The Negotiation of Entropies in Thomas Pynchon's *V*

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Abstract

This paper analyses Thomas Pynchon's *V.* (1961) in light of two contradictory scientific perspectives and argues that Pynchon uses complex science-based formulations on different semantic levels to give shape to a seemingly shapeless world of uncertainty. *V.* is considered by many critics a historiographic metafiction which evolves through certain new readings of the early 20th century Europe's colonialism and is given a sense of uncertainty to historical consciousness via Pynchon's postmodernist style. This paper suggests that though Pynchon uses the techniques (on the syntactical level) which define postmodernism and create a pandemonium of complexity and meaninglessness, he leaves hidden blueprints which give shape and order to the syntactical and semantic chaos created in his works. To achieve this goal, the main methodological focus of the paper would be on Claude. E. Shannon's (1948) "information theory."

Keywords: Chaos Entropy, Information Entropy, Noise, *V*

Introduction

Dealing with two separate plots, Pynchon's (1961) first novel, *V.* tries to link the two together. The first story deals with Benny Profane, an ex-navy Schlemihl who spends his time yo-yoing between different places in New York City. He carries a type of living which has no purpose, and, as a result, he changes his career repeatedly; taking bizarre occupations such as hunting alligators in the New York subway tunnels, becoming a night guard for a high-tech company, and also his shifting inclination towards different women support this claim. He befriends a group of low-life individuals who call themselves the Whole Sick Crew; like Benny, they have no purpose in life and continue their so-called "yo-yoing" throughout the novel. The other story which is interwoven with the first story encompasses the quest of Herbert Stencil in search of a mysterious woman whose name is V.

It is possible to read the novel not as a constituting whole but as a group of 17 short novels hinged together. However, the novel as a whole unfolds these seemingly separate stories in a fashion which creates a dangling thematic link between the stories as a modifying whole.

Although critics such as David Seed (1988) try to read Pynchon's work as a "historiographic metafiction" which challenges the reader and the character in a quest for finding the truth and meaning (p. 44), this paper suggests that Pynchon's historical obsession and postmodernist style is a result of a scientific mind, who tries to put scientific premises in a humanistic spectrum. Thus, Pynchon's postmodernism is an application of scientific achievements, specifically in quantum mechanics and information theory, to the world of literature, and the postmodern uncertainty apparent in Pynchon's novel is a direct result of the writer's interest in modern physics.

Different Interpretations of Entropy: From Chaos to Information

The modern scientific study of chaos has begun with James Maxwell in the nineteenth century. To appreciate the complexities of Maxwell's experiment that lead to the introduction of the so-called Maxwell Demon, it seems necessary to understand "entropy." Understanding entropy requires an understanding of The First and Second Laws of thermodynamics.

The First Law of thermodynamics stipulates that "energy is conserved and heat and work are both forms of energy" (Blundell & Blundell, 2006, p. 107) and thus neglects the form of energy. As Gleick (2011, p. 283) states, The First Law suggests that "the energy of the universe is constant." The Second Law; however, argues that "no process is possible whose sole result is the transfer of heat from a colder to a hotter body" (Blundell & Blundell, 2006, p. 122) and "no process is possible whose sole result is the complete conversion of heat into work" (p. 123). Therefore, "the entropy of the universe always increases" (Gleick, 2011, p. 283). Lyons and Franklin (1973) argue that according to this law "any spontaneous transformation of an isolated system is from a 'higher' more ordered form to a

'lower' less ordered form" (p. 197). As a result, a new quantity should be defined to measure the amount of disorder within a system, a quantity which "Clausius called 'entropy'" (Kafri & Kafri, 2013, p. 35). An important inference of the Second Law would be the increase in the entropy of a system over time. Thus the entropy of our surrounding tends to get higher. Since this "heat exchange" is the result of this increase in the entropy of a system, "there will eventually come a time when no heat reservoir exists anywhere in the universe" (Hayles, 1990, pp. 38-39). This is the point where the universe experiences "heat death," that is "the final dissipation of all heat differentials, the universal coming to rest in a state of inert equilibrium" (Clarke, 2011, p. 216).

In his comments about "unstable" systems, Maxwell recognizes the existence and importance of systems with "sensitive dependence to initial data," a defining characteristic of chaos theory that will be discussed later in this paper. In his assault on the second law of thermodynamics, "Maxwell suggested that an intelligent being small enough to deal with the motions of individual molecules would be capable of violating the second law" (Angrist & Hepler, 1967, p. 194). Consider an isolated enclosure initially containing a gas at a uniform temperature which is divided into two sections by a partition with a small door in it.

> Maxwell imagined the existence of a small intelligent being, called a demon, who would open and close the door to permit molecules with greater velocities to pass from right to left, and to permit molecules with less than average velocities to pass from right to left. (p. 195)

After Maxwell, some other scientists commented on his Demon. Among those scientists Leo Szilard and Leon Brillouin are noteworthy. Szilard (as cited in Gleick, 2011, p. 293) noted that "in a closed system, a demon who could catch the fast molecules and let the slow molecules pass would have a source of useful energy, continually refreshed." Thus, Szilard suggested that the Demon should possess an unfailing memory connected with the production of entropy. His identification of the demon's sorting as a kind of memory was not taken into account until the introduction of computer memory (p. 293). Brillouin (as cited in Hayles, 1990, p. 45) redefined Szilard's "memory" by identifying it with information. He suggested that since Maxwell's enclosure is a "black body", the "demon would have no way to see the molecules" (p. 45). So,

> Brillouin demonstrated that if a source of illumination is introduced (a headlamp, for example), the absorption of this radiation by the system increases the system's entropy more than the Demon's sorting decreases it. Thus information gathered by the Demon is 'paid for' by an increase in entropy. (p. 45)

As a result, there will be no violation of The Second Law. From this insight Brillouin concluded that "transforming negative entropy into information" is the way through which physicists could define information (Gleick, 2011, p. 300). Claude E.

