THE TRANSFORMATION OF SCIENCE FICTION INTO THE MODERN TECHN O-THRILLER GENRE

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ABSTRACT

This article explores science fiction as one of the major literary and theoretical sources of the techno-thriller genre. Although techno-thrillers are generally associated with advanced technology, military operations, scientific experimentation, intelligence systems, and institutional crises, their origins are closely related to science fiction's long-standing interest in scientific progress, technological innovation, and the risks connected with human discovery. The study argues that the techno-thriller evolved from science fiction by adapting its scientific imagination into a more realistic, immediate, and procedurally structured narrative form.

Whereas traditional science fiction frequently focuses on distant futures, imaginary societies, or speculative philosophical ideas, the techno-thriller usually places technological conflict within recognizable contemporary reality or the near future. The genre emphasizes scientific plausibility, professional expertise, institutional environments, and the vulnerability of technological systems during moments of crisis. Particular attention is devoted to Michael Crichton's *The Andromeda Strain* illustrates how a science-fiction concept may be transformed into a techno-thriller narrative through the use of laboratory procedures, quarantine systems, scientific collaboration, and governmental response mechanisms.

The article further investigates the relationship between scientific realism and suspense, demonstrating how documentary techniques, technical language, and procedural detail contribute to narrative credibility and psychological tension. The study concludes that the techno-thriller should be regarded not as a complete separation from science fiction, but as one of its most realistic and crisis-centered literary developments.

Keywords: science fiction, techno-thriller, Michael Crichton, *The Andromeda Strain*, scientific realism, technological anxiety, procedural narrative, genre evolution.

Конец формы

INTRODUCTION

Science fiction and the techno-thriller are closely related literary genres because both deal with scientific development, technological progress, risk, and the influence of modern systems on human life. Nevertheless, the two genres approach these issues differently. Science fiction generally creates imaginative worlds that may include future societies, advanced civilizations, artificial intelligence, or alternative realities shaped by scientific discovery. The techno-thriller, however, tends to present technology in a more immediate and realistic context. Instead of focusing mainly on distant futures, it often explores situations in which existing or potentially achievable technologies become sources of danger, instability, or ethical conflict.

The connection between science fiction and the techno-thriller can be observed in their treatment of science as a central narrative element. In many traditional literary forms, science functions only as background information or as a symbol of modernization. In science fiction, by contrast, scientific knowledge becomes one of the major forces shaping the fictional world. It influences the structure of the narrative, creates conflict, and raises questions concerning ethics, responsibility, and the limits of human control. This literary tradition later

prepared the foundation for the development of the techno-thriller genre. Before techno-thrillers began to focus on biological crises, military technologies, computer systems, or institutional breakdowns, science fiction had already demonstrated that scientific progress itself could become a major source of literary tension.

Researchers of science fiction frequently emphasize that the genre is not based solely on fantasy or imaginative invention. Scientific plausibility remains one of its essential characteristics. Even highly imaginative narratives usually preserve some connection with scientific or intellectual possibility. This idea is especially important for understanding the techno-thriller because the genre also depends heavily on realism and plausibility. However, the techno-thriller normally presents its conflicts within recognizable contemporary settings, making technological danger appear immediate and socially relevant.

An important example of this transformation can be found in the fiction of Michael Crichton, particularly in *The Andromeda Strain*. The novel demonstrates how a science-fiction premise may be reshaped into a techno-thriller through procedural realism, scientific investigation, institutional response, and documentary-style narration. Laboratory systems, expert-centered decision making, quarantine procedures, and governmental secrecy become central mechanisms of suspense throughout the narrative.

Therefore, the present article aims to examine science fiction as one of the literary foundations of the techno-thriller genre. Special attention is devoted to the similarities and differences between the two genres, the role of procedural realism, the significance of institutional settings, and Michael Crichton’s contribution to the development of modern techno-thriller fiction. The study argues that the techno-thriller emerged from the traditions of science fiction while adapting speculative scientific ideas to the realities and anxieties of modern technological society.

Конец формы

METHOD

The present article is based on a qualitative literary and genre-oriented approach to analysis. Since the main purpose of the study is to investigate science fiction as one of the literary foundations of the techno-thriller genre, the research does not depend on statistical, quantitative, or experimental methods. Instead, the study applies comparative, descriptive, analytical, textual, and contextual methods, which are more appropriate for examining literary genre development, narrative structure, and the transformation of scientific themes in fiction.

