"Self-Development and Modern Technological Culture: A Study of Thomas Pynchon’s Bleeding Edge"

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Abstract

The current paper’s main aim is to analyze the importance of the self-development in achieving and claiming the modern technical innovations. Thomas Pynchon’s Bleeding Edge investigates the relationship between self-development and the technological culture in the American society. Pynchon is one of the innovative writers of the twentieth century, who encourages and calls for the development of the self, talents, and technical devices. His latest novel is a police story, features a physical urban landscape and virtual space; acting as a contract to distribute information about cyberspace and urban areas in New York City during the Sep 11 terrorist attacks. His prohibitive hiring personalities occur in the form of hyperlinks and non-embodies interactions. This novel is a new form of anchoring the body, the technological saturated “information society” becomes its newly created “natural” habitat. Pynchon believes that the society can be developed throughout the self-development in particular, as well as moral and physical encouragement by the state itself, which leads to a positive stimulus and make life more comfortable and easier than before. So this study intends to show how novel represents technology in relation to some cultural concepts.

Key words: Pynchon, Bleeding Edge, Technological culture, Self-development.

1.1 Introduction

“Culture attracts the worst impulses of the moneyed, it has no honor, it begs to be suburbanized and corrupted.” (Bleeding Edge, 2013, 56)

Pynchon is one of the twentieth century authors whose writing “reflects the dominant cultural focus of the American, and Western, literary scene” (Gourley, 2013, 1). His fiction and non-fiction encompass and investigate philosophical, theological, scientific and sociological ideas exhaustively. He has been concerned with depicting the post-postmodernist concepts as identifying larger contemporary patterns of aesthetic and cultural development. Among many American authors, Pynchon is classified to such approach since he gives his readers an opportunity to describe the aesthetics and cultural concerns in his works. Bleeding Edge (2013) is Pynchon’s insight to the importance of understanding and keeping up with the recent technical innovations and their effects on the society as a whole. By analyzing this novel, it is clear to distinguish the deleterious effects that led to the emerging internet culture upon the characters. Seeping into every aspect of their lives, and "embedding itself in their minds, and becoming a prosthetic consciousness” (Siegel, 2016, 2), Pynchon depicts a truth that the internet has transformed the individuals into post humans and altered their subject positions within a technological global capitalist culture. In order to find the appropriate theoretical framework that fits the subject of the study, the endogenous growth theory of Paul Romer is selected to conceive the importance of the correlation between technology and the economic growth. This theory primarily holds that the improvements in technology can lead to further improvements in the conditions of people. It further asserts that the modern innovation-driven approach participates profoundly to the understanding of economic growth, which, as Romer believes, is primarily the result of endogenous and not external forces. (Jones, 2019, 683)

In addition, Romer speaks in his theory about the development of the poorest countries that have been incapable of technical innovations because of self-encouragement and the development of skills and modern devices. Through his theory, Romer asserts and proves that innovation and economic growth is what makes the country advances technically and achieve progress. This theory shows that a large population is not sufficient to generate growth, rather the innovation and technical growth in this theory are models driven by technological change. According to Romer, the development of new ideas is connected with the number of people working in the knowledge sector (Johns, 2019, 680). According to him, the economy is a huge discovery machine that can make a big difference to the technical cultures. He, furthermore, believes that the innovation comes from within, and this is what is called self-growth. It is significant to mention that Paul Romer stipulates three concepts of his theory:

a- Self-development.

b- Developing the skills and practicing talents.

c- Needs for technological devices.