Shannon (1948) sees the relationship between information and entropy in a way that diverges from that of Brillouin. As Hayles (1990) puts it,

> In Brillouin's analysis, the Demon's information allowed him to sort molecules, thus decreasing the system's entropy; but this information had to be paid for by an even greater increase in entropy elsewhere in the system. (p. 48)

Therefore, the information and entropy, for Brillouin, are opposites. His coined word "negentropy" which means "negative entropy" is considered as a synonym for information.

In his commentary on Shannon's (1948) "The Mathematical Theory of Communication", Warren Weaver (1949) describes the process of communication as the transmission of signals (containing information in the form of messages) from a source to a receiver. He argues that "information is a measure of one's freedom of choice when one selects a message" (p. 265). Ward (1998) quotes from Weaver that "information in communication theory relates not so much to what you do say, as to what you could say" (p. 132). Shannon and Weaver (1963) believe that a single signal may contain more than one message. So, the amount of information contained in any signal is determined by the amount of choice that exists in the selection of the message. Thus, the number of possible messages will increase as the amount of information increases. Shannon (1948) argues that among all the possible messages, just one "intended" or actual message exists. Needless to say that, with a signal containing a large amount of possible messages, the receiver has a smaller chance to get the intended one. Weaver (1949) believes that "[t]he greater this freedom of choice, and hence the greater the information, the greater is the uncertainty that the message selected is the particular one" (p. 132). Unlike Brillouin, Shannon not only does not regard information and entropy as opposites, but also they become identical. When he devised a probability function that he identified with information, he called the calculated quantity the entropy of a message. His choice of the word "entropy" shows his anticipation of "the contemporary insight that proliferating information is associated with the production of entropy" (Hayles, 1990, p. 49). The main concern of information theory is that information can be considered as a form of energy. Therefore, entropy becomes a concept which could be utilized for measuring the contents of a message i.e. its information. Therefore, a signal containing a load of possible messages will be disorganized (and therefore ambiguous) and inevitable highly entropic. As in the case of open systems, the amount of information will increase when the amount of its entropy rises. Thus, too much information increasing at high speed may lead to increasing disorder rather than order. The fear of the postmodern world is not "that the universe will run down, but that the information will pile up until it overwhelms our ability to understand it" (Hayles, 1990, p. 49). Considering randomness as maximum information paved the way to envision chaos as the source of all that is new in the world. Chaos and complexity no longer mean simply disorder but some flux "rich in information rather than deficient in order" (p. 51). Discussing the application of information theory to literature in "Information or Noise," Hayles (1988) argues that it is possible that

information generates uncertainty (p. 36). As the amount of information increases in the narrative, so does the entropy (uncertainty) of this information. She proposes that the chaotic complexity of narratives makes a high level of information and a high degree of entropy possible. So, information and entropy are considered essential features of open narrative systems in whose presence the process of determining meaning becomes more complex. Meaning and information are distinguished from each other in Shannon's (1948) information theory. They should not be confused with each other. Weaver (1948) argues that two messages may have the same amount of information while one message could be significantly rich in meaning and the other entirely meaningless or noisy. Brian Ward (1998) argues that:

> The combination of possible and actual messages in any given signal defines a complex and ambiguous relationship between information and meaning in all forms of communication, including fictional narratives…. Narratives contain a plurality of possible messages, any of which could be the 'intended' message. Consequently, the act of identifying any one message as the 'intended' message has become an extremely difficult, if not impossible, task for the reader to achieve. (pp. 133-34)

He also reminds us of Roland Barthes (1967) who argues in "The Death of the Author" that narratives do not contain predetermined authorial messages, and that the meaning found in narratives by readers is predominantly created during the process of reading (pp. 2-3). It is clear that Barthes and other poststructuralists highlight the role of the reader in creating meaning in the text. So, the author is considered to be unable in transmitting a specific message to the reader, because the ideas that the reader brings to narratives identify the meaning not those of the author;

> The informational process of narrative may therefore be described thus; a transmitter (an author's mind) selects a message from an information source (a set of ideas) and encodes this information into a signal (a narrative), which is then transmitted (published). The signal is received (read) and the signal decoded into a message (the text is interpreted and transformed into meaning) by the reader. (Ward, 1998, pp. 134-35)

Benny Profane/ Herbert Stencil: Entropy, Uncertainty, and Historical Chaos

The novel creates an atmosphere of uncertainty which remains a part of Pynchon's literary agenda as he continues his career as a writer. *V.* is a novel which perfectly depicts Pynchon's attempt on choosing either chaotic or information entropy as a solution for the most ambiguous riddle of mankind: finding one's true self in a quest meant for something or someone different. The novelist manages to incorporate two stories which according to Andrei Vasilenko (2009) should be read as an apocalyptic sermon predicting the end of the world as we know it (pp. 21-24). Pynchon's attempt in *V.* is the blatant depiction of Boltzmann's entropy and the depiction of the repletion of energy in a world in which everything is being wasted in a Yo-Yo like repetitious manner. Billy Profane's aimless wanderings and temporary interests in different occupations which vary from an alligator exterminator to a nightshift guard

in new-tech building sarcastically picture the unexpected and aimless movements of particles which finally result in the total repletion of heat and a period of frozen nonbeing. Thus Pynchon seems even more pessimistic than chaologists such as Ilyia Prigogine and Isabella Stangers (1985) who believe that this high amount entropy finally pushes a system "beyond the threshold of stability" (p. 107).[ii]

