessed for information capitalism. First, information capitalism and information economies are important and significant for economists across the entire broad spectrum of the discipline. Again, just as with the network and network organization (geometry) section, there is a specific emphasis given to information capitalism and information economy. The economists actively involved in this academic conversation show incredible range from political economists to development economists, global economics literature, international economics, labor and organizational economics, comparative economics, and cross comparative economic development and policy.

Regardless of the category of economic interest in the topic of information capitalism, this is a topic that economists are interested in studying. Specifically, the changes and shifts that are caused by a fundamental economic system’s new development seem to permeate the economic literature. Whether information capitalism is discussed as a marked change in the economic system, to the importance of understanding a more information based economic
system, to assessing large scale economic change, information capitalism was, and is, a topic of economic interest across the field of study.

Second, there is an overarching theme of information capitalism as important in reference to changes in the mode of production. Economists in this literature review mentioned the changing nature of modes of production as related to the emergence of information capitalism and information economy. While other economists in this literature review were trying to identify whether these information-based changes were changes and attempted to isolate and locate the underlying changes in the mode of production. While other economists focused on analyzing the extent to which we can see and view these new modes of production in the everyday social world. In all of these examples from the literature, changes in the mode of production was the definitive central feature of information capitalism discussions and research after the notion of information capitalism as important and worthy of study.

Third, an important theme to emerge from the information capitalism literature is that of whether economists agreed on the level of significance of information capitalist change, or more specifically information economic changes in modes of production. There was a legitimate attempt to understand and locate these possible changes within the economic system. This is a significant point to make because it means that economists are taking the possibility of a new perspective, outlining an information capitalist theory, and exploring its merits, worth, and possible inclusion into economic theoretical discussions. This is evidenced by the amount of detail and focus on the history of the developing information capitalist perspective and the large-scale summarization of these types of theoretical concepts and ideas. In addition, this means that there is an ongoing investigation into this perspective and that investigation needs to be assessed and explored further into the future.
Global Capitalism and TNCs in the Economic Literature

The final thematic area of importance to economists is that of global capitalism and the development of TNCs. This area, in particular, is one that needs some clarification. When referencing and discussing the notion of global capitalism and TNCs, the context in which they will be discussed is its change, development, and impact on cities and urban development. This theme will be just as important and significant as networks, network organization (geometry), and information capitalism. In fact, “global capitalism and the development of transnational corporations (TNCs) is viewed as being not only significant but it is a major emphasis for economists” (Wheeler & Muller, 1981; Bryson & Henry, 1999; Wheeler, Aoyama, & Warf, 2000; Cuthbert, 2006; Murray, 2004; Fernandez-Kelley & Shefner, 2006; Papademetriou & Martin, 1991; LeGates & Stout, 2000; Kaplan & Wheeler, 2009, McChesney, 1998; Gale & Kariv, 2007; Fukushima & Kikuchi, 2008; Farhat & Mahmood, 1996). In fact, Robert McChesney (1998) makes this very point regarding the entire field of economics when he proclaims that “globalization may well be the dominant political, social, and economic issue of our era… the extent of globalization should not be exaggerated; it is just one trend-albeit an important one-among many in the complex, rapidly evolving, and not particularly stable worldwide capitalist system” (p. 1). This concept of the importance of globalization is one that many economists across the field discuss in their economic studies.

For example, Wheeler and Muller (1981) discuss the changing nature of global economic structures and the changes they bring forth to entire institutions, such as agriculture, in the United States. This is a statement they make clear when they state that “food production is becoming characterized by economic spacialization which is the concept that there is a near-national set of more-specialized producing regions that have emerged, that are dominated by a
large-scale geographic division of labor, internal agglomeration of economies, and increasing interregional trade” (p. 317). In the Wheeler and Muller example, they are beginning a discussion of noticeable changes that agriculture is undergoing as globalized capitalist markets begin to apply a more large-scale and international-based agricultural trade and division of labor that did not exist in the past. The changes they see in agriculture are not unique. That is, they see further changes across society as both rural and urban cities have transportation, communication, and markets expand and become larger in scale due to economic spatialization, which they see as “diffusing rapidly” due to globalization of markets and global capitalism (Wheeler and Muller, 1981, p. 317).

A similar example comes from Martin J. Murray in his focus on the development of cities in a globalizing world economy. Murray argues that there has been important work done by economists, especially urban economists “have drawn attention to the pivotal role of the current wave of globalization in fostering intensified competition amongst and between cities that aspire to ‘world-class’ status” (Murray, 2004, p. 2). Researchers in this area of study within economics have adopted what is now known as a global cities paradigm. Researchers in this area of study “have sought to reassess the importance of large metropolises as key-command and control centers within the interlocking globalizing dynamics of financial markets, high-level producer services, corporate headquarters and other associated business-services industries (telecommunications, business conferences, media, design and cultural industries, transport, and property developments). A central tenet of this innovative theoretical framework is the contention that the spatial dispersal of [TNCs]…over increasingly global distances requires a parallel territorial concentration of ‘command’ functions at the apex of the global urban
hierarchy” (Murray, 2004, p. 2–3). This means that the global reach and integration of new high-level functions now demands a more strategic role for largescale urban cities.

Not only that, but large urban areas and major cities have moved “beyond their conventional historical role as central sites for managing worldwide trade and international banking and finance, emergent ‘global cities’ now function as ‘highly concentrated command and control points in the organization of the world economy.’ And as key locations for transnational corporate head offices. While globalization has affected all kinds of geographical localities in a variety of ways, it assumes particular significance in those key urban centers that’s scholars have labeled ‘global’ or ‘world cities.’ In short, globalization, precedes and largely determines urban spatial and socio-cultural restructuring, inexorably transforming emergent global cities by disconnecting them from their local ties” (Murray, 2004, p. 3). This is an interesting point to make to say the least because Murray is suggesting that the globalization of the world economy has led to the development of centralizing global cities or world centers that have not only redefined urban centers and urban life but also changed urban spatial relations and reshaped the social and cultural aspects of cities as well. Thus, globalizing economies is not just impacting urban areas and cities, but they have a profound effect on the society and culture around us as well.

This is a point that Kaplan et al. (2009) makes in his discussion of the development of cities within the context of the transformation of urban space. New and expanding telecommunication technologies and services have increased globalization and the interconnectivity of everything, including “people’s lives, work, ability to shop and socialize, but it is also altering the kinds of activities that take place within the family home, the office and
other workplaces, the classroom, financial institutions, and even within the automobile” (p. 134). The same can be said for the development of global cities and urban space change.

Kaplan’s main argument is that even though globalization is altering and transforming global cities into major centers, this does not suggest that cities will disappear or cease to exist in the future. He makes this clear when he proclaims that “although some scholars have predicted the ‘death of cities’ as a result of information being equally abundant everywhere in the country of world, as we have seen telecommunications can both centralize and decentralize urban activities and centers. Past urban planning and policy approaches saw the city as made of distinct and discrete zones of residential, commercial, and industrial land use maintained by zoning ordinances. This industrial-era perspective has become obsolete in the telecommunications age” as technology and telecommunications has expanded global reach and impact on the nature of cities and the urban space they preoccupy (p. 135).

Kaplan (2009) goes on to say that in “the contemporary large city, far from being bypassed by spaceless communications and the death of distance, has become a concentrated constellation of computers principally linked with other major cities, themselves control points of national and global economics and the ensuing social and cultural consequences” (p. 135). Similar to the points made by Murray, Kaplan is stating that globalization and the interconnection of major urban cities through technology have produced a major change in urban areas and urban space. Not only are we seeing a change in urban space and the form in which they exist, but these same fundamental and large-scale changes are transforming people’s lives as well. The results of these changes are significant to make in addition to Martin because Kaplan is suggesting there are consequences that form from these new developments in urban city centers.
A point also made by James Wheeler in his statement that “the current reality and these future developments (technological) are astounding in the consequences for telecommunications among global cities and emerging word cities. Whereas inexpensive and instantaneous transmission of routine messages and data can take place worldwide, the limited number of global cities will continue to function as select gathering places-centers of people concentrations” (p. 6). This limited reach of major urban centers and large-scale cities suggests that there will be unequal development of new globalized cities and city centers. Overall, there is an intriguing problem that Murray (2004), Kaplan et al. (2009), and Wheeler (1981) hint at, which is the unequal development of cities and unequal change in urban space as a problem for the future.

This concept of global economic restructuring and unequal development is a pressing issue that concerns Cuthbert (2011) in his study of the form and space of cities. That is, the process of growing interconnected cities through globalization and the advancement of technology comes with new consequences for the future. For instance, “as a backdrop to this process, global economic restructuring is already fulfilling the expectation that the third millennium will generate circumstances wholly unanticipated in history. For the first time, economic forces evade political control, as international financial markets transcend the ability of any single political organization to govern their operations. A key function of this global economy is its tendency to break down production processes hierarchically, not only as an inherent technological necessity but also as a geographic or sociospatial feature that permits the necessary exploitation of labor markets in the second, third and fourth world orders” (p. 111). This concern of exploitative labor is a growing concern in terms of underdeveloped or unequally developed regions, and even more importantly, cities. As other economists in this literature...
review have already pointed out, this will also impact labor and migration within the global cities and global centers of the world.

This is the central focus of Papademetriou and Martin (1991) who discuss urban development and cities within the context of becoming more globalized and how that unequally impacts labor and migration. This is a point they make when stating that classical economic models of development and migration “are criticized by conflict theorists. Conflict theorists object to the classical models portrayed of migration as the calculated result of individual actions motivated by self-interest. Conflict theorists see migration in the context of class structure and conflict. Both Marx and Neo-Marxist view emigration as the result of the incorporation of less-developed sectors (such as traditional rural economies and periphery countries) into more economically advanced sectors (such as cities or city centers). This process of incorporating developing areas becomes cumulatively unequal and leads to the weakening of the position of the developing sectors vis-à-vis the advanced ones. Human and capital resource flows thus reflect a process whereby excess labor from subsistence sectors and economies migrate to the modern sectors and economies” (p. 9). While these two specific economists are taking a more Marxist approach in their account of migration and labor change, they agree in that globalization and centering of major cities as labor centers. The point they make is still significant for economics in that as major metropolitan cities and global cities develop for the future, the changes in labor and migration among cities brings about new challenges as the new global cities emerge as major employers, and as more cities concentrate labor, there will be an increase in migration.

This will have consequences as migrants represent new labor challenges, which is a point that Fernandez-Kelley and Shefner (2006) make when they state that migrants can become
thought of as “unregulated workers that can ignore or violate state regulations, they try to keep a low profile, thus refraining from overt complaint, dispute, or negotiation” (p. 1). This causes both realistic problems and perceived problems. These notions only increase with the emergence of a large-scale migrant population. However, there will also be a potential two-tiered economic system that sees economic advancement in major cities and urban areas versus lesser developed and less economically developed countries, or in the case of globalization, less-developed economic regions. The overarching point made by Papademetriou and Martin (1991) is that globalization is bringing about the possibility of unequal economic development.

The same point is also made by Ron Martin (1999) in his discussion of end of geography theories that examine the erosion of national and global borders and boundaries. Martin discusses the notion that “the ‘end of geography’ thesis is that this integration of world financial markets has undermined the significance of location, in the sense that the new communication technologies considerably widen the choice of geographic location of financial firms and allows them to serve widely dispersed markets regardless of where they happen to be” (p. 67). This dispersion of markets and the location, or relocation of production, makes for a volatile mix in that global industries can continue to profit and find new markets within a context of displacing workers and displacing regions.

From this perspective, not only is migrant labor and labor in general destabilized, but the regulatory functions of political organizations and nation states are also lost. This will create future problems in terms of city development and urban city centers as labor and labor-related social problems extend into the future because of globalized labor change and labor transformations.
Global Capitalism and TNCs as Emergent Economic Theme

While this is a major theme that economists are discussing, there are three specific areas of importance that developed out of this discussion of city development, global capitalism, and TNCs. First, the restructuring of cities brought upon by increases in global capitalism and the global economy is a central feature of city development and urban development literature in economics. The notion of cities and city life undergoing significant changes was a topic covered extensively, and the development of major urban centers and global city centers was a consistent topic.

Second, the idea that growing connections and establishments of major global city centers were brought about because of technology and communication technological changes was also a consistent theme found in the literature. Almost every economist for this literature review directly or indirectly identified communication and information technology as a key and central feature of transformation or of new developments that cities are undergoing. Not only was technology a key aspect of development but it also establishes itself as a central feature to be attached to or become a global city center is a theme found throughout the economic journal literature.

Third, there was a significant focus upon the consequences and social problems associated with city development and city transformation. As cities become global centers and undergo structural and institutional changes, there are new consequences that develop, or in the case of some cities, do not develop. The overarching theme of unequal global development was a consistent point made by several economists in the literature. Not only do we see unequal development, but there are also issues of unequal regional and global development attached to these overarching concerns. There is also mention of unequal economic development, financial
market development, and new issues concerning labor, migration, labor policy, and exploitative and hyper-exploitative practices that are consequences that need study for the foreseeable future.