Accordingly, the theory of internal growth holds that economic growth is primarily the result of internal rather than external forces. Romer named this theory as economic growth and innovation as it refers to something that is originated or grown from within. Simply, investment in human capital, innovation and knowledge are crucial factors in economic growth. It is not surprising that Romer’s theory has generated major areas of research into the regulations and policies that encourage new ideas and long term growth, and Pynchon, through Bleeding Edge, adapts Romer’s theory and sheds light on the importance of the self-growth and self-development of the skills to attain comfortable life.
Through exploring Bleeding Edge, it is noted Pynchon adapts the same principles of Romer’s innovation theory. He encourages the new modern innovations like the use of the internet and its development, as well as the self-evolution that has a great importance in developing self-skills and improving talents. Significantly, Pynchon is classified as a writer whose goal is to deliver a message to the reader and the society that the technological developments become very essential in the contemporary life, yet at the same time, those machines and devices must be used with caution. He leads his readers through an underworld of corruption and conspiracy by investigating the attacks of September 11 on America. He shows that there are no easy sides to take, no absolute good guy/ bad guy dichotomies, and no straightforward plotline to follow. He tackles “the nefarious doings of a New York computer-security firm in the year leading up to the September 11 attacks of 2001, all the while attempting to parent her children in the wake of domestic difficulties” (Nathaniel, 2013,). The novel revolves the technological change even if they differ in their responses. It is not just about media technology or specifically about the internet; rather it is about the effect of the search engine upon the life of characters themselves.

The statement of the problem

Through Bleeding Edge, the study attempts to analyze the modern technical innovations and the economic growth of technological culture in America and their impact on the whole world. Consequently, it hypothesizes that Pynchon is an innovation writer and this novel is very sufficient to show his insight in this regard. This paper aims at validating the hypothesis by exploring and adopting the Endogenous growth theory of Paul Romer. The study tries to find an answer to the following:

a- How does Pynchon explain the self-development?

b- How does Pynchon assert the development of skills and talents in Bleeding Edge?

c- Does Pynchon think that there is a need for investment in human capital, innovation, and knowledge?

Objectives of the study

The current study aims at exploring Thomas Pynchon’s Bleeding Edge and showing the importance of the invention of net web. The main objectives of the study are

- to investigate the relationship between self-development and the modern technological culture.

- to draw the attention of people to the harmful, unreliable, and destructive effects of the virtual world on people and users of the internet.

- to state how the technology may be misused especially by the terrorists who utilized the new technology and attack America in 11 September, 2000.

Literature review

When reviewing the libraries and surfing the net, it is found that there are several studies and researches carried out about Pynchon’s Bleeding Edge, among them is Albert Rolls who has written many articles about Pynchon’s Bleeding Edge, like “A Note on Bleeding Edge’s “Unsheltered” and “Review of Bleeding Edge, by Thomas Pynchon” and etc. Rolls studies and reviews the novel and its main themes and plot. While, in 2016 Jason Siegel examines in his article,“Meatspace is Cyberspace: The Pynchonian Posthuman in Bleeding Edge”, Pynchon’s criticism of utopian posthumanism by investigating the harmful impacts that the Internet culture has on the novel’s characters.

Simon Radchenko argues in his study that the ideas of metamodernism and its main trends can be successfully implemented in the analysis of Thomas Pynchon’s Bleeding Edge (2013). In addition, in 2016 Francisco Collado-Rodríguez tackles how Pynchon depicts the image of the female protagonist, and at the same time he evaluates Pynchon’s depiction of current society as posthuman and influenced by a new type of social stagnation related to the control of information system. Whilst, “Welcome to the Indexed World: Thomas Pynchon’s Bleeding Edge and the Things Search Engines Will Not Find”, talks about media technology and the Internet. This article uses a media-historical analysis to argue for the search engine as the major factor stimulating the reorganization of Pynchon’s technique in the novel.

Methodology

The major methodology used in this study is depending on analyzing thematic preoccupations and on finding a matching relationship between the endogenous economic growth theory of Romer and the events of the novel.
2.1 Discussion

“It’s the first day of spring 2001, and Maxine Tarnow, though some still have her in their system as Loeffler, is walking her boys to school.” (Bleeding Edge, 2013, 1)

Pynchon is a significant and well-known writer due to his complex narrative style that is attributed to the postmodernist narrative techniques. Bleeding Edge is the fictional detective novel which is revolved around the internet web and 11 September attacks. The novel speaks about the protagonist, Maxine Tarnow, who is a Jewish, single mother of two boys, and a formerly certified fraud investigator in New York City. She starts snooping into the case of the money funneling to and from indeterminate sources of web firm Hashslingerz, which lead her to entangle in a complex web of criminal activity when she takes a case involving a shady computer security firm. She has to negotiate through a colorful array of Russian mobsters, bloggers, hackers, angry entrepreneurs, and coders. After a murdered case, in the building where Hashslingerz is formerly located, Maxine gets mixed up with CIA Hitman Windust, and her life and job get increasingly complicated. She goes to coexist the DeepArcher, an closed electronic system, as a refuge, and takes Horst back and she attempts to bring the two programmers, Eric and Driscoll, to move with them as temporarily homeless. March finds herself hunted and homeless, but she keeps up her blog using WiFi.

