

Cognitive Science, Cold War, and Cultural Imagination: A Case Study of *The Body Snatchers*

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Cognitive cultural studies discuss the connection between culture and mind with insights from different areas of cognitive science and explore the functions of the shared features of human cognition in cultural production of specific historical context. The analysis of the American Sci-Fi *The Body Snatchers* from this perspective reveals the cognitive logic during the cold war period, and indicates that this science fiction not only records and shapes the American social psychology during the Cold War, but also serves as an effective medium through which the political and cultural symptoms of that period can be observed, interpreted, and reflected.

Keywords: cognitive cultural studies, Sci-Fi, *The Body Snatchers*

The dialogue between the humanities and the sciences has always been one of the scholarly concerns in the academia. From the debate of “two cultures” initiated by C. P. Snow in the 1950s to the discussion of “cultural criticism” and “cognitive science” by contemporary scholars, they can be regarded as different variants of this dialogue. In the field of literary studies, some scholars have also recognized that the separation between literary studies and cognitive studies has led to challenges in both fields (Baetens & Frey, 2014, p. 93). In their dialogue with different fields of cognitive science, they continue to draw inspiration and obtain new research paradigms, thus expanding the territory of cognitive literature research (Xiong, 2015, p. 3). In this landscape, cognitive culture research has become a new component. By applying insights from many fields of cognitive science to examine the connection between culture and the mind, cognitive culture studies focus on the relationship between the “evolved human brain” and the “specific interpretations produced by specific cultures”, and explore the role of shared cognitive characteristics in the cultural production of specific historical periods, thus greatly enriching the approach to literature and cultural studies.

As a “rapidly growing interdisciplinary field” (Zunshine, 2010, p. 1), cognitive-cultural studies not only enables us to gain new interpretations from previous cultural representations, but also to analyze the formation of specific cultural patterns in particular historical periods from new perspectives, and to understand how they are related to human cognitive features such as human mind, analogical thinking, embodied perceptions of the world, and people’s emotional reflections on various representations. It is also possible to analyze the formation of a particular cultural form in a particular historical period from a new perspective, and to understand how it is related to human cognitive characteristics such as the human mind, analogical thinking, embodied perception of

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the world, and people's emotional reflections on various representations. This provides new insights into the themes and implications of American culture during the Cold War.

The Cold War, the Containment, and the Cultural Themes

The end of the Second World War marked the entry into a bipolar system of competition and confrontation between the United States and the Soviet Union, and the more than half-century-long "Cold War" thus began. The Cold War was not only a traditional political-military confrontation between the United States and the Soviet Union, but also an unprecedented ideological and cultural competition, which was not limited to the traditional security, but also seriously affected the non-traditional security sphere such as literature and culture. All kinds of cultural practices are seen as important means of national security (Caute, 2003, p. 3). This naturally includes various practices in the field of literature and art. Poetry, fiction, and literary criticism were all recognized as forces that could pose a real threat to national security (Carlston, 2010, p. 615). It has been noted that the emergence of non-governmental organizations such as the Congress for Cultural Freedom in the United States during the Cold War constituted new cultural formations that not only radically reshaped the relationship between writers and their public readers, but also redefined the paradigms of domination, subjugation, and subordination. Practical territorial occupation was no longer an imperial goal; it was replaced by the occupation of literary and cultural space (Rubin, 2014, p. 31).

In exploring the relationship between the Cold War and American literature, a number of scholars have based their examination on the strategy of "containment" that dominated American foreign policy during this period. The concept of "containment" was first proposed as a foreign policy initiative of the U.S. government, and its ideological origins can be traced back to the remarks of U.S. diplomat George Kennan. As a U.S. expert on the Soviet Union, George Kennan believed that the Soviet Union was inherently and irrevocably ambitious for foreign expansion and posed a great threat to the United States and the West. Therefore, the focus of U.S. diplomacy was to stop Soviet expansion, and the main approach the U.S. could take was to contain the Soviet Union in all aspects, including politics, military, diplomacy, economy, culture, and ideology. Kennan's idea of containment not only deeply influenced U.S. foreign policy, but also played a large role in shaping U.S. ideology during the Cold War (Jin, Liao, Sun, & Shen, 2017, p. 157). Under the dominance of the strategy of containment, various cultural means were used for ideological delivery, and cultural and artistic products were also used as a sharp weapon in the foreign cultural Cold War. As Tony Shaw (2001, pp. 59-76) puts it, all wars, especially the Cold War, were fought in part through words and images. Propaganda (i.e., the design, production, and dissemination of these words and images) was at the heart of the 40-year battle between East and West after World War II.