**Emergent Economic Themes and Castells**

The literature review of economics was meant to investigate the ways in which economists are describing, discussing, or making statements about the themes of networks and network organization (geometry), information capitalism, and global capitalism and TNCs. This inquiry was initially posed as a way in which we could investigate economists’ perspectives on these three very specific thematic areas. However, there is another purpose in investigating these themes. This literature review was centered on the importance and significance of these three specific themes in regard to the field of economics and to economists in general. This is noticeable as there was an upfront commitment to having a broad review of economics across the field, which was apparent in the literature in statements from economists ranging the entirety of economics.

The literature review of these themes confirmed that these areas are not only significant and important to economists across the field, but they are also discussed and researched by economists as well. This is an important point to make as this literature review serves as our justification of performing a deductive content analysis of the academic literature on economics in relation to the academic work of Castells. That is, if the themes of networks, information capitalism, globalization, and TNCs are important to economists across the field, then it stands to reason that Castells should also be a contributor to research performed in this area within the academic literature on economics.

Castells’ three major thematic areas of networks, information capitalism, and globalization are meant to make him unique compared to the major competing sociological
theories of western economic change that included Bell’s post-industrial theory and Harvey’s post-Fordism which were all discussed in Chapter 3. Though this was a point that was discussed and made earlier, it needs reiteration before going forward. Castells’ major contribution to the sociological study of western economic change is centralized in the three thematic areas of networks, information capitalism, and globalization.

These defining aspects of Castells’ theoretical perspective not only make him dynamic but they have also perhaps redefined the ways in which sociologists and social scientists, in general, view current sociological changes in the economic system. In fact, many sociologists view “Castells contribution of informational capitalism, networks, and global development as being the three central features defining his theoretical ideas” (Ritzer, 2000; Longhofer & Winchester, 2012; Jones, 2010; Roberts & Hite, 2007; Stalder, 2006; Webster, 2006). This is also significant to restate because Castells’ theoretical perspective has not only permeated the sociological literature in terms of importance within these three thematic areas but it has also succeeded in his theoretical goal of “challenging the claims made by the Post-Industrial Society theorists and post-Fordist perspective” (Castells, 1996, p. 152–153). Hence, the major point of Chapter 3 was that the themes established as unique contributions within the sociology of economics place Manuel Castells, from a sociological standpoint, as an important and central figure in the debate and theoretical perspectives informing current ideas on sociological theories of economics.

However, Castells is also attempting to make contribution to the field of economics through his information capitalism economic perspective in his theoretical work. The issue at hand then becomes whether Castells has made a contribution to economics through his theoretical perspective of information capitalism and the central theoretical defining themes of
information capitalism, networks, global development, and TNCs in the academic literature on economics. These three thematic areas were already established as topics of interest throughout the economics literature and deemed important to the study of economics in general.

The literature review in this chapter already emphasized that these three thematic areas are of central importance moving forward in the discipline of economics in terms of research and scholarly work. This notion was not meant to be a passing fad in research or a theoretical soup-du-jour that would lose its interest in the future. Instead, these three thematic areas were described in the academic literature on economics as central and defining. This observation from the literature poses another question in that given the field of economics important focus on these thematic areas of information capitalism, networks, and global development and TNCs Manuel Castells should be featured within economics? More simply put, given Castells’ interest in these same topics and thematic areas within economics, his work should be featured within the academic literature on economics.

As we move into Chapter 5, this notion of locating the use and utility of Castells’ theoretical idea of information capitalism and the three thematic areas within the academic literature on economics will be of concern for us moving forward. Chapter 5 will begin with an outline of the methodology and process of performing a deductive content analysis of the literature. At the end of Chapter 5, there will be a summary of the content analysis findings and implications of these findings for Castells’ economic theory of information capitalism.
CHAPTER 5
CONTENT ANALYSIS AND METHODOLOGY

Introduction

The point of this chapter is to look closer at economic research and use of Castells’ theory of information capitalism and the themes of information capitalism, networks and network organization (geometry), and global capitalism with TNCs, within the academic literature on economics. To accomplish the goal of understanding the use of Castells’ information capitalism and these thematic areas within the economic literature, a content analysis was performed to assess his theoretical use and its importance in the literature. The emerging categories generated from the theoretical analysis of Castells’ contribution to sociology and the analysis of economic literature and their use of the three themes are valuable as they assisted in assessing the overall contribution of Castells’ theory of information capitalism in relation to the economic journal literature.

According to the thematic implications of the sociological contribution of Castells and the focus on these themes for the study of economics, Castells’ information capitalism theoretical perspective should be referenced in the academic literature on economics. This is the case because Castells’ contribution to sociology and social science, in general, was illustrated to be the three same thematic areas that are of concern and significance within the academic literature on economics. In addition, another important statement to make clear is that if Castells is expected and assumed to be a part of the academic literature on economics due to his connection and contribution to information capitalism, networks, and global capitalism, then it is also
reasonable to assume that these themes will also be utilized in reference to him in the academic literature on economics.

The content analysis portion of this dissertation serves the essential function of actually locating the literature in which his work appears and assessing the economic dialogue surrounding the possible thematic contribution of Manuel Castells in the academic literature on economics. There is also an investigation into the thematic areas in which we see the academic work of Manuel Castells and his contribution to economics. These specific research areas within the academic literature on economics are important because the information ascertained from this study gives theoretical and intellectual insight into what economists are actually doing with Castells’ sociology of economic theory of information capitalism. It also allows for discussion on the extent to which information capitalism and the thematic areas of information capitalism, networks, and global capitalism are actually being used and how.

This study also highlights the extent to which this theory is being applied theoretically and the areas of discussion contained within the categories of information capitalism, networks, and global capitalism that are important within the literature. The extent of these categories and their development will not only allow us to further discuss Castells’ overall importance to the field of economics but it will also provide key insight into which areas or topics are actually utilized. These statements will also allow us to comment on Castells’ impact on the field of economics overall.

**Content Analysis as a Methodology**

There are several reasons why a content analysis is being utilized for the purpose of this study. First, there’s the ability to categorize instances of text in a very organized yet objective fashion. Content analysis from this perspective illustrates the notion that it is indeed a systematic
methodology in which researchers are able to implore, utilize, and apply rigorous techniques in conducting their studies. This is a point that Berg (2004) makes when he states that “the criteria of selection used in any given content analysis must be sufficiently exhaustive to account for each variation of message content and must be rigidly and consistently applied so that other researchers or readers, looking at the same messages, would obtain the same or comparable results” (p. 268).

This brings us to a second reason for utilizing content analysis. It allows for a very structured way of identifying and classifying pieces of data while also permitting the researcher to examine the types of underlying meaning or meanings of the text and information being created and eventually analyzed. Not only does it provide the structure necessary for analyzing the content and generating information from it, but the manifest content of the data produced is determined in this research to identify the surface structure or general classifications of the data. Third, content analysis provides the opportunity to allow the “determination of latent meaning or meanings of the data in order to assess the symbolism of the specific terms used and meaning conveyed” (Berg, 2004, p. 268). Additionality, having the ability to discuss and present the results of manifest content in terms of frequency of the data is important. It is important because it can assist the researcher by indicating the magnitude of the message conveyed within the analyzed text or texts. A similar idea is expressed within latent meaning.

If a content analysis of the latent meaning of the language and content being utilized in the text being investigated is conducted, it can permit the researcher to “learn about how…authors’ textual materials view their social worlds” (Berg, 2004, p. 269). In addition, the other major strengths of conducting a content analysis, in comparison to other types of possible methodologies, includes the low-cost of performing and conducting the study, gaining
untouched, original data and increasing the researcher’s reliability by reading and rereading data.

Even though there are strengths to utilizing and performing a content analysis for research studies, there are also weaknesses. The data collection portion of performing a content analysis can and often is time-consuming, as was the case with this study investigating the economic journal literature. Another concern comes about when looking for latent meaning within the data. It may take a lot of time to read and reread the data to begin the process of identifying the context and the underlying meaning of each piece of data. Another possible weakness of content analysis, which applies to this research, concerns creating an exhaustive list of terms to search for in the texts read for the study.

In my initial list of key terms, I attempted to create an exhaustive list of terms. Although it is possible, I did not include every term associated with information capitalism and network economy. My list of terms is extensive, and I added new terms to it as they became apparent in the process of collecting data, but I may have missed some related terms. If there were instances in which this happened, then some terms might not have been included. However, they were likely listed in conjunction with other terms already on my list or in a section already counted because of related material in the section. This is why my list of initial key terms was created to be expanded upon and considered a list in constant development, instead of being seen as an absolute preset list.

Another possible limitation in conducting content analysis research concerns reliability. When I assigned codes to sections of the academic literature on economics and the text located within them, it can be argued that researchers can designate codes to data in an inconsistent manner or assign incorrect codes to sections of text. To curtail this problem, I have increased the
reliability of this content analysis by presenting each theme and sub-theme identified in the research into a well-illustrated findings section with multiple, independent examples of my findings. This measure of increasing reliability is advocated by Berg (2004) “as one avenue to more extensively illustrating how codes represent pieces of text” (p. 269).

A final potential weakness of performing a content analysis that is important for this research is that “it does not allow for the researcher to understand or state definite causal relationships” (Berg, 2004, p. 269). This is not a key concern of this research as the purpose of this study is to merely isolate where dialogue or conversations are taking place about Castells’ concepts of information capitalism, networks and network economy, and global capitalism in the academic literature on economics is actually occurring and where Castells’ theoretical ideas are being utilized are the main concerns for this study. I will, however, discuss some of the implications of what the findings of this research convey about the influences shaping the data analyzed in this research, and what they potentially convey about the dialogue and conversation where Castells’ economic theory takes place in the economic literature and to what extent.

This means that definitive statements are not being made about these issues outside of their location and possible implications. This is because the data from my content analysis does not support making conclusions about cause and effect. Instead, the task of this research was to locate, identify, and investigate the context in which academic conversations about the economic theory of Manuel Castells is taking place within the academic literature on economics as a whole. This makes methodological sense because the context in which this study is being performed is exploratory in nature; it is an exploratory study that no one else has attempted.
Methodology Explained

The design of this research was a deductive qualitative content analysis which involved collecting data, looking for themes and patterns that emerge during the coding and collapsing of data, identifying variables, and analyzing data. Some of the concepts identified in the literature review were initial sensitizing concepts that indicate the prominence and significance of Castells’ academic works and the types of themes that became important during the coding process. These concepts, discussed in the literature review, represented specific areas and topics of discussion that may be found within the academic literature on economics. The location of these themes and context in which they are discussed are the central focus of this research study.

The methodology employed for this research involved a “spiraling process” which required continually going back and forth during the process and making many decisions based upon what emerged from the data. As is typical of qualitative research, data collection and analysis occurred simultaneously (Berg, 1998; Lofland & Lofland, 1995). This chapter describes how this process was carried out in detail. This description explains how the sample was collected, tentative hypotheses derived from the literature review, the coding frame utilized for this study, and how the data was analyzed.

Population and Sample

The population for this study included all economic journals located within the database called EconLit, which was accessed through an online search engine called JSTOR. At the time when this research began, November of 2015, there were 222 total journals contained within the EconLit database. This population of journals included only English language articles. However, it also included academic papers and special edition journals as well.
A total sample of 222 was available for this study, and the criteria used for the filtering process were as follows: all journals were in English, all journals in the database were utilized in this study to cast a broad net, journals dated from January 1, 1995 through November 15, 2015 were utilized because this the initial date (1995) of the publishing of Castells’ *The Rise of the Network Society*, and the final filter after these parameters were met was an extensive search to narrow down the data by only looking only at journals that mention Castells and information capitalism in the text, abstract, description, keywords section, title, or references pages. This final search yielded the following results of 229 journals to be analyzed for this content analysis. The results of using these filters produced an interesting array of economic journals that illustrates variety and uniqueness of journals along with some interesting points related to the location of the journals themselves.

**Design of This Study**

The purpose of this research is twofold in that it is concerned with (1) locating the context in which Castells’ theoretical ideas on information capitalism as an economic theory are being discussed in the academic literature on economics, and (2) describing the themes, or in this case, the emergent themes that appear as important theoretical topics of discussion within the literature regarding Castells’ information capitalism. These two research areas led me to transcribe each and every reference to Castells, in any way, shape, or form, within every economic journal, paper, or special edition that was a part of the content analysis sample. Not only were single words, sentences and entire block quotes, etc., used as my basic unit of analysis, but particular attention was also paid to the type and exact journal where Castells was being mentioned regardless of use—either superficial or in great detail.
The research strategy was to locate the context in which Castells is being utilized in the academic literature on economics and describe the emergent themes that consistently appeared within the literature. It was also exploratory in that “emerging themes were noted and described in keeping with a grounded theory approach” (Glaser & Strauss, 1967, p. 1). The transcriptions allowed for a more in-depth analysis of the verbal text that may not have been possible if only looking at the journal articles solely in portable document format.