The allusive irony of the novel supposedly targets nothing but uncertainty and indeterminacy. In the second Chapter, the third person omniscient narrator of the story elaborates on Rachel Owlglass's perception of New York as "a city of smoke" which has made smoke a part of Rachel's organic whole discernable "in her voice, in her movements; making her all the more substantial" (p. 48). Such a comparison tends to put the character in a state of instability which is described in the form a physical reaction of one form to another, less stable form. Thus Rachel's character signifies a rise in the entropy of a system which would finally drain the system of its energy. As suggested by Vasilenko (2009),

> the force of entropy, one of Pynchon's favorite themes, is conspicuously at work in V., whose world is slowly but surely running down. There seems to be less and less space for humanity and human feelings, as the inanimate gradually encroaches into all spheres of life. (p. 22)

Unlike Vasilenko, David Seed (1988) provides a less pessimistic reading of the novel by putting Pynchon in a state of indecision in the acceptance or rejection of entropic decay (p. 115).

For many scholars, the true identity of V. has been a point of interest.[iii] However, if V.'s repetitive and disorganized appearances are read from the perspective of information theory; these appearances justify the introduction of V.s to a channel as informative noises which carry on packages of information waiting to be analyzed and calculated. Reading *V.* from this perspective has the privilege of making V. a single idea which evolves into a range of possible meanings when put into the transmitter of the novel. The introduction of noise as a technique is a frequent device used by Pynchon in writing the novel. A significant start is in the 3rd Chapter when the whole story of what happens in Cairo; the failed conspiracy and the appearance of V.'s first impersonation, Victoria Wren, are unfulfilled endeavors on Herbert Stencil's part (61-86). As the Chapter begins by comparing Stencil's obsession with V. with that of an ornithologist's with "flights of migratory birds" and the significance of "spread things to the libertine," the relationship between Stencil and the letter becomes an effort to remain truly active and alive (p. 59). What is important here is not the true identity or even gender of the actual V., if he/she even exists, the important thing is that "the pursuit of V. allows Stencil, and the reader as well, to look at certain moments in history" when "the tragic and yet sometimes farcical" events "make us wonder" about "what has gone awry in the twentieth century, and ask ourselves why the destruction of humanity has become for some of its representatives not simply a cynical motto but a command to be carried out" (Vasilenko, 2009, p. 22). Numerous incarnations and presences of V. throughout the novel in Katrin Amian (2008)'s words,

> … trace this search, interweaving its depiction of the events in 1950s New York with stories of the past that return to Egypt in 1898, Florence in 1899, South-West Africa in 1922, Malta in 1942–43, and Paris in 1919. Each of these episodes features a promising candidate for the mystery's resolution, Victoria Wren, Vera Meroving, the 'Bad Priest,' or simply 'the lady V.,' but their ties remain obscure, increasing the already excessive proliferation of V-signs throughout the novel. (p. 69)

Amian later argues that the novel creates a web of "creative possibility" which puts the character/ reader in a state of indecision not because of lack of knowledge (information) but because of its abundance while at the same time "the novel goes beyond delighting in these moments of creative play by exposing the stifling elements of control at work in each and every act of creation" (p. 70).

The repeated appearances of V. in different shapes, names, and forms suggest the novel's tendency to remain in a continuous revolving labyrinthine which as suggested by David Cowart (2011) puts the reader along with the character in a state of interminable but highly encouraging eagerness to find the truth (p. 44). This lack of signification accompanied by the bombardment of signifiers put the very act of signification the main subject of the novel. Alec McHoul and David Wills (1990) in their important book on Pynchon and the process of signification say,

> The text, V., does not use the signifier, 'V.' to represent a character, V., in the way that Robinson Crusoe uses the signifier, 'Robinson Crusoe', to represent a character, Robinson Crusoe. Something has changed in/as the novel- almost imperceptibly- in the space of the texts between, texts which we call 'history'. For a start, V. is always absent, hinted at, forced into a shadowy (non-) existence in the way Bowie mimes out a glass cage which is not 'there'. V.: she/it is pure signifier - the (as we used to say) conscious pure effect of signification. (p. 163)

Using "information theory" as a methodological tool would be beneficial in giving the novel a technical rationale in remaining obscure and labyrinthine, specifically when Pynchon's academic background as a physicist is taken into consideration. What Pynchon depicts in *V.* is not an aimless chaotic endeavor to get lost in a quest to find the truth, rather the suggestion that the search is in itself the truth. The only way to increase entropy as a means of avoiding the repletion of energy is to keep the system in touch with the highest amount of noise (Shannon & Weaver, 1963, p.16). The solution of the riddle metaphorically puts the characters (and the reader) in a state of passivity and a motivational ice age where human endeavor and willfulness is frozen and motionless.

Reading *V.* from the lens of information theory justifies Pynchon's introduction of noise(s) to the novel as insightful informational packages which places the mysterious figure of V. in an endless process of decoding. The process introducing different incarnations of V. as semantic noises to the novel cannot end since the completion of the quest is also the end of Stencil and Profane as well. In *V.*,

Pynchon brilliantly juxtaposes chaotic entropy with informational entropy. Profane's Yo-Yo like movements, indecisions, instability, and aimlessness signify a state of chaotic entropy in which the energy though not depleted but is being wasted.[iv] On the other hand Stencil's determination in solving the riddle of V. and his unquenchable thirst for the truth makes him a good example of the unending process of accumulating information and thus the representation of Profane's opposite in the impersonation of informational (Shannon) entropy.