The central preoccupation of the novel is thus "the nexus of technology and terror" (Rich 4). When a hacker, named Felix Boinguexaux, who develops malware-detection software; Maxine can’t express where Boinguexaux’s sympathies lie. “You’re frowning,” says Boinguexaux. “We’re beyond good and evil here, the technology, it’s neutral, eh?” (Bleeding Edge, 2013, 89) Maxine doesn’t reply, but one can ask: Is technology neutral?

In the light of shifts of temporality, the novel highlights the idea of obsolescence, which refers to the new technology that it can be useless, unreliable or even harmful (Simonetti, 2018 15) in such virtual world. This technology, as Pynchon describes, is “a virtual sanctuary to escape to and from the many varieties of real-world discomfort” (Bleeding Edge, 2013, 74). He accomplishes this effect deeply in some scenes where Maxine visits a virtual world called Deep Archer, which is a closed system, accessible via the internet, links to no other Web site, and it is hidden from Google. Thus, Pynchon allows many readers to be visitors in this virtual world like those characters who created such electronic system for ourselves to show the meaning to be more realistic. The novel gives an opportunity not only to recognize technology in elaborated phases, but to understand an idea, inhabit, and follow it. Maxine presents the DeepArcher as a refuge, one character says: 'DeepArcher will always take you in, keep you safe,” (Bleeding Edge. 2013, 373). This technology is represented by Justin and Lucas' Deep Web guide. Maxine takes Horst back and she attempts to bring the two programmers, Eric and Driscoll, to move with them as temporarily homeless. March finds herself hunted and homeless, but she keeps up her blog using Wi-Fi. Pynchon shows that cyberspace has already merged with human life. As a result, Maxine has nowhere to run in her attempt to find a provisional refuge for herself and her family.

It is not surprising to state that Bleeding Edge is a novel about the birth of the internet age in New York, “we’ll stay in town and hide where everyone can see us” (Bleeding Edge, 2013, 321), says the protagonist at one point and seems to reveal the author’s strategy indicating to the technology environment at the turn of the millennium. Maxine expresses her opinion about this technology to say that nobody can be in control of the internet. Then, her father, who was a political activist, comments that “Your internet, back then the Defense Department called it DARPA.net, the real original purpose was to assure survival of U.S. command and control after a nuclear exchange with the Soviets”. (Bleeding Edge,2013, 416)

Due to the significance and importance of the internet, Pynchon talks and repeats several times about this subject, “Yep, and your internet was their invention, this magical and nvenience that creeps now like a smell through the smallest details of our lives, the shopping, the housework, the homework, the taxes, absorbing our energy, eating up our precious time. And there’s no innocence” (Bleeding Edge, 2013, 321). This novel shows that the internet has become the new global technical and developing tool. It is a space of freedom and possibilities system to transform information into property. In the same time, it is based on control in which everybody is connected together, no way anybody should get lost. When your cell phones are connected together, you’ve got an inescapable web of surveillance. Therefore, Pynchon affirms that the internet technology is controlled by governments and corporations; it has become just one more lost chance at freedom that was converted into an instrument of increased control and surveillance. The novel indicates the conflict between the rise of the War on Terror and the control of the internet via the Deep Web (Chappell, 2016, 37). Maxine indicates that the technological tool of internet became coercive instruments of control upon individuals’ life though they hope for positive change and liberation.