The use of content analysis allows for flexibility in formulating hypotheses and allows for drawing tentative conclusions from the content. Based upon the literature review and sociological theoretical analysis between Castells information capitalist theory and post-industrial theory and post-Fordist perspective, the following served as guiding hypotheses:

**H1:** Castells will have a presence in the economic journal literature.

**H2:** The academic literature on economics will utilize and mention information capitalism as created by Castells.

**H3:** The academic literature on economics will utilize and mention networks and network organization (geometry) as created by Castells.

**H4:** The academic literature on economics will utilize and mention global capitalism and TNCs as created by Manuel Castells.

**Data Collection and Categorization**

The data was collected for this research study by reading and performing in-text searches within every economic journal article utilized for this study and locating all references to Castells and the term information capitalism. After having found a reference to Castells or information capitalism within the text, I would transcribe the passage, section, block quote, sentence, or single term used from the search. To ensure consistency, each journal was searched five times to
prevent loss of data. It was during this transcription process that themes began to emerge. Transcribing the in-text references to Castells allowed for a hard copy of the text. Words and sentences, regardless of length, could be color coded in a Microsoft Word file as fitting into one of the categories on the coding frame. This also served as a way to check the reliability of the text used within the economic journal literature.

After the in-text search was utilized a fifth and final time, I was able to complete the coding frame. The coding frame was also completed from the transcriptions of the text located in the literature. Themes emerged in some journals, which made it necessary to view the articles again to determine whether these themes were present in other economic journals. The journal text was viewed again seven weeks later to verify themes and to ensure that as much data as possible were coded. This also served to verify intra-rater reliability.

Data was also collected on the journal type in which instances of Castells or information capitalism were identified. After each in-text search and transcription was completed, there was a special section after that article denoting its journal title, date, volume, and any other special qualifiers or indicators that described the journal itself. This data was used to make statements about the context and location of Castells’ academic works and economic theory later on.

An open coding frame was used to analyze data within the several areas explored in this research project. This initial frame was developed by color coding and noting the type and kind of reference to Castells’ academic works and his ideas on information capitalism. Initially, these areas included information capitalism, networks, global capitalism, social movements, state and power, urban and grassroots, economic and political transition, decline of the state, poverty, and identity. However, after having looked at the frequency in which the color-coded frames appeared within the literature, only three major-coded areas of interest emerged as being
significant for the purpose of this study. These three major areas of interest, which have been the majority of the references within the literature, also correspond to the three themes expected from the literature review in Chapter 3, which were information capitalism, networks and network organization (geometry), and global capitalism (TNCs).

The coding categories reflected what was found in the literature review in Chapter 3, and the three major areas expected to be of significance in the literature corresponded with the statements made by others regarding Castells’ ideas and concepts across other fields. The coding frame was completed while viewing the transcriptions of the text that related to Castells. The coding frames were completed through the frequency of the categories or by counting the total number of references. This was done because the point of this study was to investigate where the significance and importance of Castells is located within the academic literature on economics and to locate the context in which these dialogues are occurring. By focusing on Castells’ most referred-to areas and topics within the literature, a statement can be made about his significance and importance within the academic literature on economics and also attend to its overall location and what that means for his future reference in the literature.

According to Luckmann and Berger (1966), “language plays an important role in the transmission of objectivated messages. Language is not only important in presenting ‘knowledge’ as it also provides meaning to those who are the receivers of that ‘knowledge’” (p. 22). These journal articles serve as the social apparatus to transmit objectivated meanings or knowledge of Castells and his theoretical perspective of information capitalism. Individuals, or in this case academics, reading economic journals will form subjective meanings from objectivated reality. They will form these meanings not only from what they see but also from what they interpret from the information before them. The coding frame established for this
study serves to determine what knowledge is being transmitted through the text of academic literature on economics.

Coding the Text

Most of the data recorded for information capitalism, networks and network organization, and global capitalism, were initially recorded with single words. However, as variations of terms began to arise and be utilized consistently, the list of key words and terms began to expand. This means that even list of key terms provided below were established through an inductive approach in that they emerged within the context of the data itself. This was crucial for this content analysis because the types of terms utilized in the literature assists in making statements about Castells later on in the conclusions section. The list of keywords and terms in its full form is located below:

**Information Capitalism:**
- Information Capitalism
- Information Society
- Informationalism
- Information Technology
- Information Communication Technology
- Information Age
- Information Commodity
- Information Technological Revolution

**Network Theory:**
- Network
- Network Geometry
- Network Economy
- Multi-functional Network
- Network Society
- Timeless-Time
- Space of Flows
- Spacio-temporal Flows
- Spacio-temporal
- Information Flows
- Capital Flows
- Global Capital Flows
Nodes
Agents
Network of Action
Spatial Dimensions
Global Networks
Space

**Global Capitalism:**
- Global Capitalism
- Global Economy
- TNCs (TNC)

The transcriptions of the text analyzed for this content analysis were utilized to provide support for the data on the coding frame and to examine the words, concepts, terms, key ideas, and quotations that indicated the use of Castells’ economic theory of information capitalism, which is a central feature of this research study.

The ratio of each of these three major categories was tallied by indicating the number of overall references in every economic journal in which they were present. Then, the ratio of instances was tabulated on a spreadsheet to show the location of the journal and the number of instances it appeared within a particular journal respectively. From these lists of frequencies and the location of the references to Castells within the literature, the emergence of three categories formed.

**Coding and Indicators**

Initially, in the research process undertaken here, the coding frame did not include a specific list of key terms for coding the text in the journals. As this content analysis was done through a deductive approach but with an open coding format, the list of key terms and concepts associated with Castells and information capitalism would begin to develop rather quickly after having begun the initial analysis. While a list of key terms and concepts emerged through the analysis of the economic journals, the literature review did not inform this process.
However, the literature review and theoretical analysis provided indicators of the initial hypotheses and provided insight into the potential major categories that would come to define the areas and topics discussed within the academic literature on economics. These three categories developed into the three central emergent themes of information capitalism, networks and network organization, and global capitalism that were established earlier in the literature review as important areas of research and the sociological theoretical analysis in which these thematic areas were perceived as possible indicators of the reference to and utilization of Castells in general.

References to these three themes were also confirmed within the content analysis performed for this research study. As the findings section located below will illustrate, these three thematic areas of discussion, while significant to economics in the initial literature review and important to theoretical perspectives in sociological theories of the economy in regards to Castells’ contribution, unfortunately play a limited role in impacting the academic literature on economics overall.

**Results of the Content Analysis: Information Capitalism**

The theme of information capitalism is an area that is definitely noticeable within the literature. There are many illustrations of how the authors of these articles are utilizing and applying Castells’ notion of information capitalism and its conceptualizations in their research. For example, Galambos (2005) states that “Castells conclusion that the new economy is “informational because the productivity and competitiveness of units or agents in this economy ... fundamentally depend upon their capacity to generate, process, and apply efficiently knowledge-based information” (p. 1). In this example, Galambos is both using Castells’ definition of informational capitalism and describing a new and emerging economic system.
There are more examples of this in the literature. For instance, Ishemo (2004) discusses the same idea. “That transformation, he suggests, is manifested in a ‘new economy’ characterized by ‘three fundamental features.’ These are that the ‘new economy’ is, first, ‘informational’ which means ‘the capacity of generating knowledge and processing/managing information.’ In turn this determines ‘productivity and competitiveness of all kinds of economic units, be they firms, regions, or countries’” (p. 74).

Another example can be found in Powell’s (2001) article where he discusses Castells’ notion of an information economy. “Castells uses the word ‘informational’ to distinguish the current centrality of the role of information and information technology in society and business from its acknowledged but lesser use in previous systems. He sees informational industries and processes as integral parts of a world order dominated by global financial networks exchanging huge flows of capital. These giant flows work beyond the strategic control of any one identifiable group of people” (p. 244–245). In these types of examples, the concept of information capitalism and ideas surrounding a new and emerging information economy is the focus. While these examples represent basic definitions and summaries of the key terms information capitalism and information economy, they are still important for the nature of this study. In fact, this was a common occurrence in many of the journal articles analyzed for this project.

However, this is not the only aspect of information capitalism and information economy development discussed in the literature. Another aspect discussed is the development and historical development of information and information technology that has culminated into the Information Age in which we live. An example of this can be seen in Sengupta’s (2001) article. At the dawn of 21st century the changing nature of capitalism found another path to cause globalization in the information technology revolution. In his multi-volume work on the
Information Age, Manuel Castells has examined the dynamics of this new world of technological revolution. At its core, the Information Age is the age of new technologies of information, processing and communication: “Information technology is to this revolution what new sources of energy were to the successive industrial revolution...” (p. 313). This statement that associates the development of information and information technology to larger changes within social structures, such as the economy, is also a common place discussion in the literature.

There are more examples of these types of discussions in the literature. For instance, we see a similar idea expressed by Harnecker (2005) in her research: “It is undeniable that something new has occurred as a result of the information revolution: the world system of communications has been revolutionized. Capital today has not only reached the most remote places of the world—as it has since the 16th century—but, as Castells has noted (Castells, 1997, 120), is also capable of functioning as a single unit in real time on a planetary scale” (Harnecker, 2005, p. 143). Again, in this example, there is an association of the development of technology and the technological changes that are occurring as having an impact on the current economic system. Another example of this can be seen from Ishemo (2004), who discusses information system changes in relation to African development.

In his acclaimed three volumes, Manuel Castells (1996, 1997, 2000a) suggests that this is a new epoch, one that is characterized 'an information society.' The new age is characterized by 'a new technological paradigm.' What is new, he writes, is a new set of information technologies [which] represent a greater change in the history of technology than the technologies associated with the Industrial Revolution, or with the previous Information Revolution (printing). Furthermore, we are only at the beginning of this technological revolution, as the Internet becomes a universal tool of interactive communication, as we shift from computer-centered technologies to network-diffused technologies, as we make progress in nanotechnology (and thus in the diffusion capacity of information devices), and, even more importantly, as we unleash the biological revolution, making it possible for the first time, the design and manipulation of living organisms, including human parts. What is also characteristic of this technological paradigm is the use of knowledge-based, information technologies to enhance and accelerate the production of knowledge and information, in a self-expanding, virtuous
circle. Because information processing is at the source of life, and of social action, every
domain of our eco-social system is thereby transformed. (p. 73)

Again, this represents another example from the literature in which a central feature of
the discussion is that of the development and historical development of information technology
and how it has shaped or changed the economic structure. These types of examples are also a
consistent and prevalent feature of the journal discussions in relation to the theme of information
capitalism and information economy. Here we see discussion of the key terms and concepts, such
as information technology, information technology revolution, Information Age, information
communication technology, etc., which are also found throughout the academic literature on
economics.

A third major discussion of the theme centered on the concept of information capitalism
and information economy is the question of whether a society is indeed an information society.
This is another topic of discussion that is commonplace in the literature. There are numerous
examples of this in the literature. For example, in Ebenezer Obadare’s (2006) article discussing
Nigerian civil society and the state, he examines the term information society. “‘Informational
societies,’ he (Castells) argues, are those ‘in which information generation, processing, and
transmission become the fundamental sources of productivity and power because of new
 technological conditions emerging in this historical period.’ ‘Informational societies,’ of course,
are different from mere ‘information societies’ in which ‘information, in its broadest sense, e.g.
as communication of knowledge, (is) critical’” (parenthesis added) (p. 109). In this example,
Obadare is assessing whether Nigeria meets the criteria established by Castells to meet the
definition of an information society.

There are other examples of this in the literature. Ravi Sundaram (2004) discusses the
increasing possibility of the development of an informational society. “It is part of a world where
experience as we know it is increasingly commodified and informationalized” (p. 67). Again, the focus here is on developing into an information society and the notion that our experiences are reflecting this change as well. There is a similar concept expressed by Gerry Riposa (2003) as he discusses “the emergence of information societies” (p. 51). His notion of information society is taken directly from Castells’ conceptualization of the term, and the focus is centered on information society creation and its development. In addition, the same type of example can be seen in Steinberg and McDowell’s (2003) article that states “that those who write about the new ‘information society’ typically highlight a new, post-industrial mode of production, likening activities occurring in cyberspace to those that were associated with farms, workshops, and factories during previous modes of production. This production-oriented perspective has been used to guide trade and investment policies oriented toward building and furthering the dominance of specific financial centers (and the states within which they are located)” (p. 210).

In this example, there is a focus on information society and its definition, yet it still references the developmental aspect of an emerging information society.