Benny's repeated shift of mood and lifestyle puts him alongside with the reader in a state of indeterminacy which strongly suggests Pynchon's obsession with the notion of entropy. Benny's inability to finally settle and choose a lifelong partner shows how Profane is getting used to a yo-yo lifestyle. As the narrator suggests in the 6th Chapter, "women had always happened to Profane the Schlemiel like accidents: broken shoelaces, dropped dishes, pins in new shirts" (p. 141). For Benny, every happening is an accident following no pattern whatsoever.

The novel shifts or rather floats between the dichotomies of entropic chaos and informative analysis; however, Pynchon's obsession with conspiracy theory and yet non-practicality of information theory puts him more in accord with the novel's schlemiel. The epilogue tends to put the story of V. and her true incantation as a part of a deep conspiracy, espionage which is finally felt by Sidney Stencil at the moment of his demise (pp. 508-47). The end of World War I is not a return to order, but symbolically it connotes the beginning of disorder. Herbert would carry on his pursuit to Sweden though Pynchon is most skeptical of Herbert's success. The legend of V. is more than just an impersonation of a woman; it evolves into a web of socio-historical events and the introduction of so many alternatives, mentioned or not, which entraps Herbert in a whirlpool of noises which avoid true semantic significance when he gets in their proximity. In more technical terms, Herbert's endeavor tries to find an actual shape in a Shannonian algorithm, but it falls into the disorderly labyrinth of chaotic entropy. The novel tends to read historical events such as WWI, the Fashoda affair, or even the fictional staged assassination in Cairo as informational packages that can channel the noises, different incarnations of V., into an analyzable, if not coherent, meaningful messages and thus complete the transmission of a message with minimum inconsistency. However, the tendency of the novel as a volatile system into inconsistency bars the process of transmission and re-channels a message before being decoded into meaning.

Contrary to the claim above stands the underlying pattern of the historicity of the novel which suggests how Pynchon by representing and in many cases re-narrating the history tries to opens a channel for a meaningful transmission of a message via a moderate interpretation of the noises imposed upon the system of the novel as a whole.

Lost in Noises: Different Incarnations of V.

Significantly, different impersonation of V. and the events surround her are narrated from different characters who mostly do not appear in the story beside their narrative

functionality. The information regarding V. is being carried out from different people, significantly not related to each other, and Herbert is extremely skeptical of his findings and the sources on which he relies. He tries to put the pieces of a seemingly disordered and vague jigsaw puzzle together. A puzzle that avoids being solved and put Stencil in bewilderment since each piece points its direction to other pieces.

From the perspective of information theory each piece of the supposed puzzle could be considered a message which should be transmitted to its target. However, in the process of decoding, each message is being bombarded with noisy signals, which add to the informative entropy of the message and the system of communication as a whole. These noises not only force the character to change his direction over and over, but also are forces which put the information entropy of a system to such a high degree that it becomes almost impossible to be decoded by Stencil or the reader.

V.'s first appearance is as a girl called Victoria Wren, a young British girl in Egypt, has been narrated by eight different characters who do not appear again in the novel (pp. 59-96). Although Victoria is a marginal character in the 3rd Chapter which focuses on a conspiracy and an assassination taking place in British-governed Cairo, the obsession which surrounds her presence in the Chapter makes her an influential noise affecting the whole system. Victoria's presence or even her name equalizes an obstruction which abruptly changes the subject of conversation and thus the whole transmission.

The name for the first time is overheard by Aieul, a café waiter who happens to be an amateur libertine, for the first time. Victoria Wren is supposedly a British name because it has been followed by other names such as Sir Alastair Wren and Bongo-Shaftsbury (p. 62). The name for Aieul is just redundant noise with no significant information; however, when the novel is read as a system, the redundant noise becomes a justifiable information package for Stencil. Significantly Aieul's eavesdropping makes the name informative for the waiter as well, and now he can find a link between Victoria and a fat English man who wants to seduce her, Shaftsbury who is Victoria's lover, and Sir Alastair who is Victoria's father. Aieul also finds out that the two English men at the café are planning to assassinate Sir Alastair (p. 64).

The second narrator, Yusef, is again a waiter who works at the consulate and appears to be against the British rule in Egypt. He also encounters Victoria briefly while she talks with another Englishman called Porpentine. Maxwell Rowley-Bugge, a man with a proclivity for young girls, is the third character who notices Victoria (p. 69). A heavy drinker, he leeches onto Victoria since she reminds him of her lost love, Alice (p. 71). Victoria is seen again after a fight between Porpentine and an Arab by a cab driver named Gabriel (p. 85). Lastly after many diversions and ups and downs Victoria witnesses how the conspiracy against her father results in the opera to the death of Propentine instead.

Later in the novel, Victoria is seen in Florence, interestingly in the time of crisis, when a Venezuelan official tries to steal a painting called the Birth of Venus from the Uffizi.[v] She also encounters a young Englishman named Evan Godolphin who is invited to Italy by his father Captain Hugh on an important business about a mysterious place called Vheissu. Sidney Stencil works in the British consulate and is investigating about Vheissu while he is informed by Victoria about Hugh and his knowledge of Vheissu. Once again Victoria is seen at a time of crisis when she obscurely and passively witnesses a train of killings in the riot that takes place in the Venezuelan consulate (pp. 161-228).