2.2 The significance of Self-development and technical innovation

As mentioned earlier, the study adapts Romer’s theory of self-growth and innovation in exploring and analyzing Bleeding Edge, so as to reflect the correlation between self-development and the new technical inventions like internet invention. Pynchon's style is thus distinguished with “the heart of modernity and the Enlightenment
project... which involves an increasing interest in the individual and his or her capacity for self-development, and the Age of Reason” (Hogue, 2009, 63). He attempts to naturalize this notion of a unified and developed-self upon the characters’ life even if they do not achieve absolute knowledge. In this novel, Pynchon reveals that the character of Maxine is full of love for knowledge and enthusiasm for scientific research. He believes that self-development must stem from will, persistence, and self-confidence. In order for the person to develop himself, he must first encourage himself, as well as moral and material support from his family and friends whose role is great in building the personality. The motives are built and emerged from the innermost of the person and the incentive that person will provide from innovation through his personality. A positive moral motivation is called reinforcement and a negative motive increases a person’s efficiency, production, or innovation of something. (Kessey, 1990, 215)

In the line with the post human model at Bleeding Edge, the concept of immorality is a topic associated with the author’s use of physical or virtual physics which, despite apparent modernity, can be traced The Crying of Lot. This novel symbolizes the thermodynamic level by means of activities aimed at obtaining a source that sustains energy and finding a symbolic religious idea as well. The writer believes that the development of the state is due to the development of the person’s self, and the person must push his ideas towards development, invent a new thing. It cannot be forgotten that the need is the biggest reason for the development of cultures, as it plays an important role in this topic.

Luckhurst stated that Pynchon criticized the indirectly human separation due to the large use of the internet that changed a lot in the framework of the global capitalist technological culture. The novel deals with the theory of innovation and self-growth with how to renew and make something new (68). Therefore, in this novel, Pynchon tried to impose the subject of the classical person by developing himself and creating new ideas of technology as is the case in the personality of Maxine who tries to invent and solve many puzzles in order to investigate the fraud in an agency. They had set up illegal factories and small warehouses Maxine wanted to solve its mystery, so Pynchon believes that the innovation required self-development and the discovery of something new in the same person in order to be able to solve all puzzles and to provide new inventions that benefit others.

On the other hand, Beck explains that Pynchon essentially clarifies the history of modern alien culture, especially American culture, and how it arises in a multi-minded universe. Ultimately, it results from their ability to live within natural cycles unlike energy addition, which has led to a reversal of mistakes in the American society (2000, 36-37). They had a popular culture consisting of radio and cinema and because of their new innovation and their disposal of old things, they were able to invent and develop a new device. Therefore, America is currently one of the best industrialized countries because of the self-innovation and economic growth of its states. Pynchon, in this novel, shows that the world can end without modern technology, so it must be technically developed and prospered, posing no limitations on the innovative individuals.

Moreover, the writer tries to penetrate to the reader’s mind to share with him the central problems explored in the novel. This situation implies the writer’s sense of salinity at the level of human screen issues and the joint cares between turmoil and geopolitics from the surface world. For example, the internet is considered as a positive change in many societies. Pynchon tried to draw attention to the self-consciousness in using the net:

Our internet was their invention, this magical convince that creeps new like a small through the smallest details of our lives the shopping, the house work, the homework, the taxes, absorbing our energy, eating up our precious time. And there’s no innocence. Anywhere. Never was. It was conceived in sin, the worst possible. As it kept growing it never stopped carrying in its heart a bitter-cold death wish for the planet, and don’t think anything has changed, kid... Call it freedom, it’s based on control. Everybody connected together, impossible anybody should get lever again. Take the next step, connect it to these cell phones, you’ve got a total web of surveillance, inescapable. (Bleeding Edge, 2013, 420)

2.3 Developing the skills and practicing talents

It is usually known that each individual has many distinct skills, and differs from the rest. In this novel, Pynchon reflects the importance of the evolution of skills and talents. In particular, a person has a reservation, and his prophet can produce new things and ideas from being possible to do the role of the family, it is a task of a limited support for the moral support and the material that the person needs (Palmieri, 1987, 99). In addition, the country can help to develop his skills and talents since the countries sometimes are the main reason for the success of the person. The development is usually more complex to obtain a new culture because the contemporary life has a lot of modern devices, and the evolution of the scientific technology and industry. Innovation and new ideas come from the need through the self-development that Pynchon refers to in this novel, and he shows that the time is very important especially in “Times of great idealism carry equal chances for great corruptibility.” (Bleeding Edge,2013, 399)
Pynchon also shows an astonishing variety of tones and effects in his novels to make them fictional. This variety glimpsed by exploring many scientific, industrial, and economic fields from the seventeenth century until the twenty-first century. He calls for revolutionary ideas and freedom in order to create new innovations that serve his community. He emphasizes the role of the creative persons who can bring about change in society, and make important technical developments to their society through self and economic growth. The title of the novel “Bleeding Edge” is formed to refer to the edge of development, progress, and diversity: so all the humanity can benefit out of it.