These three subcategories of information capitalism and its economic development, the development and history of information technology and the Information Age, and the development and creation of an information society located within the larger key theme of information capitalism and information represent the major areas and topics of discussion found in the economic literature. That is, these subcategories represent the most common and prevalent ways in which Castells’ economic ideas related to and pertaining to information capitalism and information are discussed, described, and utilized within the literature analyzed for this research. However, this is not the only facet describing the context in which Castells’ ideas on the topic of information capitalism appear. While we have established one of the key themes for this project
and the subcategories in which the discussion takes place, let us now turn our focus to where these discussions are actually located within the literature.

**Information Capitalism and its Journal Location**

This section will document where the conversations about the key theme of information capitalism and information actually take place in the economic journal literature. To condense this conversation, Table 1 outlines my frequency distribution of journal types and appearances of the key theme at least once in the journal’s text. Asterisks indicate most common journals and frequencies in the distribution.

From the data presented in the table outlining the location and use of Castells and the key theme of information capitalism and information within the literature, there is a clear set of journals in which Castells is located. Out of the 22 different types of journals in which Castells and information capitalism and information appears, there are five major journals that represent the overwhelming majority of this information. The journal with the most references to Castells and his conceptualization and ideas on information capitalism and information occurs within the *Review of International Political Economy* with 18 journal articles and multiple instances of key theme terms, concepts, ideas, and subcategories utilized in those discussions. If we condense the six instances of the key theme of information capitalism and information from the *Review of African Political Economy* into this list, we would have a total of 24 journals within the political economy, which comprises the majority of this key theme in the literature.
Table 1

Content Analysis Results for Information Capitalism

<table>
<thead>
<tr>
<th>Name of Economic Journal (Information Capitalism Theme Only)</th>
<th>Frequency of Journal Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of International Political Economy</td>
<td>*18</td>
</tr>
<tr>
<td>The Annals of the American Academy of Political and Social Science</td>
<td>*6</td>
</tr>
<tr>
<td>Economic and Political Weekly</td>
<td>*9</td>
</tr>
<tr>
<td>The Business History Review</td>
<td>3</td>
</tr>
<tr>
<td>Journal of Economic Issues</td>
<td>3</td>
</tr>
<tr>
<td>Science &amp; Society</td>
<td>3</td>
</tr>
<tr>
<td>Review of African Political Economy</td>
<td>*6</td>
</tr>
<tr>
<td>The Direction of Contemporary Capitalism</td>
<td>1</td>
</tr>
<tr>
<td>Economic Geography</td>
<td>*9</td>
</tr>
<tr>
<td>Small Business Economics</td>
<td>3</td>
</tr>
<tr>
<td>Canadian Public Policy</td>
<td>1</td>
</tr>
<tr>
<td>Canadian Journal of Political Science</td>
<td>1</td>
</tr>
<tr>
<td>The Pakistan Development Review</td>
<td>1</td>
</tr>
<tr>
<td>Hitotsubashi Journal of Economics</td>
<td>1</td>
</tr>
<tr>
<td>The Economic History Review</td>
<td>1</td>
</tr>
<tr>
<td>The Journal of Economic History</td>
<td>1</td>
</tr>
<tr>
<td>The American Economic Review</td>
<td>1</td>
</tr>
<tr>
<td>Eastern European Economics</td>
<td>1</td>
</tr>
<tr>
<td>The American Journal of Economics and Sociology</td>
<td>1</td>
</tr>
<tr>
<td>Review (Fernand Braudel Center)</td>
<td>1</td>
</tr>
<tr>
<td>The American Economic Review</td>
<td>1</td>
</tr>
<tr>
<td>Journal of International Business Studies</td>
<td>1</td>
</tr>
<tr>
<td>Total Instances of Least One Reference to Castells in Journal</td>
<td>73</td>
</tr>
</tbody>
</table>

A secondary area of the literature where Castells is utilized is within the journal titled *Economic Geography*. This journal has nine separate instances in which Castells’ ideas and
concepts about information capitalism and information as a key theme appear and are utilized. However, there is a tie with this journal and *Economic and Political Weekly*. This journal also has nine separate instances in which the key theme of information capitalism and information is utilized or discussed within the journal text. The final journal where we see Castells being utilized is within the journal titled *The Annals of the American Academy of Political and Social Science*, which has six separate mentions of Castells and information capitalism and information within its journal texts.

On the surface, these lists of journals and their references to Castells’ ideas seem superficial in that they represent basic descriptive statistics, or in this case, a frequency table of appearances that lists which economic journal these appearances are actually occurring. However, there is a larger statement in the location of these discussions of Castells’ theory of information capitalism and information. While there are literally dozens of scattered references to this theme of information capitalism located in the table, the larger segments where the economic conversations are taking place do make a set of statements. First, there are four major areas (if we combine the political economy literature together) in which the conversations outlining the key theme of information capitalism and information, along with the three subcategories, are occurring. Second, the overwhelming majority of the economic journal literature focused on discussing information capitalism and information, and its subcategories are taking place within the political economy journals. Third, there is a focus within the economic geography literature on this key theme and subcategories as well. Fourth, there are discussions and instances of theoretical praxis within *The Annals of the American Academy of Political and Social Science*. 
These four major statements about the location of the journal article discussions of Castells and the theme of information capitalism and information have significant implications in terms of his references within the economic journal literature. First, from the data analyzed in this research study, the vast majority of conversations taking place regarding Castells and information capitalism are mainly within the political economy journals located in the field of economics. This area of the economic discipline in terms of journals represents a subfield in which the foci of these journals is primarily dedicated to discussing “interdisciplinary studies drawing upon economics, sociology, and political science in explaining how political institutions, the political environment, and the economic system-capitalist, socialist, or mixed-influence each other” (Weingast & Wittman, 2008, p. 3).

The significance of this finding is that it illustrates that Castells’ academic work regarding this key theme is being discussed at an interdisciplinary level within the economic literature, and the conversations surrounding his work are appearing within this context of interdisciplinary economic journal literature. In fact, the frequency of his appearance and conversations taking place suggest that for this key theme and subcategories, this is where majority of the academic conversations regarding his work are currently located.

Second, even though there is a considerable amount of discussion taking place within the context of the economic geography literature, this might be in name only. That is, even though this represents a growing subfield within the economic discipline and literature and represents the “study of the location, distribution and spatial organization of economic activities across the world” (Clark, Feldman, & Gertler, 2000), the actual journal titled Economic Geography still has an overarching focus on the topic of political economy. This topic of spatial organization will be more heavily visited in the next section as our conversation turns to the discussion of networks.
The significant point to make regarding information capitalism and information is that the economic geography conversations taking place still reflect more of a discussion in political economy than suggested by the journal name and subject matter. This reinforces the point that the majority of conversations taking place are in the academic discussions located in the subfield of political economy.

**Networks and Network Economy**

The second key theme for this research project is that of networks and network economy. This theme has a several references within the literature and preoccupies four subcategories. One of the first major areas that stands out in terms of networks is its general importance in relation to economics and economic discussions. That is, the term network and network society as created and discussed by Castells is everywhere in the literature as a general concept. For example, *The Annals of the American Academy of Political and Social Science* published a special edition that highlighted public diplomacy and information change in a global context in which its main focus centered on how “if communication networks of any kind form the public sphere, then our society, the network society, organizes its public sphere, more than any other historical form of organization, on the basis of media communication networks” (Castells, 2008, p. 79). Here, the focus is on networks and the development of a network society in relation to a developing public sphere. The context here is intriguing because the journal article is highlighting the necessity and importance of studying networks and network development for the future.

This general theme of networks and importance in the literature continues on with examples from authors like Cortada (2006) who mentions that society is indeed looking “like the networked and diffuse society described by Manuel Castells” (p. 755). There are other examples mentioning this same concept of importance located in the article titled “Globalization of
Protest” by D.N. (2001), who states that the economic system “shows that both share features of the current state of capitalism in the information age, as some would call it, or of the network society as others term it” (p. 381). Other examples can be seen in Paul Duguid’s research looking at recent changes within the structure of commodities where he begins by discussing the “emergence of a ‘networked society’” (Duguid, 2005, pp. 493–494) and Gagnon’s research outlining the “emergence of a New Economy, a ‘network economy’” (Gagnon, 2007, p. 593). Another example of this general reference to networks can be found in Jan Nederveen Pieterse’s article on conflict within technology, war, and politics. “In sociology, connectivity has given rise to the notion of the network society” (Pieterse, 2002, p. 8).

The common thread within this theme of general usage and the importance of networks and development illustrates an important point. Within the literature, there are numerous examples across the academic discipline of economics that utilize and mention the concept of networks, network society, and their emergence. However, the theme of networks, network society and network economy are not limited to general references, or merely superficial uses. In fact, there are three more subcategories to investigate for this section. The next subcategory in the list is network logic, which includes the terms space of flows, timeless time, and the concept of spatiality. This subcategory also preoccupies a large segment of the economic discussion within the economic journal literature.

There are numerous referees to network logic examples of network logic in the literature. For instance, Edward J. Malecki (2002), in his research discussing the economic geography of the Internet, borrows heavily from Castells in his discussion of the ‘space of flows.’ In fact, he borrows an entire paragraph from Castells:

Castells (2000, 442–45) distinguished among three dimensions or layers within the space of flows. The first layer, the material support for the space of flows, is constituted by a
circuit of electronic exchanges. It is largely the technological infrastructure of telecommunications networks, akin to Batty’s (1997) cyber place. The second layer is made up of its nodes and hubs, which are hierarchically organized and have well defined specializations in certain social, cultural, physical, or functional areas. That is, not all global cities are alike; each has its own "competitive advantage." The third layer refers to the spatial organization of the dominant, managerial elites, which are increasingly isolated in premium infrastructure spaces whether in California or Cairo (Castells, 2000, 447; Graham and Marvin 2001). (p. 403)

In this example, we are able to see that entire sections of material are being directly used to discuss, describe, and outline the concept of space of flows. This is not an unusual occurrence in the literature. A similar reference can be seen in Bongman Seo’s (2011) research on geography and flows of finance where he utilizes an entire paragraph outlining the nature of the space of flows in the beginning of his article. In this research, the statement is about the importance of flows and their development:

In *The Rise of the Network Society*, Castells (2000) argues that “our society is constructed around flows: flows of capital, flows of information, flows of technology, flows of organizational interaction, flows of images, sounds, and symbols” (p. 442). He presents the geography of these flows as rather unstructured, describing three layers of the space of flows—a circuit of electronic exchanges, its nodes and hubs, and the spatial organization of dominant managerial elites. He stresses the importance of the last layer and the “directional functions around which such space is articulated,” representing a spatial logic of domination. (p. 79)

Again, this statement about the importance of flows and space of flows is being used to outline both the concept of the network logic of flows and the importance of the concept. There are other references to network logic in the economic literature. Henderson, Dicken, Hess, Coe, and Yueng’s (2002) research on global production emphasizes Castells’ transformative aspect of the space of flows. “Indeed, Castells has argued that the world is being transformed from a ‘space of places’ into a ‘space of flows’ (Castells, 2000a, 2000b)” (p. 437). In other examples, such as Torrance’s (2009) research on global infrastructure, there is a similar idea expressed. “Castells (1996) argued that with the rise of electronic means, time and space will be annihilated
and capital from all origins is merged in, for example, mutual funds, since it is in constant movement” (p. 79). Again, in this example, the transformative process toward a space of flows is the central focus. A further example can be seen in Scholté’s (1996) research on the geography of collective identities. “More recently, Manuel Castells has distinguished a new ‘space of flows’ alongside the old ‘space of places’” (p. 572). Once again, the focus is on the emergence of a space flows and its transformative impact.

Steinberg and McDowell (2003), though still focused on this theme of network logic, emphasize the notion of a new emerging spatiality. Their article on global communication utilizes Castells’ notion of spatiality. “Some argue that contemporary spatiality is undergoing dramatic shifts as the world becomes a web, whose channels of interaction constitute a post-modern equivalent of ‘place.’ But even among these scholars, many recognize that this transformation in global spatiality is merely the latest episode in a dialectical process that long has played a role in both buttressing and altering society’s spatial formations” (Castells, 1996, p. 205). The main point is that not only is the theme of network logic as part of the conversation but we also begin to see Castells’ ideas used to illustrate spatial change.

There are even more examples of this. Take Eric Sheppard’s (2002) discussion on space and time as an example: “Other ways of conceptualizing space and time should be part of our toolkit, however, if we are to analyze adequately the ways in which distant places have directly shaped one another’s fortunes throughout the long history of globalization. Castells’ focus on the global networks that constitute the space of flows suggests that networks, stretched horizontally across space, are remaking the geography of globalization” (p. 315). These alternative ways of conceptualizing space and time, as stated by Castells, illustrates another example of changes in
spatiality, but there is also the need to begin utilizing this concept on a regular basis as part of the standard conversation on spatiality within the economic journal literature.