In all sequences in which Victoria appears she proves to be stone-hearted and indifferent about the cruelty that surrounds her. Her presence in the British consulate at crucial points in the 7th Chapter makes her look like a spy though the theory doesn't have enough valid supports as proof. Her indifference to the incidents which occur in Cairo also makes her presence enigmatic and mystical since she becomes an interesting person who though known briefly, she is remembered by many not just as a woman passing by. In an interesting instance in the 3rd Chapter the only voice which is discernibly heard by Yusef the waiter among a plethora of voices is that of Victoria's (p. 67). She sexually intrigues many characters and for Max becomes the recollection of his lost love Alice,

> She'd been talking, the older girl- Victoria- white Voslauer gone perhaps to her head. Eighteen, Max guessed, slowly giving up his vision of vagrants' communion. About the age Alice would be, now.
>
> Was there a bit of Alice there? Alice was of course another of his criteria. Well the same queer mixture, at least, of girl-at-play, girl-in-heat. Blithe and so green…. (pp. 71-72)

In Chapter seven she becomes a confidant for Hugh Godolphin and apparently, an informant for Sidney Stencil. Regardless of the roles she plays and impressions others have of her, Victoria's presence signifies conspiracy and chaos. In her presence people get killed or hurt, but, like the Birth of Venus, she remains detached and unaffected by what happens around her.

Chapter five brings about an interesting manifestation of V.'s, that of a rat! In this section this is Benny Profane who accidentally finds a journal in New York sewers while he was chasing an alligator, he works for some time as an alligator exterminator. He enters a part of the sewer system which was named after a priest, Fairing's Parish, where he finds pieces of Father Fairing's journals, in which the priest in detail had explained his great desire to covert rats into Catholicism. From the journals Profane finds out that a rat called Veronica, mostly mentioned only by V., was the only rat whose soul worth saving (p. 126). In a fragment from the journal Fairing writes that,

> When they are established firmly enough to begin thinking about canonization, I am sure Veronica will head the list. With some descendants

of Ignatius (another rat) no doubt acting as devil's advocate… V. came to me tonight, upset. She and Paul (V.'s male partner) had been at it again. The weight of guilt is so heavy on the child.…V. has expressed a desire to be a sister. I explained to her that to date there is no recognized order for which she would be eligible. She will talk to some of the other girls to see if there is interest widespread enough to require action on my part. It would mean a letter to the Bishop. And my Latin is so wretched…. (pp. 126-27, parentheses added)

Once again V. is spotted in Africa during the Fashoda Incident, in 1921. This time as Vera Meroving, a German woman of about 40 years with a glass eye containing a watch and witness to the annihilation of the native population in a German colony. The story is reported by a German engineer called Kurt Mondaugen who is working on a program regarding atmospheric radio disturbances. He is extremely dedicated to the program, and his experimental antennas even when natives attack the Germans and the colony is on the verge of collapse. He bumps into Vera Meroving on several occasions and overhears an important conversation between Vera and Hugh Godolphin about the mysterious polar underworld, Vheissu.

Maybe Vheissu is the central key to understanding different manifestations of V. Hugh Godolphin refers to Vheissu as an ideal subterranean community in which rules do not hold sway (p. 179). Later, he talks of Vheissu to Victoria Wren as an ideal mysterious colonial target, "a place of so many colors" and "spider monkeys," a place where "everything changes" and "no sequence of color is the same from day to day" (p. 181), and finally, a place in which you dream of "shapes no Occidental ever saw" (p. 181).

In his *The City in Literature*, Richard Lehan (1998) argues that Vheissu encompasses the main themes of the novel such as "the power of entropy, the emptiness of myth and history," and "the mechanical limits of the city" (p. 269). Lehan sees Vheissu as a "fantasy vision that owes much to Henry Adams's emphasis on entropy" and tries to relate the theme of entropy as a controlling idea to the development of different manifestations of V. from a woman to a place (from dynamic to static) and to justify a waste land scenario for the novel,

> Pynchon's Vheissu, located near one of the poles and reached by ascending large mountains and then traveling through an elaborate network of caves, is frozen, motionless, barren, and lifeless. When Hugh Godolphin reaches it, he digs down several feet beneath the snow to find the corpse of a spider monkey buried in the ice. The monkey is the physical expression of the heat loss that occurs in the universe as we move from the tropics (the monkey) to the poles, from the primitive to the civilized, from the savage to the city, from life to death- dichotomies that run through Pynchon's major works. (p. 269)

The imaginary status of Vheissu gives Pynchon/ the reader a wide scope of choices for any interpretive scenario regarding the significations of the place;

however, Lehan's argument instead of remaining one of these choices tries to encompass Pynchon's attraction to the theme of entropy (a theme which he develops mostly in his next novel, *The Crying of Lot 49* (1965)) as the major theme in *V*.

The Bad Priest is chronologically the last appearance of V. though she appears again in the course of the novel. In the 11th Chapter once again Stencil finds clues regarding V.'s appearance in Valletta, a city which ironically begins with a V. This time through the letters written by a humanitarian activist in postwar Valletta, Fausto Maijstral, to his daughter Paola. The letters supposed to be an apology which clarifies certain facts about himself and his wife Elena to Paola. Through the letter, Fausto refers to a certain Bad Priest who has affected Fausto's marital life by brainwashing Elena. Firstly, convincing her to become a nun and later giving her the idea of not giving birth to a child. Elena is killed later in a bombardment, and Fausto always takes the Bad Priest responsible for the estrangement between himself and Elena. Interestingly, Fausto sees the Bad Priest once again after Elena's death. This time the priest is surrounded by children who take away his gown and surprisingly they find out that the Bad Priest is, in fact, a woman with a wig, an artificial leg, and a glass eye. The children disembody the Bad Priest and leave her in the gutter to suffer. When Fausto comes to her, she cries desperately and Fausto takes it as a cry of remorse (pp. 334- 83).

The Bad Priest perfectly shows V.'s disintegration from a feminine mystery towards an abject objectification. Here the myth of V. is degraded into disintegrated and pointless goose-chase which loses its signification. The collapse of V.'s majestically imagined position through a transvestite act of gender twist and the artificial body parts which constitute V. as a person show the fragility of Stencil's quest.