In discussing how American literature and culture responded to the Cold War, John Cusatis has cataloged six major themes in Cold War American culture, including the culture of containment; McCarthyism; fear; the culture of conformity; the rise of consumerism; and the counterculture (Cusatis, 2010, p. 37). While this categorization takes into account the richness and diversity of American literary production and cultural practices during the Cold War in a more comprehensive way, there are some overlaps. For example, themes such as the pervasive culture of fear and conformity were largely shaped by the dominant narrative of containment. Thus, among these cultural themes, the "culture of containment theme" is dominant. Thomas Schaub (1991) has revealed the inseparable relationship between literary and cultural production and the politics of containment in the United States during the Cold War, and Alan Nydahl (1995) has examined in detail the interpretation of

containment policies in American literature. These studies further show that the American policy of containment at the political and diplomatic level during the Cold War extended to many areas of American culture, including novels, plays, films, paintings, and so on.

Obviously, containment is the prevention of further expansion of an adversary by means of “non-comprehensive war” (which includes military, political, economic, cultural, and other means that can be controlled and mobilized) (Zhang, 2006, p. 73). But how does the idea of containment work so that it extends from the political, military, and diplomatic spheres of the United States to all aspects of culture, ideology, and even daily life, and thus forms a narrative discourse that dominates U.S. society? Among the various answer to this question should be taken into account the rise and development of cognitive science and its related disciplines in the early years of the Cold War.

The Rise of Cognitive Science During the Cold War—The Dialogue Between Humanities and Sciences

Early Cold War period witnessed the emergence of cognitive science. World-renowned psychologist George Miller regarded the Information Theory Symposium held at the Massachusetts Institute of Technology from September 10 to 12, 1956, as a sign of the emergence of cognitive science, with three representative papers in this symposium from the field of computer science, linguistics, and psychology respectively. In Miller’s view, the symposium convinced him that “human experimental psychology, theoretical linguistics, and computer simulations of various cognitive processes are all part of a larger whole, and that the future will see the gradual elaboration and harmonization of topics of common interest in these fields” (Posner & Shulman, 1979, p. 379).

Miller’s prophecy was confirmed in some way almost at the same time, and in the mid-1950s a series of publication marked the emergence of the new field of cognitive anthropology. Researchers systematically collected data from people living in remote cultures on such things as naming, categorization, and concept-forming abilities, and then attempted to describe the nature of these linguistic and cognitive practices in formal terms, even though the data showed that the cognitive processes involved were similar across the board (Martini-Nielsen, 2010, p. 132). However, these studies have prompted human culturalists to focus on insights from the cognitive sciences that distill culturally nuanced concepts of cognition. Much of this research has focused on “cultural models” (Shore, 1996, p. 10). As a result, cultural models, developed on the basis of schema theory in psychology and neuroscience of the brain, have provided new perspectives on the highly shared cognitive structures of groups in a given culture.

Different scholars have different views on the definition of cultural models. For example, Holland and Quinn define it as the preconceived, taken-for-granted framework of the life-world shared by people in a given society, which is an important tool for interpreting the world and for social action (Holland & Quinn, 1987, p. 4); Roy D’Andrade sees cultural models as “cognitive models that are shared among a cultural group” (D’Andrade, 1989, p. 809). For Bradd Shore, however, these definitions are too vague. He proposes an anthropological conception of “mind” in which the brain depends on a series of externally derived models to function (Shore, 1996, p. 10). In Shore’s view, although the human brain is often described as an information processor, it also plays an important role as a model generator, “humans are opportunistic and creative model builders as well as skillful model interpreters” (p. 44). His argument suggests that the models that make up culture are both public goods of

the objective world and cognitive constructs that exist in the minds of group members. In this sense, it is impossible to exhaust the cultural models that human societies can come up with. For this reason, he proposes a set of ways in which different sets of models can be distinguished in order to elucidate the kinds of cultural models and their functioning, which includes two most basic categories: linguistic and non-linguistic models (p. 56). Within the category of linguistic models, “narrative is a more complex and important cultural model. The creative relationship between narration as an activity and narrative as an outcome gives narrative a uniquely ambiguous position in the linguistic formula” (p. 58).