This notion is reinforced by Sheppard (2002). “Latour and Castells both exemplify a network discourse that has become broadly influential over the past 20 years. This discourse presents networks as an emergent or neglected form of social organization, with distinctive characteristics making them superior to markets and hierarchies. Networks are represented as self-organizing, collaborative, nonhierarchical, and flexible, with a distinctive topological spatiality” (p. 317). The emphasis, once again, is that the discussion of network logic and spatiality is not only an important concept from Castells but it is also being viewed as influential concept within the economic journal literature.

The final subcategory that appears within the key theme of networks and network economy is that of applying network logic and spatial flows to world city theory. While this area of study reflects older references to Castells’ ideas on the space of flows and network logic they are featured and located within the economic journal literature. There are numerous examples of this subcategory scattered throughout the journal literature. For example, Neil Brenner in his article on global city development discusses the notion that “In the early 1970s, Manuel Castells (1972) and David Harvey (1973) radicalized urban studies by presenting the ‘urban question’ as a key analytical window for the critical investigation of capitalism’s spatiotemporal dynamics and contradictions” (Brenner, 1998, p. 200). In this example, Castells’ notion of network logic and spatiality is presented as a new perspective in studying the development of urban cities and capitalism.

Other examples of this can be seen in Keshab Das’ (2004) research that mentions two types of uneven spatial development. “Essentially, the analyses of uneven spatial development,
or of class formation and conflict within a spatial dimension, were carried out in two overtly
discernible traditions of radical thought: studies of urban geography and studies of the political
economy of international development and imperialism” (p. 4922). This example illustrates that
Castells’ application of spatial development to that of world city theory and urban geography has
become traditional thought on the subject.

In Katharyne Mitchell’s (1995) research, she mentions that “As a result of this process, a
new type of society and a new type of urban environment is emerging, characterized by a space
of flows which dominates the historically constructed space of places, as the logic of dominant
organizations detaches itself from the social constraints of cultural identities and local societies
through the powerful medium of information technologies” (p. 371). Here the focus is on the
development of a new urban environment, but the context is still that of applying network logic
and space of flows to city development.

The same can be seen in Darel Paul’s (2002) research in which he states “The nebulous
nature of ‘world’ or ‘international’ status and its lack of a firm definition in the political arena
capture an essential element of the world city as political and cultural project. While a strategy of
becoming a world city is certainly about economic development, aimed at generating inward
investment, economic growth, and building the city into an important node in the global ‘space
of flows’ (Castells, 1996)” (p. 480). Here, the emphasis is still on global city development in
relation to the space of flows.

While this final subcategory of networks and world city theory is scattered throughout the
economic literature it does warrant mention in this section as a component of this content
analysis. The other subcategories of network logic and geometry, general use of networks and
their importance, along with network logic and world city theory comprise, cumulatively,
another significant overarching theme for this research project. Not only is the key theme of networks and network logic a major theme of this project, but its contextual importance, as was the case with information capitalism and information, cannot be overstated. In the next section, we shall examine the types of journals where this key theme and subcategories are being discussed within the literature.

Networks and Network Economy and its Journal Location

In this section, there is going to be a discussion on where the conversations about the key theme of networks and network economy actually take place in the economic journal literature. In order to condense this conversation into a much easier to follow discussion, Table 2 outlines my frequency distribution of journal types and appearances of the key theme at least once in the journal’s text.

According to the data presented within the frequency chart above, there are 18 journals that reference Castells’ notion of networks and network economy and the three subcategories of networks and their importance, network logic, and spatiality and world city theory. While the conversations about this key theme are varied across the field in terms of scattered references, there appears to be four major journals in which conversations are actually taking place. The majority of the discussions around networks and network economy as a key theme are taking place within the Review of International Political Economy with 19 journal articles using Castells’ notions of networks in some capacity at least once in the body of text. The next highest use in the literature can be seen in the journal of Economic Geography with 12 journal articles using the key theme of networks at least once in the main body of the journal text. Following these two journals are both the Economic and Political Weekly and the Annals of the American
Academy of Political and Social Science with each having seven journal articles a piece in which the key theme of networks appears within the body of text at least once.

Table 2

*Content Analysis Results for Networks and Network Economy*

<table>
<thead>
<tr>
<th>Types of Journals (Network Economy, Networks)</th>
<th>Frequency of Uses in Journals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of International Political Economy</td>
<td>*19</td>
</tr>
<tr>
<td>Annals of the American Academy of Political and Social Science</td>
<td>*7</td>
</tr>
<tr>
<td>The Business History Review</td>
<td>5</td>
</tr>
<tr>
<td>Economic and Political Weekly</td>
<td>*7</td>
</tr>
<tr>
<td>Journal of Economic Issues,</td>
<td>4</td>
</tr>
<tr>
<td>Science &amp; Society</td>
<td>1</td>
</tr>
<tr>
<td>Review of African Political Economy</td>
<td>4</td>
</tr>
<tr>
<td>Economic Geography</td>
<td>*12</td>
</tr>
<tr>
<td>Economic Development and Cultural Change</td>
<td>1</td>
</tr>
<tr>
<td>Canadian Public Policy</td>
<td>2</td>
</tr>
<tr>
<td>International Journal of Political Economy</td>
<td>1</td>
</tr>
<tr>
<td>Management International Review</td>
<td>1</td>
</tr>
<tr>
<td>Hitotsubashi Journal of Economics</td>
<td>1</td>
</tr>
<tr>
<td>National Institute Economic Review</td>
<td>1</td>
</tr>
<tr>
<td>Journal of the Economic and Social History of the Orient</td>
<td>1</td>
</tr>
<tr>
<td>The Economic History Review</td>
<td>1</td>
</tr>
<tr>
<td>Cambridge Journal of Economics</td>
<td>2</td>
</tr>
<tr>
<td>Eastern European Economics</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Usages in Which the Theme Appears at Least Once in the Journal’s Text</strong></td>
<td><strong>71</strong></td>
</tr>
</tbody>
</table>

On the surface, these four journals and the number of instances in which we see the key theme of networks and network economy seem pedestrian in nature. However, in relation to
establishing the overarching goal of where conversations about Castells’ economic theory are actually occurring, this data provides us with some particularly interesting insight. For example, as with the previous key theme of information capitalism and information, there is a consistent theme of Castells’ overwhelmingly being found within the political economy economic journal literature. If we combine the instances of networks and network economy found in the economic journals of the Review of International Political Economy, Economic Geography, Economic and Political Weekly there would be thirty-eight instances of this key theme making at least one appearance or more within these three political economy oriented economic journals, which is more than half of all the in text references within this key theme alone.

Another interesting finding is that even though Economic Geography does tend to focus on political economy discussions, it is interesting to see that Castells’ theory of network logic, timeless time, space of flows, etc. has indeed permeated into economic conversations about changes and developments regarding spatiality. In fact, this notion of spatiality comprises a major subcategory and area of discussion of Castells’ works and illustrates that its use is crossing over to the field of economics and other interdisciplinary areas as well. In addition, one of the major discussions and references to this notion of network logic is its importance for the future, which was represented in both the establishment of the subcategory and the nature of its journal location.

**Global Capitalism and TNCs**

The third and final theme for this research project is that of global capitalism and TNCs. Just like the other two major themes already discussed in this chapter, this one also has many illustrations and examples in regard to how authors of these journal articles are actually utilizing Castells’ notion of global capitalism and TNCs. For example, Mitchell (1995), in her article
discussing the cultural context of capitalism, points out that “the notion of a general restructuring of international capitalism is often taken as the starting point for theoretical debates concerning changes in the global built environment” (p. 364). In this example, the author is making a statement that is made by other economic journal article authors about Castells’ concept of global capitalism—the importance of understanding that discussions of global capitalism now represents the starting point for economic discussions.

There are other examples of this shared sentiment. For instance, Cameron and Stein (2000), in their research on globalization and society, state that “The current global economy, made possible in part by information technologies which enable information to reach markets at the speed of light, has exponentially expanded capital markets, trade, the mobility of factors of production, and investment opportunities” (p. 18). This statement uses Castells’ idea of a more globalized economy and global capitalist economic system to point out how it has expanded the way in which we conceptualize the global economic system and that this will be an important factor for further discussions of the global economic market for the future.

Again, there are other examples of this notion of the importance of studying and taking into consideration the growing global capitalist economic system. For example, Cameron and Stein (2000) use Castells’ notion of global economic expansion to illustrate that this is a permanent change “Economic and cultural globalization have accelerated again late in this century, after almost 50 years of regression. More and more, national economies are now integrated in to a single global marketplace through trade, finance, production, and a dense web of international treaties and institutions” (p. 16). Their recognition of this very point from Castells shows that there is acceptance of and growing use of the concept of global capitalism and the global economy within the literature. This is a significant point made by Michael Mann
(1997) in reference to Castells. “With no confident adversary in sight, capitalism is becoming—at least minimally—global” (p. 479).

Though the literature is chock full of references to the importance of global capitalism and the global economic system, there are subcategories related to this theme. The first subcategory deals with the development and history of global capitalism and the global economy. This subcategory can be seen in numerous examples. For instance, Bob Jessop (1997), in his discussion of capitalism and its future, states “This is especially significant at present because of the changing forms of social embeddedness and their rearticulation as capitalism becomes increasingly innovation- and information-driven, is more closely linked to so-called ‘post-industrial’ processes, and becomes more global in scope” (p. 565). In this statement, Jessup describes the process of information technology’s role on the development of a global capitalist system.

Another example of the development of global capitalism can be seen in John Saul’s (2001) research on African economic development for the future. In his article, Saul discusses Castells’ global capitalism. “In his own analysis of Africa, the eminent sociologist Manuel Castells sees somewhat more room for South African maneuver within global capitalism than is the case elsewhere on the continent. Castells argues this because of the country’s size and relatively sophisticated economic structure compared with other African countries (‘South Africa accounts for 44 percent of the total GDP of all sub-Saharan Africa, and 52 percent of its industrial output,’ he reminds us)” (p. 441). Here again, the focus is on the development of global capitalism either as the notion that the capitalist system itself is becoming more global and hence we see the emergence of a global capitalist system, or we see the development of global
capitalism in regard to its development in other countries. The overarching theme in these examples is that global capitalism, on some fundamental level, is indeed developing.

A second subcategory found within the literature is that of global capitalism’s organizational structure. This is a major focus in the literature. The organization of global capitalism is an interesting facet of the literature, especially when we see instances of articles dedicated to the topic. For example, in Saul’s (2001) journal article on African economic development, we see him discussing “the logic of global capitalism” great length (p. 429).

“Globalization is defined here as a set of dialectical processes that simultaneously create a functionally interdependent world economy and accentuate the importance of all kinds of differences in societies and space” (p. 400). The idea that Saul is borrowing from Castells in this sentence is that global capitalism and the global economy and their development have a profound effect on space and time or spatio-temporal processes.

Another example of this subcategory can be seen in Banerjee-Guha’s (2002) research on globalization and the socio-spatial disorder. “In spite of its projected ‘human face,’ it has been identified by many [Castells 1998] as essentially a postmodern expression of the historical process of capitalist expansion. All these warrant a trenchant understanding of globalization as a circular process along with its political, economic and cultural attributes and the given spatialities” (p. 4503). This is yet another example of the discussion of global capitalism’s organization due to the mention of spatialities and spatial development.

The third and final subcategory identified within the key theme of global capitalism is that of TNCs. This subcategory exists because there were dozens of general mentions of TNCs referenced throughout the literature. The term TNC is utilized in a handful of ways within the economic journal literature. For example, Neil Brenner (1998), in his research discussion of
global cities for the future, opens his article stating that “World city theory has been deployed extensively in studies of the role of major cities such as New York, London and Tokyo as global financial centers and headquarters locations for TNCs” (p. 4). Here Brenner is focused on drawing out the development of TNCs within world city theory.

Other conversations about TNCs can be found in Petras and Polychroniou’s article on critical reflections of globalization. In their article, they use research performed by Carnoy and Castells in the following form: “It is estimated that there are about 37,000 large multinational corporations operating around the world today (with over 170,000 affiliates), with the top 300 industrial corporations accounting for 70 percent of total FDI [Dunning 1993:15] and controlling over 25 per cent of the world’s stock of productive assets X ‘Survey of Multinationals,’ The Economist, March 27, 1994; UN 1994]” (Petras & Polychroniou, 1997, p. 2249). Here, the authors are making a point about the growth and expansion of TNCs and how the merging of these corporations may indicate problems for the future. While this subcategory is comprised of scattered references to the term TNC, it does present itself as a subcategory worth noting. The use of TNCs, their creation, and research centered on them from Castells, illustrates that this area of economic development in relation to corporations in the global capitalist system does indeed preoccupy a place within the economic journal literature. Though this is neither the most-referenced discussion nor most comprehensive subcategory, it does suggest that this aspect is a part of the literature and may very well grow in the future.

These three major subcategories of the development and history of global capitalism and the global economy, the organizational structure of global capitalism and the global economy, and TNCs are the main subcategories that formed within the key theme of global capitalism and TNCs. While these subcategories define the types of conversations present within the economic
literature, we will turn our focus to locating the types of journal in which these conversations are taking place in the next section.