Semantic Noises and Redundancies: V. and Information Theory

Regardless of the order of appearances and reappearances in the novel, V.'s incarnations could be read as messages that could be transmitted accordingly to any given receiver. However, the main issues here are the semantic value and effectiveness of these transmissions (Shannon & Weaver, 1963, p. 2). From the perspective of information theory, the journals and people with whom Herbert Stencil consults stand as the source of information and thus fill in the first box of the communication process.

The second box which is the semantic noise would be filled with by any direct reference to V.; however, these incarnations are incomplete and shredded. As a result, Herbert Stencil who acts as the semantic receiver of the communication system cannot deal with the 2nd and 3rd levels of communication problems. He gets the message on the technical level (through diaries, interviews, journals, and evidence), but he cannot have a semantically valid understanding of the true nature of V. This frustration is what makes Stencil decide on going to Stockholm since another clue has related a girl called Viola to be a part of the game (p. 502).

Though inconclusiveness of evidences found by Stencil functions as engineering noise of the communication system, the real problem is the inconclusiveness of the semantic noises which fill the system by replacing each other and thus maximizing the system's informational entropy.

Shannon and Weaver's (1963) communication model would give the novel a scientific edge which provides the reader a chance of reading a seemingly haphazard story as a technical malfunctioning of a mechanically orderly system. The malfunction is not because the system is faulty (this would be on engineering noise), rather it has the capacity of carrying infinite amount information (entropy) regardless of the fact that the semantic receiver of the message (a person) cannot process that amount information. This rise in the entropy of the system is what reinforces the idea that Stencil's quest is mostly a mental fixation which makes him indifferent to other messages which try to engineer their communication systems:

> Mounting crisis in the Suez, Hungary and Poland hardly touched them. Majistral, leery like any Maltese of the Balloon's least bobbing, was grateful for something else - Stencil- to take his mind off the headlines. But Stencil himself, who seemed more unaware each day (under questioning) of what was happening in the rest of the world, reinforced Majistral's growing theory that V. was an obsession after all, and that such an obsession is a hothouse: constant temperature, windless, too crowded with parti-colored sports, unnatural blooms. (p. 498)

Pynchon's diction is very revealing here: he chooses terminologies from theoretical physics and mechanical engineering to explain Stencil's indifference to his surroundings. The multitudinous incarnations of V. make Stencils mind a melting pot which tolerates a fixed temperature and takes only a specific kind of information. Thus Stencil deliberately takes any information package which suggests the futility of his quest as redundancy and useless information which unnecessarily maximizes the entropy of the system.

The communication model also remains an open system in which certain semantic receivers choose certain semantic noises accordingly and exclude other semantic noises as redundancies. The freedom of choice which is given to the semantic receivers makes the act of communication a unique experience for each character. Thus Stencil's quest becomes only an obsession in the eye of the others. However, there are certain hints in the novel which are suggesting regarding the reader's interpretation of the significance(s) of V. and its incarnations. V. resembles an indifferent witness to certain horrific scandals and mass killings in Africa and Malta, parts of the world which experienced massive early 20th Century foreign power meddling and colonization. As Victoria Wren, Vera Meroving, Veronica Manganese, and even the Bad Priest V. witnesses how people get killed and stone-heartedly remain passive, or as in the case of Veronica Manganese or the Bad Priest she actively participates in the conspiracy or commits murder.

Simultaneously, the integration of V. from the desired woman (Victoria) to an animal (V. the rat), to an object (a painting), or to a real or imaginary place (Valletta, Vheissu) becomes very significant. Throughout the novel, V. loses her femininity and disintegrates through a passive objectification. As Vera and Veronica her glass eye signifies the outset of the process and finally, as the bad priest, V. becomes a person who is controlled by artificial parts (eyes, teeth, hands, and feet). This dehumanization of V.s proves to be an analytical reception which is not noticed or deliberately ignored by Stencil.

Pynchon's intertextuality and numerous references to history has convinced critics such as John Dugdale (1990) in his *Thomas Pynchon: Allusive Parables of Power* to give the novel a historical and essentialist edge which defines the novel in the modern discourse of politics and posits Stencil as "The Foreign Officer" and reads this as a representation of "a return to a time before the loss of British imperial hegemony," and thus relates V. with Queen Victoria (p. 78). John Dugdale (1990) by pinpointing Fausto's comments on poetry (V. 325-6) suggests that,

> Stencil's project is to pass from the universe of absurdism into the universe of Romanticism, in which confidence in the animateness of its human and non-human contents licenses an unconstrained poetic writing and an unembarrassed use of metaphor. (p. 79)

Although Dugdale's approach gives the novel the aesthetic value it certainly deserves, the approach neglects the brass scientific background of the novel which systematically negates artistic animation and romantic philosophizing. Seeing Pynchon as a nostalgic artist who craves a return to a fin de siècle decadence (p. 79) says a lot about the novel's excessive intertextuality; however, it deprives the novel from its inherent entropic flow.

Dugdale himself suggests that Pynchon's intertextuality does not put a particular work under scrutiny on particular occasions; rather they represent themselves as "scatter[ed] recollections" which are developed with and by the novel (p. 84). This suggests how dedicated Pynchon is to the theme of entropy in his novel and the extent of its associative significations.

David Cowart (2011) in his *Thomas Pynchon and the Dark Passage of History* tries to put certain codified Postmodernist jargons which were used by critics such as Dugdale (1990) and read the novel as a "historiographic metafiction"in which both reader and character are in "the pursuit of pattern and meaning, one in the novel, the other in the text of history itself" (p. 44). This view gives the novel the scientific background which was neglected by critics such as Dugdale. Paranoia as a dominant theme of Pynchon's early writing is tolerated only through "connecting the dots" which are considered "random" (p. 43). The question regarding the agent responsible for connecting the dots is answered through an analysis of *V.* as a historiographic metafiction in which the reader(s) and character(s) might go their separate ways (p. 44).