According to Schorr’s taxonomy of cultural models, the dominant narrative language shaped by the U.S. containment strategy during the Cold War constitutes a cultural model of the “containment narrative” that dominates American society. However, to further understand the cognitive logic in the formation of the cultural model of containment, it is necessary to link Shore’s anthropological perspective with the psychological concepts of cognitive psychologists Rykov and Johnson.

According to Lakoff and Johnson, mental concepts, the building blocks of schemas, arise fundamentally from the experience of the human body in the world (Lakoff & Johnson, 1999, p. 16). Human beings create meaning both through basic concepts such as certain “basic levels”, “spatial relations”, and “bodily actions”, and through the interplay of human experience and structural patterns in the mind (p. 16), as well as through the concepts generated by human experience and structural patterns in the mind (p. 16), concepts that arise through the interaction of human experience and structural patterns in the mind (pp. 16-37). These concepts have universal significance for human development,

because all individual and cultural cognition depends on the recombination of the same conceptual primitives. When these concepts are combined to produce cultural patterns, most of them are capable of creating all sorts of concepts such as romantic love, social stereotypes, and all the other concepts we call culture. (McConachie, 2010, p. 140)

Johnson has analyzed five aspects of the spatial concept of “containment”. The study shows that human beings use the concept of containment in the same way as they use the concepts of “balance”, “scales”, and “power”. It is one of the innate functions of the human mind to construct experiences, just as they use concepts such as “balance”, “scales”, “power”, and so on. It stems from genetics and from human interaction with the natural and social environment. But the choice of these specific concepts used by human beings to construct experience is closely linked to a particular historical and cultural context.

Hence, there exists a cognitive-psychological coherence between the cultural model derived from the cognitive-spatial connotation of “containment” and the U.S. national security strategy of “containment” during the Cold War period in U.S. cultural practice. The connotation of the US containment strategy includes five components: containment, deterrence, coercion, prevention, and liberation (Zhang, 2006, p. 68). In this sense, the basic spatial concept of “containment” provides “a default mode of perception” (McConachie, 2010, p. 150) for the cultural model of containment. It pervades the American Cold War culture and contributes to the organization and the maintainment of the existing mental schemas and cultural models, and even shapes a set of new ones. These models functioned at the center of a vast network of Cold War that helped to structure much of the dominant culture of the period. The process of generating and interacting with these models is also embedded in a deep logic of cognitive psychology.

According to cognitive psychology, human concepts of space and bodily action provide people with structured cultural experiences through “analogical transfer”, i.e., the creation of analogies linking two

phenomena through similarity (Lakoff & Johnson, 1999, p. 16). However, the analogical transference between different levels of the cultural model occurs through what Schor calls “analogical schematization”. Among the various types of analogical schematization, the most common one is the analogical mapping of new information onto previously acquired underlying schemas for the purpose of constructing meaning, while the rarest is the construction of new models to address the various disjunctive experiences that result from the lack of a priori models. Some of these new models may become conventional models of the group (p. 367). And it is at the higher-level process of this analogical formation that culture plays its crucial role.

The following part of this paper is an analysis of the mechanism of the cultural theme—the “virus” culture during the Cold War under the cultural model of containment with one of the popular Sci-Fi as a case study.

The “Virus” Culture in American Cold War Cultural Themes: *The Body Snatchers* as a Case Study

During the Cold War, narrative paradigms related to containment, infiltration, mind control, and threat to humanity emerged in American science fiction. For example, in the early Cold War works of the 1950s, the alien theme was transformed from the original “vulgar monsters” into the “invasive” and “threatening” alien species. These invasion narratives are derived from cultural models of containment which is associated with “to conquer or to be conquered” (Seed, 2013, p. 30), with the aim of shaping public perceptions and ways of thinking. Among the various invasion narratives, *The Body Snatchers* (Finney, 1955) has long been regarded by critics as an iconic cultural product of the early Cold War in the United States.