**Global Capitalism/TNCs and Their Journal Locations**

In this section, there will be a discussion on where the conversations about the key theme of global capitalism and TNCs actually takes place in the literature. To condense this, Table 3 outlines the frequency distribution of journal types and appearances of the key theme at least once in the journal’s text.

**Table 3**

*Content Analysis Results for Global Capitalism and TNCs*

<table>
<thead>
<tr>
<th>Types of Journals (Global Capitalism and TNCs)</th>
<th>Frequency of Uses in Journals</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Review of International Political Economy</em></td>
<td>16</td>
</tr>
<tr>
<td><em>The Annals of the American Academy of Political and Social Science</em></td>
<td>5</td>
</tr>
<tr>
<td><em>Economic and Political Weekly</em></td>
<td>7</td>
</tr>
<tr>
<td><em>Review of International Political Economy</em></td>
<td>1</td>
</tr>
<tr>
<td><em>Science &amp; Society</em></td>
<td>2</td>
</tr>
<tr>
<td><em>Review of African Political Economy</em></td>
<td>2</td>
</tr>
<tr>
<td><em>Economic Geography</em></td>
<td>5</td>
</tr>
<tr>
<td><em>Canadian Public Policy</em></td>
<td>1</td>
</tr>
<tr>
<td><em>National Institute Economic Review</em></td>
<td>1</td>
</tr>
<tr>
<td><em>The Economic History Review</em></td>
<td>1</td>
</tr>
<tr>
<td><em>Management International Review,</em></td>
<td>1</td>
</tr>
<tr>
<td><em>The American Journal of Economics and Sociology</em></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Usage of Global Capitalism and TNCs With at Least One Used in the Journal</strong></td>
<td>43</td>
</tr>
</tbody>
</table>
From the data presented in the frequency table above, there is a clear set of journals in which Castells and this theme of global capitalism and TNCs is located. Out of the 12 different types of journals in which Castells and the key theme appears, there are four major journals that represent the bulk of this information. The journal with the most references and to this key theme occurs within the *Review of International Political Economy* with 16 journal articles and multiple instances of key theme terms, concepts, ideas, and subcategories utilized within these discussions in the literature.

A secondary area in which we see Castells and the key theme of global capitalism and TNCs utilized is in Economic *and Political Weekly*, which has seven instances in which global capitalism and TNCs appear within the literature. The third journal in which Castells and global capitalism and TNCs appear is within *Economic Geography* with five instances which is tied with *The Annals of the American Academy of Political and Social Science* which also has five instances in which it appears in the economic journal literature.

As mentioned before in previous sections, while this data seems superficial and unimportant at first glance it does indeed make a larger point about the location and context of the discussions centering on Castells and the key theme of global capitalism and TNCs. From this data there appears to be both large segments of the economic journal literature that discuss this theme there is also scattered reference as well. These larger segments of information there are represented by four major journals make a set of statements that have an important point to make about this theme. First, there are three major areas (if we combine *Review of International Political Economy* and *Economic Geography* together as was the case with other key themes) in which the conversations outlining the main key theme of global capitalism and TNCs along with the three subcategories are taking place. Second, as with the other key themes discussed earlier,
the theme of global capitalism and TNCs and its subcategories is overwhelmingly taking place within the political economy literature.

These statements, as is the case with the others made in this research study, do make important and significant point in regards to Castells and the notion of theoretical reference in the economic journal literature. As mentioned in previous sections the majority of journals in which Castells and the theme of global capitalism and TNCs is being utilized is within the political economy subfield and political economy journals. This an interesting aspect of the location of this theme as it implies that Castells academic work on the theme of global capitalism is being discussed within the broader and more interdisciplinary conversations within the economic journals.

**Summary of Results From Content Analysis**

The results of the content analysis performed for this research project suggest that several major findings exist in regards to the use and utility of the economic works of Castells. First, from the content analysis results of this study, there are indeed conversations, dialogues, and general references to Castells’ ideas within the literature, which confirms the statement made in the first hypothesis. While this does not seem particularly interesting on the surface, it does make an important point since this is an exploratory study on the subject. Not only is the work of Castells present in the literature, but there is also enough use to create and discuss key themes and subcategories within these themes. This was not necessarily an anticipated finding as the nature of exploratory research is to uncover information about the unknown.

Second, the depth of the discussions, references, and incorporation of Castells in the literature also suggests that there were more than just surface-level references to terms and ideas, Not every reference was superficial in nature. While there are certainly superficial references to
terms, concepts, and basic ideas, there are consistent references to Castells’ ideas as well. These consistent references that would come to create the themes and patterns of use established for this study are also remarkable in that with this research being exploratory in nature, there was no way to discern whether themes and categories would emerge until after the analysis was performed and results were scrutinized afterward. Though the literature review suggested the possibility of specific key themes that are important regarding Castells’ academic works, this does not mean that they are absolute or indicative of the actual results from the content analysis. Hence, this is the importance of the content analysis itself for this research study.

Third, all three key and central themes of information capitalism and information, networks and network organization and global capitalism and TNCs showed consistent general references across journals as the literature review and theoretical analysis suggested in earlier chapters. There was a plethora of examples in which the basic key terms, concepts, and ideas were present within the body of the literature analyzed for this research. Not only were they consistent, but all three categories also shared a common conceptualization in that each had examples suggesting the overall, general importance of these categories in the literature. This statement is significant in that it confirms my initial hypotheses two, three, and four that relate back to the expected references to information capitalism, networks, and global capitalism as categories and later as themes that could be found within the literature.

Fourth, within all three key categories, we see another common denominator and that is a focus on the development of each theme. All three key themes had journals discussing the importance of development or how the development of the theme has an economic impact. This was consistent as authors discussed information technology and its developmental impact on the economic system; they discussed the impact and development of networks and the development
of global capitalism and global interconnections. This subcategory of development was a central feature of each and every key theme.

A fifth finding is that location of the references to Castells in the economic journals tends to happen in a handful of journal types. While there were literally dozens of journals in which each key theme appeared at least once, there were certainly journals that had no overlap whatsoever. The scattered references to Castells across journals is not totally unexpected because the database search itself comprised 220+ journals. At the very least, there is an expectation of scattered references across all journals examined for this research. However, the concentration of Castells into a handful of journals, primarily focused on a few specific subfields and sub-areas of the field of economics, is surprising.

Sixth, while the scattered references were indeed anticipated due to the nature of the number of journals available to record and analyze data from for this project, their concentration into a set of smaller areas was highly unexpected. The primary type of journal in which Castells is the most present was that of political economy journals. This was the case for the three key themes and their subcategories. In fact, the majority of references to Castells’ works can be condensed solely into this type of economic subfield, which was the same result of the content analysis on journal location across all three key themes and subcategories. References to Castells within this body of literature have major implications about his theoretical utility and importance for the future, which will be further investigated in the implications section below.

**Implications of the Findings and Future Predictions**

The purpose of this section is to discuss the implications of the findings of the content analysis performed for this research study. Located in this section will be an overview of the implications for the key themes and subcategories established by this research study and a focus
on what that might mean for the future of Castells’ theoretical utility within the economic journal literature.

**Networks and Network Economy**

The creation and establishment of the key theme of networks and network economy was not difficult in the least and not unanticipated at all. This key category had 18 key terms and concepts that appeared within the literature. There were 18 types of journals in which this key category and subcategories were found, and there were more than 71 total articles where these key words and phrases appeared at least once within the literature. This category was also the most prevalent key theme found in the literature for this content analysis. This means that finding and establishing this key category was easy due to the number of discussions, dialogues, superficial uses, and theoretical aspects of this key theme referenced in the economic literature.

The creation of this category was not unanticipated from a theoretical point of view. Many theorists such as Webster (2006), Stalder (2006), Ritzer, (2000), cite Castells’ major enduring theoretical contribution as being the creation of network logic and network organization, especially in the areas of timeless time and space of flows. This means that the appearance and prevalence of these themes within the literature comes as no surprise which was indeed the case as it represents one of the largest areas in which we see Castells being discussed.

This expectation is something that certainly showed within the results of this study. That is, from the examples previously discussed, there is a predominate set of authors emphasizing the importance, utility, and creation of networks and the network economy within the economic literature. Not only are people discussing networks as new and innovative but they are also often viewed as new way to discuss and describe the economic system. This means that similar to what other social theorists like Bell and Harvey, and economic researchers from the literature review
have already stated, many economic journal authors are confirming, or really reconfirming, the prevalence and overall importance of networks in describing and discussing the economic system in a way that is commensurate with what others have already said or intimated in the past.

The same statement can be said for the numerous references to and descriptions of the development of networks and/or network/organizational logic within the economic literature. As in the case with networks and their general importance, we see a similar expected appearance within this subcategory. With theorists claiming that networks and network logic may be Castells’ theoretical contribution, it was not unexpected to see this topic of discussion either. While it was rather intriguing to see the extent and prevalence of network logic with key terms, such as timeless time, space of flows, network logic, network geometry, etc., their inclusion into the literature also serves as a reconfirmation of what other theorists have long speculated about Castells’ theoretical utility. That is that networks may indeed be his major, defining contribution across the theoretical spectrum.

This is not necessarily a negative finding for this research, and it does not necessarily imply something terrible about the establishment of this key theme. In fact, this statement about expecting to find networks as a prominent discussion serves a very positive function. While others are merely postulating that Castells’ network-based theoretical perspective is his major academic contribution, this content analysis and its results illustrate that networks and network logic are indeed a major contribution from Castells. There is now data that shows, at least in relation to economic journals, that there is a major focus on discussing and utilizing his ideas, concepts, and key terms centered on networks and network logic.

A surprising aspect of this study in relation to the theme of network and network economy deals with the subcategory of network logic and networks in relation to world city
theory. This is a unique result from performing this content analysis even though world city theory represents some of Castells’ earlier work on urban development and urban sociology. This application of network logic to the conceptualization of urban development and city planning is certainly unanticipated. The majority of the theoretical work done on this subject predates any of Castells’ work in relation to networks and network logic established and formulated within his work the *Rise of the Network Society* (1996). Even more intriguing is that these journal discussions are taking place within the years of 1995–2015 and across different types of economic journals. The surprising result here is that to a certain extent, even though world city theory from Castells predates the *Rise of the Network Society* by more than a decade, it is still being discussed, utilized, and even seen as having relevance in current discussions and topics relating to city and urban development.

Overall, even though the findings of this content analysis in relation to networks and network economy as a theme were expected, there is an element of conversation that was indeed unanticipated located within the application of networks and network organizational logic to world city theory in this research. While Castells spent his early career and academic publishing within the field of urban development and city planning, the majority of theoretical conversations taking place on this topic would be expected to be before the development of his writing on the *Rise of the Network Society*.

The interesting aspect of this finding is that perhaps for the future, an investigation into literature centered on urban development and city planning, post-world city theory might be necessary as it might point toward another key theme and area of theoretical reference that might be unexplored or considered in terms of theoretical contributions made by Castells. This would be particularly interesting in that an additional study in this area may suggest another completely
separate discipline and area of study in which Castells’ ideas, concepts, and basic terms
discussing and describing networks and network logic still persist and even have theoretical
utility.

**Information Capitalism and Information**

The second major key theme established for this research is that of information
capitalism and information. This is another area and topic of general discussion that preoccupies
a large segment of information discussed in the literature. The discussions of information
capitalism and information are found within 22 journals across the field of economics, and there
are 73 instances in which the key terms outlining this theme appear at least once in those journals
respectively. This means that not only is this a prominent category, with equally prominent
subcategories, but it is also another instance in which its general importance and recognition of
importance is portrayed within the journal literature.

There are a myriad of examples in which we can see this description of the importance of
information capitalism. In fact, with this category, as seen in the network category earlier, there
is a focus on presenting the concept of information capitalism as a new and emerging
development that must be focused on and understood for future research. While this makes sense
on the surface, this is due to the notion that information and information technology have an
impact on developing and shaping the capitalist economic system. This is another major
contribution to the economic literature identified and analyzed for this study as its initial
importance was mentioned within the literature review and theoretical analysis as a possible area
of significance and importance in relation to Castells’ theoretical importance.

An explanation of why this is a major area of conversation in the literature can be found
in a very fundamental and yet elementary level of understanding. The finding of the importance
of information capitalism and information as a theme within the economic journal literature should be viewed as anticipated. First, let me clarify what is meant by this statement. That is, Castells dedicates a significant portion of his *The Rise of the Network Society* to the establishment and discussion of the history and development of information and its impact on economic development. This topic comprises nearly one-third of the entire first volume of this three-volume work. Castells’ initial discussion of information capitalism and the history of information begin his entire discussion on the emergence of the network society and later on the network economy. The prevalence of information capitalism and information in terms of its history and development should not be unanticipated in terms of its usage and utility within the economic journal literature. This category is a major component of Castells’ initial writing on the topic of information in general, and as the literature review suggests, it should be a topic of conversation or interest when discussing the academic works of Manuel Castells.