Cowart's (2011) analysis is insightful, but he remains indifferent to the process through which such an insight is discernable. Reading the novel as a communication model would help in understanding the process through which Pynchon plays with, postpones, and even avoids meaning. The novel provides reader(s)/character(s) with semantic noise packages rather than straightforward information. This adds to the informational entropy of the system and gives the reader(s)/character(s) multitudinous choices between taking a certain informational package as meaningful or redundant. The metahistorical aspect of the novel is also understandable with this communicational model in which different references to actual historical events take fictional and periodical significations in a process which Cowart calls "emplotment."[vi]

Reading the novel from the perspective of information theory might exclude certain aesthetical values of the novel from the domain of appreciating the text, but it provides invaluable resources for dealing with one the novel's ongoing themes, that of entropy. The novel like its two later-to-be-published companions, *The Crying of Lot 49* (1965) and *Gravity's Rainbow* (1973), elaborates on the ongoing discussion between the dichotomies of "informational entropy" and "chaos entropy." Through its interrelated plots, Pynchon creates a dialogue between the two entropic forces.

On the other side of the spectrum stand Herbert Stencil and his plan of constructing meaning out of his fragmented sources. Stencil's challenge is to solve a puzzle without having all pieces, and thus he tries to place the scattered pieces of the puzzle as he sees fit. His obsession with V. and his unwillingness to accept the futility, impossibility to say the least, of his search for V.'s true identity could be understood through Shannon and Weaver's (1963) suggested communication model as stated in the Table 1.

Table 1. Analysis of V based on Shannon & Weaver's (1963) Model

Source	Semantic Noise (Informational Entropy)	Engineering Noise	Received Meanings by the Semantic Receivers (Herbert Stencil and the reader)
eight witnesses → **Victoria Wren**	Victoria's father and his role in colonized Egypt and The Fashoda Affair	They don't know about Victoria.	**Herbert** → V. is a tempting / British / young woman who happens to be at the wrong time in the wrong place. **Reader** → V. could possibly be a spy / She is indifferent to the death of others.

Evan Godolphin → ***Birth of Venus***	The British involvement in the Venezuelan riot in Italy / Victoria's interest in Vheissu	Why do Venezuelans try to steal the painting?	**H** → Could the painting be V.? **R** → The painting resemble Victoria's disinterestedness towards the violence which encompasses her.
Kurt Mondaugen& Hugh Godolphin → **Vera Meroving**	Vera's glass eye / Vera's interest in Vheissu / Vera's role in The Fashoda Affair	They are speechless and mesmerized by Vera's presence. Thus no accurate picture of Vera is given	**H** → A new hope for finding V.'s true identity. **R** → V.'s disintegration into a machine / her stonehearted attitude toward the massacre of the natives / her being a fascist spy working for Germany
Hugh Godolphin → **Vheissu**	The underground and interrelated tunnels which connect Vheissu to Malta and Italy	No one believes Hugh.	**H** →Vheissu is a utopian and intellectual secret society. **R** →Vheissu is just an obsession or a philosophical enterprise if anything.
Father Fairing's Journal → **V. the Rat**	Benny Profane finds the journals in the sewers of NY while chasing an alligator	The journal is unfinished and torn apart.	**H** → New York sewer system could be connected to or give directions to Vheissu and Father Fairing might be The Bad Priest. **R** → Father Fairing resembles the disintegration of a generation.
FaustoMaijstral's confessional letter → **The Bad Priest**	The Bad Priest is a woman whose body parts are mostly artificial	Fausto's is unwilling to encounter the dissembled V.	**H** → The Bad Priest has survived the incident in Italy and has changed ever since. **R** → V. signifies a process of objectification and proves to be no more than an obsession.
Sidney Stencil's Journal & Mélanie l'Heuremaudi → **Veronica Manganese**	Stencil has been manipulated by Veronica. Veronica cannot tolerate anyone being praised except herself.	Is she Herbert's mother? Is she a killer? Sidney's Journal is unfinished.	**H** → He looks for new clues about V. **R** → V. is the agent of Sidney Stencil's destruction and resembles chaos and disorder.

The Table could be revealing in understanding Herbert Stencil's situation. Stencil tends to analyze and interpret the information packages (semantic noises) that are provided for him alongside the hard evidence such as journal fragments and interviews he conducts with people who might know something about V. in a way he sees fit. In other word Stencil "constructs" his history of V. However, the position of the reader is quite different, and as one of the semantic receivers of the communication model, he/she would have a different understanding of the message. The issue here is that the reader tends to take the plethora of semantic noises as suggestive packages of information which suggest the uselessness of Stencil's quest while Herbert's bias and dedication to the quest convinces him to take certain semantic noises such as the impossibility of the transgendered situation of V. and insubstantiality of the proofs and evidence he laid his hand on during his search as redundancies and excluded them from the message he wants to receive.

Conclusion

V. is considered a historiographic metafiction which begins Pynchon's satirical attack of the first half of the 20th Century, an attack which reaches its peak in *Gravity's Rainbow* (1973). Pynchon's interest in modern science has given him a chance to embellish his novels with many scientific metaphors and internalize them as important humanistic features which would make the process of understanding human behavior more logical. Pynchon's has been influenced by modern thermodynamic theories and quantum mechanics and the effect they might have on man's understanding of himself and behavioral analysis; thus, his novels are filled with characters who represent these sometimes contradictory scientific theories.