Pynchon also makes a hint to the anxiety about the future because of the use of the internet and the new technology in unhelpful and useful aspects of life. He encourages people to exploit their talent and intelligence to serve humanity and make new innovation and discoveries. He also focuses on the anti-capitalist view, and Bleeding Edge makes it so clear, especially the change that takes place in the engineering system or technical devices in the United States. He talks about the bad use of the internet that keeps and imprisons people at home and things reaching their homes, playing, spending most of their time at home; this affects the social relationships and distance between members of one society, as Pynchon mention it “Yeah, actually, gamers in the houses forever” (Bleeding Edge, 2013, 69). Therefore, a change must be made to achieve complete economic penetration into society, and all of this applied to the events of the novel. Although the plot reveals no elaborated description of the developing shift in society, Pynchon focused on the personality of Maxine to prove that this society can be changed for the better, and achieve outstanding innovations.

The Bleeding Edge is considered as a postmodern work as it analyzes the harmful technological effects through leakage in one aspect of the characters’ lives and integrating them into their minds, and they became an industrial consciousness that transformed the internet into people beyond human beings and change their objective positions in the global technological capitalist culture. Pynchon focuses on the cultural level inside the family as a cloud of the global technology. Thus, Bleeding Edge considers the family life which is actually stressing the importance of its importance. (Schaub. 2008, 30-43)

Therefore, this novel offers an indication of Pynchon’s pursuit to portray human life within the family rather than the feigning freedom, the virtual identities, and electronic connections in this world. Those who live in the virtual life via the internet attempted to convince others that people gain each other in the wide world. Rather, Pynchon suggests that both are just “second lives, fakes. Only the real family” (Cohen, 2013, 105). Although, he believes in the technological culture and internet devices, at last he emphasizes the theme of the family in the realistic life. He presents a comparison between the two worlds people coexist to indicate that the adult mind should not depend on the life they lead on the internet, but on the life they make, their children, how they love them and how the raise them.

2.4 Needs for Modern technological Devices

The nature of Pynchon's fiction preoccupies with elements of science and technology either as overall themes or as props that stimulate the readers to find new tools and useful strategies as characters do. In his writing, the technical effects focus on the material rather than conceptual aspect around technology. He seeks a balance, attending to the reality of those technical fields as substantive issues of his written topics, with addressing their literary strategies they imply. What makes Pynchon's use of technology so convincing is that, throughout "their elaborations upon science and technology, his novels combine "an exploration of the limits of narrative structure with thematic approaches and implicit social commentary and critique" (Slade 54). Consequently, in his writings, he tends to explore technology in relation to historical or political issues than simply as new device for the story.

This leads to the development of all economic, social, scientific, biological, armaments and technical fields in all areas of life, as well as manufacturing robots inside the home that benefits housewives. This step has led to stagnation in human energy and also leads to the reduction of job positions and compensation for them by auto-equipment. It causes a lot of problems to individuals, such as unemployment, and this has many returns to the problems of society. Information stored inside the devices may be infected with a virus or malfunction that leads to a malfunction in the process of the devices.

Pynchon's view and fear of the future is depicted in this novel, arousing question about how will the future of the world become with the development of modern systems? And how will the condition of humans become in future? This will create major and critical problems to the world. Currently, people almost touch them in the modern generation in their different mentality and different thinking from the previous generations, even in their behavior and way of thinking.

Therefore, the development of modern devices such as the internet, mobile-phones, computers and tablets, there is no need for newspapers, magazines or radio, that is, they no longer have any importance at the present time. As Pynchon mentioned that in this novel:
No matter how the official narrative of this turns out. It seemed to Heidi, “these are the places we should be looking, not in newspapers or television but at the margins, graffiti, uncontrolled utterances, bad dreams who sleep in public and scream in their sleep”.  