**Global Capitalism and TNCs**

The third and final key theme for this research is that of global capitalism and TNCs. While this is a smaller key category in size and scope compared to the other key categories established for this research, it is important to note for the discussion of theoretical reference. This category encompassed 12 total journals across the field of economics and had at least 43 instances of using the key terms and concepts associated with global capitalism and TNCs. The global capitalism category and subcategory is not unexpected as it preoccupies large sections of Castells’ academic work and writing and was mentioned as a possible area or topic of interest within the literature review. That is, the term and conceptualization of a movement toward a global capitalistic society is not a surprising find within the economic literature or any literature
for that matter. It is expected because it encompasses a very fundamental idea of Castells. Its appearance within the economic literature is not necessarily an unanticipated finding.

However, the reference to and utilization of TNCs and their organizational structures is an unexpected finding for this research. While Castells does dedicate academic writing on this topic throughout all three volumes of *The Rise of the Network Society*, it is not a major topic that academics are referring to as a major contribution to theory or theoretical ideas and concepts. One can argue that the context of TNCs in relation to networks and network logic found in the literature makes sense because to a certain extent its association with and presentation as an extension of the impact of networks on structures makes sense. This, once again, is not a commonly referred to topic as a contribution made by Castells, but it does preoccupy a major role in the discussion of TNCs within the economic journal literature. The reason this key theme is worthy of inclusion into this study is because it suggests that this key theme is another instance of Castells’ theoretical work that may be more unanticipated and underdeveloped in terms of being used in the journal literature than previously thought.
CHAPTER 6

IMPLICATIONS OF CONTENT ANALYSIS RESULTS

The location of key themes and subcategories within the economic journals makes its own profound statement about the future of Castells’ academic works within the economic journal literature. That is, majority of all discussions and references to Castells’ academic work within the three key themes of information capitalism and information, networks and network economy, and global capitalism and TNCs, while predicted by the literature review and theoretical analysis, happen overwhelmingly within political economy journals.

Unfortunately, even with all of the individual references to terms, ideas, concepts, and superficial uses within the economic journal literature, the context in which we find Castells’ economic theory of information capitalism is limited at best. This suggests that Castells’ academic work and economic contribution is contained to a subfield of the economic discipline, which implies that his overall contribution to the field of economics is limited and confined as a result.

Even though his inclusion into the political economy journal literature suggests that it was or is his entry point into economic discussions and journal reference, the political economy journals where Castells appears are all interdisciplinary journals that pull from multiple social sciences and are more open and receptive to utilizing theories outside the realm of mainstream economic theoretical perspectives. This makes sense for the economic journal discussions and references to Castells and the key themes that emerged within the context of this study. However, this also means that Castells’ overall contribution to economics is confined and very
limited in terms of its importance and significance because his ideas are mainly contained within one subset of economic journals. This is problematic for Castells not only in relation to the themes discussed for this research study but it also does not bode well in terms of assessing his overall contribution to the field of economics in general.

Overall, it can be stated that there were three major key themes that seem to permeate throughout the entirety of the political economy journals, which was already established from the investigation into Castells’ contribution to sociological theories of the economy and established as important to the field of economics in general. These themes and subcategories represent theoretical utility and reference to Castells’ ideas and concepts on the notion of information economy within the literature and reflect the expected and anticipated themes as stated within the literature review and sociological analysis of economic theories of western change portion of this research study.

Their presence within the journals located primarily in the political economy research represents a contained reference in the economic literature and limited segments of journal discussions using and applying Castells’ ideas within the entirety of economic research. There were sparse, scattered references to Castells that were a part of his presence in the economic literature, but the establishment of these three general themes and their overwhelmingly confinement to solely within the political economy literature makes its own profound statement in that usage in the political economic journals not only represents an entry point for Castells’ ideas but there also appears to be no exit point for his academic ideas as well. In the next section, there will be an explanation as to why the economic theory of information capitalism and these three thematic areas have been contained and limited, or in this case, relegated to only existing
within the political economy journals through the lens of historical specificity as discussed by Geoffrey Hodgson.

**Beyond the Implications: Castells as Marginalized**

While the previous chapter outlined the key themes and sub themes where Castells actually sees theoretical utility and reference in the literature, the point of this section will be to discuss, though a sociology of knowledge lens, the actual extent of Castells’ contribution to the field of economics. Using the theoretical ideas outlined by Geoffrey Hodgson (2001) in his book titled *How Economics Forgot History: The Problem of Historical Specificity in Social Science* my intent is to explain the reason why the theory of information capitalism and the three defining themes that encapsulate Castells’ theoretical perspective in general has limited reference within the field of economics.

Based upon Hodgson’s central argument that outlines the problem of historical specificity and its inclusion within the economic journal research, my intent is to show that Castells’ theoretical perspective of information capitalism has a limited appearance within the economic journal literature, and its significant and defining themes—as established throughout this theoretical analysis and content analysis—are confined and constrained within the field of economics. This is due to Castells’ theoretical perspective being a representative example of the type of new economic movement that Hodgson is arguing for in the journal research literature but has been less than well received in the field of economics.

Hodgson’s focus on historical specificity, theoretical universalism, generality or general theory, and the notion of barren theory, all become significant as Castells’ theoretical approach to the new and emerging information capitalist theory shows synergy with Hodgson’s basic conceptualization of a new economic movement. However, this may very well come at a cost of
having Castells’ theoretical perspective being considered or viewed within the mainstream economic literature as less palatable and less relevant.

To make the connection between the academic work of Castells and Hodgson, the next section of this chapter will briefly summarize and highlight the central arguments from Hodgson. After this summary, the focus will be on using Hodgson’s notion of historical specificity to explain Castells’ lack of inclusion into the economic literature, his contained theoretical ideas and development, and Castells’ under-utilized theoretical perspective that has come to represent a confined and limited overall reference and utility in the economic journal literature, thus illustrating that Castells is a marginalized theoretical figure.

**Historical Specificity and Castells**

Hodgson’s book titled *How Economics Forgot History* (2001) begins with stating the central argument and topic of interest for his investigation is that of historical specificity. He views historical specificity as one of the main and key questions of the social sciences for the last several decades. For Hodgson, this problem of historical specificity “starts from the presumption that different socio-economic phenomena may require theories that are in some respects different from each other. Essential variation among objects of enquiry may impose limits on successful explanatory unification” (Hodgson, 2001, p. xiii). An example of this principle can be seen in the example of feudal system and that of capitalism. A theory that describes and represents feudal society may very well differ from one that outlines and discusses capitalism. Any similarities between these two theories will represent common features of the actual or real systems involved in the discussion. However, “if the differences between different systems could be so important that the theories and concepts used to analyze them must also be substantially different, even if
they share common precepts. A fundamentally different reality may require a different theory. This, in rough outline, is the problem of historical specificity” (Hodgson, 2001, p. xiii).

Not only are there problems of historical specificity within the literature of economics, but there is also an issue with general theory. These are theoretical statements that serve the function of abstracting reality and real-life events. General theories accomplish this task by leaving out the details and descriptions of the impact of not only history but also agents, actors, institutions, and structures. These are large-scale or macro theories that refer to change as a matter of fact or merely already existing and hence are devoid of description of the process leading up to or defining the history of significant changes. This is a problem within economic theories because they often outline and describe an entire economic system with no mention or account of the changes in the economic system in terms of historical change. Hodgson sees this as problematic because “for a long time Hodgson has thought that the recklessly over-general postulates of mainstream economics has weakened, rather than strengthened is as a theoretical system” because these theories are questionable in terms of actually saying or stating something in the real world, instead they are abstractions deeply removed from the economic world around us (Hodgson, 2001, p. xiii)

Hodgson also views the problem of universalism as another issue found in economic theories. Universal theories in economics suffer from trying to find universal, all-encompassing concepts and theories to explain economic phenomena. In the field of economics, universalism and “universal theories are based on the maxim: ‘one theory fits all.’ Universal theories can have limitations in dealing with specific, concrete phenomena, As in the case of much of mainstream economics, they can be insufficiently sensitive to historical and geographic variations” (Hodgson, 2001, p. xiii). The problem of universalism within economic theories is certainly not
new in its criticisms and critiques of the theory produced in the field. The German historical school for the last century has already debated and argued the central features of the notion of universalism. Though brushed aside through arguments made by other economists, this concern has reemerged in the British school of economics and in the United States in late twentieth century.

This is intriguing to Hodgson because this resurgence in the concerns of universalism assisted him in “discovering that there was a lost continent of theoretical, methodological, and empirical studies, largely hidden under the twentieth-century rubble of fascism and war. It contained important thinkers who should in justice rank among the most important social scientists of the twentieth-century. Yet they have no memorials in the technocratic domain of modern mainstream economics. Few of the Lost Continent have escaped this oblivion. Many are absent from the classrooms and the textbooks of modern, global academia” (Hodgson, 2001, p. xiv). Even though some authors, such as Weber, Marx, and Schumpeter are in the view of many in the economic field today their inclusion has taken time. For Hodgson, “the few are praised but the majority is forgotten” (Hodgson, 2001, p. xvi).

These elements of historical specificity and the forgotten economists—past, present, and future—is the beginning impetus for the deeper investigation into this topic by Hodgson. Though he does mention and outline some of the contributions of the German historical school in this book, it is not Hodgson’s sole focus. In fact, his book does not provide its reader with a full summary of any one given or particular theoretical perspective. It does not fully outline the historical school or the history of institutionalism in any way shape or form, yet they are outlined in regard to their ideas on historical specificity.
The level in which arguments of the nature of historical specificity are discussed in this book is one that is meta-theoretical. That is, “the argument here is largely at the level of meta-theory; an attempt is made to explore how different theories relate to each other and mesh together and whether each may be useful as a means to understand a particular segment of reality. Meta-theory occupies the debatable ground between philosophy and theory itself. Accordingly, there is less detailed discussion here of specific theories” (Hodgson, 2001, p. xiv).

The reason Hodgson approaches this book in this manner is because attending to each and every theory in elaborate detail would have been impossible. Thus, the reader is instead directed and guided to those aspects and features of theories that are important in referencing this concept of historical specificity. “In facing the thematic problem of this book, the establishment of meta-theoretical co-ordinates is a primary and substantial task” (Hodgson, 2001, p. xvi).

While the focus of this book is one that criticizes and critiques the idea of general economic theories and economists’ fixation on utilizing these theories, it is also argued that there are some general principles that exist that are necessary in our discussion of economics and economic theories. The “requirement of additional levels of theorizing, guided by broad, general principles but rooted, both conceptually and empirically, in historically and geographically specific phenomena” is also argued throughout this book (Hodgson, 2001, p. xvi). It is based on this idea and others expressed throughout the entirety of the book, that Hodgson’s “strong conviction is that the task of development and reconstruction in economics and the other social sciences cannot be fulfilled without a more adequate knowledge of past intellectual history. Without this knowledge we are condemned to repeat the mistakes of the past. Moreover, the thoughts and debates of past economists form a rich quarry of inspiration and ideas” (Hodgson, 2001, xiv).
The overall connections and links between Hodgson’s theory of economics forgetting history and Castells information capitalism are intriguing to say the least. The argument from Hodgson is that new economic theories and theorists must account for and be responsible for avoiding the pitfalls of historical specificity, universalism, generalism, and institutional blindness to be relevant and impactful in relation to describing the real economic realities in the world around us. Without attention drawn to these problems and potential new theories that take these problems into account, economics, sociology, and social science, in general, run the risk of becoming less relevant or will continue to make statements about the economic world that come to represent nothing. Hodgson is calling for a new theoretical movement that takes his criticisms and critique of economics, and social science in general, into account. This change will have to come at multiple levels and perhaps take a long time to address, but the theoretical pay off would be a better theoretical reference point that pertains to the real economic and socio-economic world. This is especially the case for the mainstream economic journal literature where Hodgson identifies majority of the problems discussed as particularly problematic.

The interlinkage of Castells theory of information capitalism to the arguments established by Hodgson may suggest a partial explanation as to why Castells’ contribution to the economic literature, the mainstream journal literature specifically, is more limited and constrained than initially anticipated for this study. Castells’ avoidance of historical specificity, universalism, generalism, and institutional blindness becomes key for the conclusion and final result of this research project. His avoidance of these major issues that are seen as plaguing mainstream journal literature suggest that Castells’ theoretical perspective is a representation of Hodgson’s ideal movement toward a more open, flexible, fluid theory that also takes institutions, social structures, and culture into account while avoiding the pitfalls he outlines. If this is the case,
which I believe based on the theoretical analysis and content analysis results of this research is the case, than Castells’ theoretical perspective of information capitalism will continue to be ignored or overlooked completely because of his connection to Hodgson and his criticism of the economic journal literature. This suggests that Castells represents a marginalized figure in the economic journal literature but the remaining question is why?