The novel focuses on the strange experiences in Santa Mira, an imagined town in California. The town’s doctor, Miles Bennell, returns from an out-of-town medical conference to find that the town has been experiencing a series of strange events: Pod seeds from outer space have been falling from the sky, replicating human beings and replacing them with plant stand-ins while they sleep. On the surface, there seems to be no difference between the pod people and the ordinary people. Only those closest to them can notice the subtle difference: The pod people have no emotions. Although it has the memories of the original human, it can only pretend to have human emotions and senses. Upon discovering this secret, Dr. Myers seeks to save the town by stopping these pod people’s plans to replace humans.

Among the various interpretations or criticisms of this fiction, political allegory became the dominant paradigm, which takes this work as a continuation of the paradigm of aliens as a thematic category in American Cold War science fiction. However, in sharp contrast with the other science fiction of the same period, the alien invasion changes and evolves into something akin to the spread of disease. An ordinary town in the novel becomes a source of contagion, with families infiltrated by non-human enemies, as if the new life form has somehow corrupted or infected its human host. The pod people work like a virus, stealing basic information from humans and creating a blind herd mentality that transforms ordinary Americans into soulless puppets. The titles of both the novel and the movie adaptation use the term “body snatchers”. The logic of cognitive science underlies this seemingly commonplace term. The popularization of viral knowledge at the time provided a new field of experience for the creation of new cultural models and the transformation of existing ones.

Although the link between medicine and politics had already attracted attention during the germ warfare of the Second World War, it was only from the mid-1950s that metaphors of viral invasion began to increase. Research has shown that when viruses were first discovered, they were portrayed through language such as “amazing”. However, with the emergence of the metaphor of viral “invasion”, viruses were described through

language such as “attacking”, “engulfing”, or “destroying the host cell”, and so on, and thus viruses could “attack and engulf and destroy the host cell”, as “the worst enemy of mankind”. And each virus particle “penetrates” into the cells of a tissue. Each viral particle “penetrates” into a tissue cell, generating new particles that “invade” neighboring cells and kill them (Wald, 2008, pp. 170-172).

However, behind these various descriptions of viruses is a kind of conceptual exchange between virology and Cold War politics. For the human body, as viruses become increasingly dangerous and volatile, they infiltrate human cells and gain access to the body’s control mechanisms; for the state, external forces, such as what Americans see as the “ideology of the other”, become like viruses, invading the state’s nerve center threatening and disrupting the dissemination of information of all kinds.

According to cognitive anthropology, human behavior is constructed at three different levels: concrete cases, institutional models, and foundational schemas (Shore, 1996, p. 366); among these, the foundational schemas serve as “foundational models that operate across different domains of experience and form the basis of the group’s worldview” (p. 366), as schemas themselves are transformed, and even created, through encounters with new experiences. In this context, one can see various forms of cultural knowledge being created, transformed, and negotiated. Unusual experiences may change old cultural models or even create new ones.

This psychological basis for the acceptance of viral culture during the Cold War was closely linked to the political climate in which “McCarthyism” reigned. Joost Meerloo (1956, p. 47) refers to the situation: “ready-made opinions can be disseminated daily through the news, radio, etc., until they reach the nerve cells and implant a fixed pattern of thought in the brain...”. The influence of McCarthyism permeated the fields of American politics, education, and culture, and had a great impact at all levels, as well as providing a psychological basis for mass acceptance of the creation and transformation of all kinds of cultural knowledge. As the Cold War containment strategy progressed and the U.S. House of Representatives Committee on Un-American Activities became fully operational, social and medical notions of threat began to interact with Cold War politics and viral-related narratives. The new experience of the concept of “virus” generated by biomedical developments was analogically mapped onto the original “invasion model” by Cold War political discourse, resulting in new constructions of meaning from the “invasion model” of shaped territories to invisible ones. The new construction of meaning arises from the transition from the territorial model of invasion to the invisible model of viral contagion. A number of specific virological terminologies have familiarized such representations of viral and disease transmission, whereby the virus, as an enemy, an invader, stealthily infiltrates into cellular tissues to regenerate and ultimately destroy or damage the invaded object. The operational mechanisms of viral infections are thus constructively analogized to political threats. Virus-related themes are given a new interpretation: the threat of the emerging ideology of the other on a global scale.