*(Bleeding Edge, 2013, 322)*

The technology, as Pynchon portrays, has two sides. It involves a high risk to the society, yet it can be so helpful and useful tools that serve humanity in general. “What’s known as bleeding-edge technology” Sez Lucas says, “No proven use, high risk, something only early-adopter addicts feel comfortable with” *(Bleeding Edge, 2013, 78).* Modern technology or modern devices may be unreliable or simple untested, these risks may have a downside in early adoption as well as industrial resistance to new change. Trade magazines and industry leaders stand against a new technology or product but some organizations try to implement it on any condition because they are convinced that it is technically superior. The internet in this novel is a core character. Through it Pynchon shows the internet’s negative and positive points, he also comes across the disadvantages of using modern devices in the American society.

Furthermore, Pynchon points out the benefits and significance of the electronic devices in this era that technology has helped people to improve their living conditions and has done a lot for humankind. The title of this novel was explained by the developers of software that desperate to get his hands on. It is a kind of virtual maze that forever forgets its location. It’s bleeding high tech no proven use, high risk, something just early adopters feel comfortable with. The term adopter refers to an individual or company using a new product, innovation, or technology ahead of others. Early adopters are more likely to pay for the product than later adopters, but accept this premium if using the product to improve efficiency, increases market penetration, or raises the social status of the early adopter. Companies rely on early adopters to provide feedback on product deviancies and to cover the cost of product research and development.

It has been evident now that Thomas Pynchon is the author of innovation and economic growth who encourages the development and self-growth of every person. He used ridiculousness more than humor and he mentioned that in his novel The Bleeding Edge in which he depicts the development of the internet in America and the development of technological culture in the world. Innovation is one of the ways that pushes Pynchon to write this novel. Bleeding Edge is the last novel by Pynchon, and it has a tight schedule that starts at a specific moment. His novel makes the reader enthusiast to invent something new and to develop his skills and creativity. He succeeded in portraying the advancement and progress of the American society, and manages to depict the importance of the American technological culture and its significance to the whole world. This represents another type of innovation accounted as a credit to Pynchon. *(www.tandfonline.com)*

**Conclusion**

The current study explores the importance of self-development in achieving the wanted progress in any society. Pynchon’s Bleeding Edge encourages the development of personal skills and practicing hobbies, as well as it reflects how the new technical innovations have changed the contemporary life. The importance of the individual’s family encouragement, as well as the state’s position, encouraging and supporting it morally and financially, leads to making and initiating creative individuals and this is extremely beneficial for the humankinds. In this novel, the internet invention has a great role and considered a good tool that contributes a lot to the advancement and changes that blur the boundary between fiction and reality in order to make readers more conscious of their position within a technological global capitalist system. Additionally, the novel explains the misuse of the internet. By choosing an innovation and economic growth theory of Romer to analyzing Pynchon’s novel, Bleeding Edge proves that he is an innovation writer. Although, Pynchon spoke in his novel about the disadvantages of using the internet and the development of modern devices that led to the emergence of social and personal problems (multilateral problems), he encouraged technology and electronic development. In general, he asserts that no one can dispense the modern devices, for example, can you dispense with your mobile device? Or are you suffering, as the writer mentioned in his novel, from the problems of technological development? Despite knowing the answer, this is what the research deals with. Solutions to these problems must be found. This study proves that the writer is an innovation writer and urges the development and use of technology with caution and encourages the development of the self and the invention of new technical devices as well.
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(www.tandfonline.com)
بمثابة حلقة وصل بين توزيع معلومات حول الفضاء الإلكتروني والمناطق الحضرية في مدينة نيويورك خلال هجمات 11 سبتمبر الإرهابية. يعتقد Pynchon أن يمكن تطوير المجتمع من خلال التنمية الذاتية على وجه الخصوص، وكذلك من خلال التشجيع المعنوي والجسدي من قبل الدولة نفسها، مما يؤدي إلى حافز إيجابي ويجعل الحياة أكثر راحة وأسهل من ذي قبل. لذلك تهدف هذه الدراسة إلى إظهار العلاقة بين تطوير الذات وتحقيق تقدم العلمي التكنولوجي وتساعد دراسة أيضًا كيفية تمثيل التكنولوجيا الجديدة فيما يتعلق ببعض المفاهيم الثقافية.

الكلمات المفتاحية: Pynchon، حافة النزيف، الثقافة التكنولوجية، التطوير الذاتي.