**Marginalization of Castells, but Why?**

The limited reference to and limited utility of Castells’ theory in the economic literature as outlined in the content analysis portion of this study assists in making this very case—that Castells’ academic work within the context of economics is marginalized. The overarching key themes of information capitalism, networks and network economy, and global capitalism were all being utilized in ways that suggest that elements of Castells’ anti-historical specificity theory is not only present but also only utilized in the political economy journals. All of these key themes are being mentioned in the political economy journals and have a common feature across all themes and journal articles where they appear. That is, they all represent flexibility and fluidity of these concepts, definitions, and terms associated with the key themes allowed for Castells’ ideas on these topics to be applied to multiple and various types of economic subjects and discussions located solely within the political economy journals. On the surface, this might not seem significant.

However, the confined appearance of these same themes and their limited reference represents Hodgson’s theoretical vision and movement for the theoretical future. Aspects of a theory that are anti-historical specific should be able to span different types of economic discussions, they would be flexible, they would have fluidity with changing terms, ideas, concepts, or frameworks, they would appeal to various discussions on economic systems and
socio-economic systems, and they would be used in discussions of institutions, structures, and culture. However, the limited and patterned reference to Castells’ theoretical approach within the political economy journals suggests the opposite. His inclusion into only the political economy journals may suggest a lack of acceptance of Castells’ theoretical perspective and more specifically, his information capitalism theory.

This can be explained by Castells’ theoretical perspective and its close connection as a representation to Hodgson’s theoretical program that seeks to uproot and fundamentally change the nature of economic journal research that takes issue with the manner in which journal research is currently created. One of the major problems of having a theoretical perspective that goes against the very grain of mainstream ideas, let alone research and theory creation, is the tendency to ignore or see these theoretical perspectives as less relevant or ignore them completely. I believe this is certainly the case for Castells, whether intended. His critical theoretical perspective is an exact match: A representation of Hodgson’s theoretical ideas that may place him into a very limited set of conversations utilizing his work.

The academic conversations taking place around the work of Castells within the context of the economic journal literature are indeed limited and confined to the political economy journal literature. This is not a surprise for Castells considering that his theoretical perspective is one that does not share in the current economic journal research perspective that is focused on universal theories, institution-less economic studies, de-emphasized culture and behavior that is replaced by rational choice theory and the quantification of economics by way of mathematical models. Castells’ theoretical perspective is looking at the economic world and economic change in the opposite manner of mainstream economics. Normally, being innovative and new is a great thing to be in the academic world because it can cause others to reassess or reexamine the way
things are currently done. However, the type of innovation and theoretical perspective that Castells offers is not well received in the mainstream economic journals or the mainstream academic conversations and dialogues as a consequence of its uniqueness.

This explains why Castells’ academic contribution to the field of economics is limited to the political economy journals. They are accepting of new and innovative outside ideas from interdisciplinary sources and other social sciences. Castells’ theoretical perspective with its anti-historical specificity aspects represents a theory that has its entry point within this specific subset of journals because it has acceptance in this type of journal format. Castells has a sociological theory of the economy that reflects flexibility and fluidity, and takes culture and institutions into account in his analysis, which is fine at the surface level. However, this confinement to the political economy journals is both his entry point and his exit point as well.

This is problematic when looking at the context of this research study. Let me explain. While Castells certainly has an academic dialogue surrounding his work—the content analysis already illustrated this at length—the overwhelming majority of his academic work and discussions surrounding his work were solely located within the political economy journals. This means that while there are conversations discussing his work, they are limited and limited in two major ways. First, there were only three major themes of information capitalism and information, networks and network organization, and global capitalism (TNCs) found in the literature, which is indeed shocking, due to the sheer amount of publications created by Castells over the last 40 years. Second, of the conversations taking place across time and the differing political economy journals, the only utility that could be found in regard to the academic work of Manuel Castells is solely within the political economy journals. Though this counts as an academic dialogue, it is a limited and perhaps superficial reference to Castells works at best.
This is highly problematic for Castells in relation to him being viewed as an important and prominent theoretical scholar in so many other social science disciplines. His work being relegated to one subset of economic content suggests that his works have very limited to no use in the context of mainstream economic journal literature even though he has created a new economic theory of information capitalism. The troubling aspect of this finding for this research study is that I believe the academic work of Castells will continue to be confined and constrained to this singular subset of academic journals. This is the case because the closer Castells’ theoretical perspective syncs with the basic tenets of critique and criticism offered by Hodgson, the less mainstream Castells’ ideas and theoretical concepts will be for now and for the foreseeable future.

This means that while Castells will continue to be viewed as a prominent and significant contributor to other academic disciplines and social sciences, his ideas will continue to go unnoticed and be underutilized and overlooked in relation to mainstream economics. This is partially because many of the various aspects and components of his theoretical perspective go against the majority of mainstream economics and its current research focus.

**Marginalization at a Cost**

The marginalization of Castells goes beyond merely leaving an important sociological figure out of the economics conversation. It is more complex and complicated than this. That is, this research study illustrates a much larger underlying theoretical problem within economics than confining and constraining one sociological theory of the economy. In fact, the treatment of Castells as a marginalized figure, at least from the results of this research study, implies a much larger problem of leaving sociology and sociological theories of the economy out of mainstream economic research in general. This is very problematic as it implies not only a problem of
historical specificity in terms of exclusion of outside ideas and perspectives but it also illustrates that sociological theorists of the economy, especially those that are critical of the economic changes observed or studied in the social world, have little to no relevance at all in this body of literature specifically.

This is indeed a major problem facing the economic journal literature for the foreseeable future. The results of the literature review for this research project already illustrated at length that information capitalism and information, networks and network organization, and global capitalism and TNCs are important and significant to the field of economics moving into the future of journal articles. These areas were mentioned as central and defining areas of study for the future and represent the possibility of new directions in economic research. However, sociological perspectives that outline and inform these same three key thematic areas, not only for Castells, but also for any theorist that is critical of economic changes and attempts to use a flexible and fluid theoretical perspective outside the confines of being historically specific, is discounted or even worse ignored.

Relegating theoretical discussions in the economic journal literature to a small subset of political economy journals, some considered fringe journals at best, represents another problem altogether for critical theorists. That is, economic journals are functioning as a boa constrictor for new and emerging theoretical ideas within the discipline. Once a new idea enters into the economic journal literature through the sub area of political economy it is constrained and confined to that very set of journal topics and areas. In the case of Castells, majority of his ideas are located solely within this one segment of journals. This is especially insidious in terms of expanding economists’ theoretical and research perspectives as political economy journals tend to be more interdisciplinary, yet it is being used more as a mechanism to prevent an influx of
non-economics-based theories about the economic world from freely entering into the journal conversation. Thus, outside theoretical perspectives are confined and set in place or strangled out of existence from ever receiving mainstream audiences.

On the surface, this is not a new phenomenon in the academic world because there are always journals that are meant to function as outside perspectives that can inform a discipline from other fields of study. However, the filtering process by which critical perspectives of economics or economic processes find themselves is especially disenchanting for the field of economics in general. The journals that should create discussion, debates, and spirited argumentation of competing ideas within and across the field of economics, and more importantly, within the journal research realm of economics, has been stifled to say the least. If a prominent sociological figure discussing and establishing new and emerging changes in the global economic system can be stifled, or silenced, then any critical theorist offering a differing perspective, or one that challenges so called mainstream economic conventions can be shut out, it can be confined and constrained and even ignored no matter how profound.

This process and the continual participation in its non-critical and confining nature limits the entire discipline of economics in terms of being a critical field of study. Preventing new and critical theoretical ideas slight legitimate economic concerns, social issues, and social problems that have real-world consequences, which is already problematic enough. Perhaps even more disconcerting is that economics has placed limitations upon itself to grow and expand as a field of study. Not only this, but this limiting of outside critical perspectives to economics suggests that nobody cares about it being of limited utility as a discipline. Without larger debates, without arguments that make people reassess aspects of the discipline, and without challenges to
popularly held beliefs and notions, especially theoretical notions, economics falls into the trap of being narrow, myopic, and possibly less relevant for the future.

**Castells as a Bridge Toward Something Better**

The limiting scope of economics and economic journal research for this project represents a problem for the future of economics. The lack of critical perspectives and confining and constraining new and emerging ideas on the topic of economics from other perspectives, especially sociological theories of the economy, has detrimental effects for the field of economics. In the case of Castells, without these new perspectives the understanding of global capitalism and changes brought upon it by information capitalism and information, networks and network organization, and the changes in global capitalism and the development of TNCs is sorely lacking. The confined and constrained theoretical concepts offered by Castells actually functions to smother the field of economics’ understanding of the fundamental economic changes that the globalized world has undergone over the last handful of decades. In this sense, economics without Castells has become less sophisticated. This is because economics without the informed theoretical perspective offered by Castells has an overall less-informed understanding of global economic changes, shifts, and development.

From this perspective, Castells and the theoretical perspective of information capitalism may serve as a bridge to a better economics. Let me explain how this is possible. First, Castells is able to avoid and sidestep many of the issues associated with historical specificity that has plagued economics for decades. His flexible and fluid theoretical perspective that allows for history and culture to remain intact when discussing the changes in the global economic system presents an initial foray into a critical theoretical perspective that challenges assumptions and commonly held conventions, which is healthy for any discipline.
Second, Castells provides economics with a dynamic theoretical perspective with information capitalism. The theory of information capitalism provides economics with a theory that is centered around discussing the impact of technology and information on the development of capitalism. It outlines and highlights not only the technological history and development of information technology but it allows aspects of social and cultural dimensions to exist at the same time. This is where the flexibility of Castells’ approach makes perhaps one of its biggest impacts in that his theoretical approach permits change; it allows for and compensates for social, cultural, and historical changes. This is key for economics because it decenters the current approach that seeks out universal but limited economic theoretical approaches and expands economics back out to investigate large-scale processes at the macro level or use elements of Castells’ theory to focus on regional change that is comprehensive. Again, flexibility in use and utility is a major component that Castells is able to offer.

Third, Castells’ insight into the development and impacts of networks on the economy can also greatly enhance economists’ understanding of this concept. Networks are the new way in which information travels, and this includes economic information as well. Networks provide vital information that shapes, forms, and even reconstitutes entire economic systems and have impacted the entire globe. The information that travels between and within corporations, their employees, and other competing corporations now serves a theoretical approach that informs and educates sociologists and economists about the power of networks and shifting networks and their impacts. While economists are interested in networks and research the power of networks, the content analysis showed that this was done in a manner in which networks were devoid of human impact—or having consequences for that matter—and were presented as existing separated away from humans or developed outside of human intervention, the development of
networks were considered matter of fact. This was a problem confirmed by Hodgson who touched on economic theories as being barren. Castells offers the ability to give networks and network development the social, cultural, and historical development that is much needed in economics along with the flexibility and fluidity to understand and respond to this change as well.

Fourth, the discussion provided by Castells in regards to the formation of global capitalism and the development of TNCs offers economics a unique perspective. Castells’ social, cultural, and historical development of modern global corporations and his discussion of the new, developing horizontal organization within corporations provides economics with a more solidified account of the development of TNCs and global capitalism. This means a more historically significant account of this development and a more sophisticated understanding of the essential processes that lead to the development of global economic processes—not to mention a more humanized and less devoid account of this development in general. The same can be said for an account of global economic development that happens at a regional level, which Castells has an excellent account of in his theoretical perspective. Also, this regional approach, while not perfect, is an attempt to break down some of the globalization of the economy to an understandable level that is not universal or relegating global development to merely an abstract concept.

The fifth and final area that Castells can bridge the gaps in economics is by offering a theoretical perspective that de-emphasizes universalistic theories. A major problem with universalistic theories in economics is that they are meant to be static and unchanged, hence universal. However, when there is a theoretical change from one universal theory to another, these perspectives are often discarded or deemed irrelevant. Normally, this is a feature of all
theories and theoretical perspectives. Theories no longer describe the social world or social realities, it happens. But the issue becomes an interesting one in which economists are all in on one theoretical perspective—a universal one—for a decade or two at a time or even worse stuck with economic theoretical explanations that are dichotomous at best.

Castells’ theoretical perspective breaks this cycle of universalism through its flexibility and fluidity. Accounting for change—social, cultural, or historical—is a major breakthrough for economics because it represents the possibility of a more encompassing theoretical perspective that can change and evolve over time. It need not be discarded or be considered an all-in theoretical perspective. It allows for movements, shifts, and new emerging areas of information capitalism and information, networks and network organization, and global capitalist development. Castells has developed an ever-changing and growing theoretical perspective that has room to grow in the future. Thus, Castells’ theoretical perspective is a bridge to the future not just for economics but theories of the economy in general. It is no ordinary bridge though. It is a flexible and fluid bridge that allows for any economist the possibility to cross it. That is, if economists will take that path.
REFERENCES