The comparative method is used to identify both the similarities and the differences between science fiction and the techno-thriller genre. Through comparison, the article examines the ways in which the two genres approach science, technology, danger, human responsibility, institutional systems, and scientific knowledge. This method makes it possible to demonstrate that the techno-thriller did not emerge independently from science fiction, but rather developed from it by transforming speculative imagination into a more immediate, realistic, and crisis-oriented narrative structure.

The descriptive and analytical methods are employed to explain the major characteristics of both genres. Science fiction is analyzed as a literary form frequently associated with scientific speculation, future-oriented imagination, technological innovation, and philosophical reflection on humanity and progress. The techno-thriller, by contrast, is examined as a genre that adapts scientific and technological ideas into realistic narratives structured around procedural detail, institutional response, and technological crisis. These methods help clarify the literary and structural features that distinguish the techno-thriller from broader forms of speculative fiction.

The study also incorporates elements of textual and contextual analysis. Michael Crichton's *The Andromeda Strain* is selected as the primary literary example

because it effectively combines a science-fiction premise with the stylistic and narrative techniques of the techno-thriller. Particular attention is devoted to the novel's use of laboratory environments, quarantine systems, scientific procedures, technological mechanisms, expert-centered narration, and institutional response. These elements are analyzed in order to demonstrate how science fiction gradually evolved into a more realistic and procedurally organized literary form.

The contextual approach is additionally used to examine the historical and cultural conditions that influenced the emergence of the techno-thriller during the second half of the twentieth century. Scientific competition, Cold War anxieties, technological expansion, biomedical experimentation, and growing public concern regarding institutional control contributed significantly to the formation of literary narratives centered on technological fear and scientific crisis.

The theoretical basis of the article relies on the scholarly works of researchers such as Darko Suvin, Adam Roberts, Roger Luckhurst, and Priscilla Wald, whose studies on science fiction, genre theory, and technological culture provide an important conceptual foundation for the present research. In addition, encyclopedia and dictionary sources are used to clarify the literary definition and genre position of the techno-thriller.

Therefore, the methodology of the article is primarily theoretical and interpretive, focusing on genre transformation, narrative function, scientific realism, and the literary representation of technological fear in modern fiction.

RESULTS

The analysis shows that science fiction provides the main conceptual and narrative foundation for the techno-thriller genre. Both genres are connected by their interest in scientific knowledge, technological change, and the possible consequences of human innovation. However, the techno-thriller modifies the

broader imaginative possibilities of science fiction and adapts them to a more immediate and realistic form of storytelling.

The first result of the analysis is that science fiction prepared the intellectual basis of the techno-thriller by making science and technology central to literary conflict. In science fiction, scientific discovery is not merely background material; it often shapes the entire fictional world. This feature later becomes essential for the techno-thriller, where scientific or technological problems become the main source of suspense. In other words, the techno-thriller could not develop fully until literature had already accepted science as a serious narrative force.

The second result is that the techno-thriller differs from science fiction through its stronger emphasis on plausibility. While science fiction may describe distant futures, alternative worlds, or highly speculative technologies, the techno-thriller usually focuses on technologies that already exist or seem possible in the near future. Merriam-Webster defines a techno-thriller as a thriller whose plot depends on modern technology and records 1978 as the first known use of the term.[1] This definition is brief, but it reflects an important feature of the genre: technology is not only part of the setting, but the condition that creates the plot.

The third result is that procedural realism is one of the defining features of the techno-thriller. The genre pays close attention to professional procedures, technical systems, institutional responses, and expert knowledge. Scientific explanation becomes part of the narrative tension. The reader follows not only the danger itself, but also the process through which specialists attempt to understand and control that danger. In this sense, the techno-thriller transforms explanation into action.

The fourth result is connected with the role of institutions. Science fiction often explores large systems, including political systems, social systems, ecological systems, technological systems, and cosmic systems. The techno-thriller narrows this systemic imagination and places it in recognizable modern

institutions such as laboratories, hospitals, military bases, intelligence agencies, corporations, and government structures. These institutions are not passive backgrounds. They control information, organize professional knowledge, create chains of authority, and sometimes make the crisis more difficult to solve.

The fifth result is connected with Michael Crichton's "The Andromeda Strain". The novel demonstrates how a science-fiction idea can be transformed into a techno-thriller structure. Although the story begins with an extraterrestrial microorganism, the main narrative focus is not space exploration or cosmic mystery. Instead, the plot develops through laboratory analysis, containment procedures, scientific teamwork, government secrecy, and technological systems. This confirms that the techno-thriller grows out of science fiction but gives it a more realistic, institutional, and crisis-based form.