Pynchon in *V.* begins the ongoing dialogue between two different types of entropy and continues the dialogue in his upcoming novels as well. However, the writer's position in the dialogue changes in progressively on the way. In *V.* Pynchon is very skeptical of Shannon and Weaver's (1963) model and rejects any hope of finding true meaning from the model since Shannon (1948)'s entropy, and its informational value is dependent on its semantic receiver. Thus the effectiveness of communication remains in a state of doubt and uncertainty. Classical (Boltzmann) entropy could give a logical and scientific edge to the yo-yoing pattern of the novel and make disorder and uncertainty a major theme in analyzing a novel which simultaneously borrows from and reconstructs history.

Endnotes

[i]The Fashoda Incident refers to an imperial dispute between Britain and France over East Africa. In 1898 a French expedition to Feshoda on the White Nile, presently located in Southern Sudan, was carried on to gain control of the river and thus exclude the British from Sudan. The British stay put and under heavy diplomatic pressure and out of the fear of war, the French finally withdrew and secured an Anglo-Egyptian control over the disputed area (Taylor, 1954, 381-88).

[ii]Prigogine and Stangers in their *Order out of Chaos* (1985) mainly argue the possibility of seeing chaos as the birth rather than termination of a system.

[iii]An account of researches done about different representations of V. has been given by Sarah Penicka-Smith in her article "Fantasia on a Nexus: Robert Graves, Igor Stravinsky, and Thomas Pynchon's *V*." available on https://openjournals.library.sydney.edu.au/index.php/LA/article/viewFile/5021/5719

[iv] Pynchon's *The Crying of Lot 49* (1967) utilizes certain acronyms and specific names to represent the same repetitive back and forth movements in the naming of bands such as Yoyodines and the introduction of the symbolic motto of an underground community W.A.S.T.E.

[v]The *Birth of Venus* is a painting by the 15th Century painter Sandro Botticelli which depicts the moment when the goddess Venus emerges from the ocean to the shore for the first time, fully grown and naked. The painting is kept in the Uffizi gallery in Florence (Hartt, 1973, 291).

[vi]David Cowart borrows the term from Hayden Whites's *Metahistory* (1973) in which White suggests that, like a work of fiction, history can also be "variously but equally plausibly emplotted" (quoted in Cowart 45).

References

Amian, K. (2008).*Rethinking postmodernism(s): Charles S. Peirce and the pragmatist negotiations of Thomas Pynchon, Toni Morrison, and Jonathan Safran Foer*. New York: Radopi.

Angrist, S. W., & Loren G. H. (1967).*Order and chaos*. Basic Books.

Barthes, R. (1967). Death of the author. Translated by Richard Howard. https://writing.upenn.edu/~taransky/Barthes.pdf. Accessed in February 2018.

Blundell, S. J., & Blundell, K. M. (2006).*Concepts in Thermal Physics*. NY: Oxford University Press.

Clarke, B. (2011). System Theory.In B. Clarke & M. Rossini (Eds.).*The Routledge companion to literature and science* (pp. 214-225). NY: Routledge.

Cowart, D. (2011).*Thomas Pynchon and the dark passage of history*. Athens: University of Georgia Press.

Dugdale, J. (1990). *Thomas Pynchon: Allusive parables of power*. NY: Palgrave Macmillan.

Gleick, J. (2011). *The information: A history, a theory, a flood*. New York: Pantheon Books.

Hartt, F. (1973).*History of Italian renaissance art: Painting, sculpture, architecture*. New York: Harry N. Abrams Inc.

Hayles, N. K. (1988). Information or noise? Economy of explanation in Barthes's "S/Z" and Shannon's information theory. In G. Levine (Ed.).*One culture: Essays in science and literature* (pp. 119-142). Madison: University of Wisconsin Press.

Hayles, N. K. (1990). *Chaos bound: Orderly disorder in contemporary literature and science*. Ithaca: Cornell University Press.

Kafri, O., &Kafri, H. (2013).*Entropy: God's dice game*. Kafri Nihul Ve' Hashkaot Ltd.

Lehan, R. (1998). *The city in literature: An intellectual and cultural history*. London: University of California Press.

Lyons, T. R., & Franklin, A. D. (1973).Thomas Pynchon's "classic" presentation of the second law of thermodynamics. *The Bulletin of the Rocky Mountain Modern Language Association, 27*(4), pp. 195-204.

McHoul, A., & Wills, D. (1990).*Writing Pynchon: Strategies in fictional analysis*. London: Macmillan.

Prigogine, I., & Stengers, I. (1985).*Order out of chaos: Man's new dialogue with nature*. London: Flamingo.

Pynchon, T. *V*. (1961) [2005]. New York: Harper Perennial.

Pynchon, T. (1973[2012]).*Gravity's rainbow*. New York: The Penguin Press.

Seed, D. (1988).*The fictional labyrinths of Thomas Pynchon*. London: Macmillan.

Shannon, C. E. (1948). *The mathematical theory of communication*. Urbana: University of Illinois Press.

Shannon, C. E., & Weaver, W. (1963). *The mathematical theory of communication*. Chicago: University of Illinois Press.

Taylor, A. J. P. (1954). *The struggle for mastery in Europe: 1848-1918*. London: Oxford.

Vasilenko, A. (2009). Apocalyptic quest in Thomas Pynchon's *V*. and Roberto Bolaño's*2666*.

Pynchon Notes.(56-57), pp.21–29. DOI: http://doi.org/10.16995/pn.2. Retrieved in February 2018.

Ward, B. (1998). The literary appropriation of chaos theory. Doctoral Thesis. Dept. of English, University of Australia. Online version: http://www.indolentdandy.net/phd/

Weaver, W. (1949 [1953]).Recent contributions to the Mathematical theory of communication. *A Review of General Semantics, 10*(4), pp. 261-181.

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