In this sense, *The Body Snatchers* creates a panic precisely by dramatizing the spreading power of disease and community. In *The Body Snatchers*, we can find that while the source of the townspeople’s fear and anxiety is the pod people from the alien planet, the agent that ultimately makes this fearful apprehension a reality comes from within their family and social relationships. Family, friends, and neighbors are turned into pod people. They were all good people before they were subverted, including such characters as the kindly uncle, the sweet lady boss, the gray-haired librarian, and so on, all of whom were infested while they slept. After the infestation, although the victims still appear to be good citizens and good neighbors as before, they have actually become the embodiment of a certain kind of evil, a kind of pod person who ensures that the replication plan is won. The

novel is told in this way with the help of the narrator's voice, "You couldn't see any difference at all ... from the outside. But inwardly, he wasn't the same man ... He spoke mechanically ... There was not a trace of emotion—not a trace—of only falsehood" (Finney, 1955, pp. 99, 12, 19). In the story, the pod people are using this kind of "invisibility" and "brainwashing" to eliminate the individuality of Americans and human emotions, and to achieve the goal of conquering the United States and the world.

Pricilla Wald (2008, p. 172) has pointed out that cultural contagions are more frightening than biological ones, and even more destructive than physical attacks. Thus, the denigration of the ideological and value dimensions of communism in such literature and cultural products was not a direct attack on culture, but rather a demonization of "un-American ideology" through a biological difference. The experience of the pod people seems to suggest that this transformation can be achieved through viruses as well as through other means such as indoctrination or brainwashing. Because of its ability to create a very effective horror effect, this narrative became a typical paradigm of science fiction, and to a certain extent, this work constructed the public's perception and way of thinking during the Cold War. By reducing foreign ideologies to invading viruses, it created a sense of fear among the public, which in turn became a leverage for political forces to utilize, thus suggesting that political discourse during the Cold War was inspired by biomedicine and virology, while at the same time influencing the field.

Perhaps it is the medical character of the story that makes this work coincide with the Cold War characterization that was a growing concern at the time. The pod people in Finney's novel were given an identity because they were the political and scientific embodiment of the era, and the continuing interpretive power of the story of the pod people was confirmed by its adaptation and retelling in different movie versions. At the same time, another important reason for the popularity of the work since its release is that it stimulated "the imagination of a generation that had witnessed both the power of the atomic nucleus and the destruction of humanity brought about by biomedical technology in the Nazi concentration camps" (Wald, 2008, p. 159). The specific Cold War political discourse and the psychology of readers' reception in a particular historical context allowed this work to be told in different media, spreading various rhetorics related to viruses and contagion, not only conveying scientific knowledge about epidemics, but also influencing the economic, political, and cultural patterns of society through the authority of science.

The above case study of this science fiction novel from the perspective of cognitive-cultural studies shows that the development of biomedicine in the United States during the Cold War and the political discourse behind it made the "virus" inspire people's literary and cultural imaginations, and the literary and cultural narratives spawned by it not only recorded various representations of the American social psyche since the Cold War but also became an effective medium for people to observe, understand, and judge the political and cultural symptoms of the United States during that period. They have also become an effective medium for people to observe, understand, and criticize the political and cultural symptoms of the United States during that period. In this sense, Jack Finney's 1955 bestseller *The Body Snatchers* not only serves as a typical example of a literary narrative in which biomedical discourse, political discourse, social psychology, and literary imagery intersected in the United States during the Cold War, but also, and more importantly, it provides us with an example of the role of the humanities and the arts in serving the national security strategy, as well as the role of the arts in serving the national security strategy, and the role of the humanities in serving the national security strategy, artistic production in the service of national security strategy and the construction of national identity and other aspects of reflection and inspiration.

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