DISCUSSION

The results of the analysis suggest that the techno-thriller should not be understood as a genre completely separate from science fiction. Rather, it can be seen as one of science fiction's modern developments. Science fiction created the literary habit of treating science as a serious source of conflict, imagination, and cultural reflection. The techno-thriller continues this tradition but changes its narrative direction. It brings scientific danger closer to the reader's own reality and places it inside recognizable institutions.

This transformation is especially important in modern literature because contemporary society is deeply dependent on scientific and technological systems. Laboratories, hospitals, computer networks, military structures, corporations, and government agencies all shape everyday life. The techno-thriller reflects the anxiety that these systems may fail, become uncontrollable, or produce unexpected danger. In this sense, the genre expresses a specifically modern fear: the fear that human beings may create systems too complex to manage fully.

The difference between science fiction and the techno-thriller is not only a matter of subject matter, but also a matter of narrative method. Science fiction often creates distance through speculation. The techno-thriller reduces that distance and creates suspense through plausibility. Science fiction may ask what humanity could become in the future, while the techno-thriller asks what could go wrong in the present or near future. This shift from wonder to urgency is one of the main features of the genre.

One of the most important elements of this shift is procedural realism. In science fiction, scientific ideas may function as metaphors for human progress, moral danger, or social transformation. In the techno-thriller, scientific and technological processes are usually presented in a more concrete and sequential way. The reader is shown how a laboratory operates, how information is processed, how experts communicate, how a containment system functions, or how a technological failure spreads through an institution. These procedures create a sense of realism and make the danger more convincing.

Michael Crichton's "The Andromeda Strain" is significant because it clearly shows this transformation. The novel keeps the science-fiction element of an unknown extraterrestrial organism, but its real tension comes from scientific procedure and institutional response. The Wildfire laboratory, the expert team, the containment system, and the technical details make the danger believable. As a result, the novel becomes not only a story about an alien microorganism, but also a story about modern science, technological control, government secrecy, and the limits of expert knowledge.

Crichton's approach also shows that the techno-thriller does not abandon the intellectual seriousness of science fiction. On the contrary, it preserves science fiction's interest in scientific possibility and technological consequence. However, it places these concerns inside a thriller structure. This means that the reader is not only invited to think about science, but also to feel the urgency of

scientific crisis. The danger is not abstract; it is immediate. The question is not only what science means, but how quickly human beings can understand and control its consequences.

The "Encyclopedia of Science Fiction" connects the technothriller with science-fiction elements, although it notes that these elements may sometimes be subordinated to thriller suspense.[2] This point is important because it explains the hybrid nature of the genre. The techno-thriller borrows from science fiction, but it also borrows from detective fiction, spy fiction, military fiction, medical fiction, and disaster narrative. Its originality lies in the combination of technical detail, institutional realism, and urgent suspense.

The discussion therefore confirms the main argument of the article: science fiction is the foundation of the techno-thriller, but the techno-thriller reshapes that foundation according to the demands of realism, suspense, and procedural detail. It keeps science fiction's concern with scientific possibility, but presents that possibility as an immediate crisis within the world the reader already recognizes.

CONCLUSION

Science fiction is one of the main foundations of the techno-thriller because it first established science and technology as serious subjects of literary imagination. It showed that scientific ideas could shape plot, conflict, character, and meaning. Through its interest in speculation, knowledge, estrangement, and technological consequence, science fiction created the conceptual conditions from which the techno-thriller later developed.

At the same time, the techno-thriller has its own distinctive features. It moves away from distant futures and highly speculative worlds toward the present or near future. It emphasizes plausible technology, professional expertise, institutional settings, procedural detail, and immediate crisis. Its suspense depends on the fear that modern systems laboratories, computers, military networks,

biological research, hospitals, or government agencies may fail despite their sophistication.

Michael Crichton's "The Andromeda Strain" demonstrates this transformation clearly. The novel begins with a science-fiction premise, but its narrative energy comes from investigation, containment, technical explanation, and institutional response. The extraterrestrial microorganism creates the unknown, but the suspense develops through the attempt to manage that unknown by scientific and technological means. This is precisely what makes the novel a representative example of the techno-thriller.

For this reason, the techno-thriller should not be understood as a genre completely separate from science fiction. It is better viewed as one of science fiction's most realistic and historically responsive developments. Science fiction imagines the possibilities of science; the techno-thriller shows what happens when those possibilities become immediate, dangerous, and difficult to control.

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