Autobiography From St. Augustine to David Antin: Examining the Construction of the Self as Mutually Reflective of Cultural Developments in Science and Technology, Art, and Literary Theory.

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AUTOBIOGRAPHY FROM ST. AUGUSTINE TO DAVID ANTIN:
EXAMINING THE CONSTRUCTION OF THE SELF
AS MUTUALLY REFLECTIVE OF CULTURAL DEVELOPMENTS IN
SCIENCE AND TECHNOLOGY, ART, AND LITERARY THEORY

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by
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B.S., Louisiana State University, 1988
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Dedicated to El Niño
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ABSTRACT

In this study, I look at the mutually reflective changes in society and autobiography in works definitive for their various periods: Augustine's *The Confessions* from antiquity; Rousseau's *The Confessions* from the eighteenth century; the autobiographical writings of Gertrude Stein, from the modernist period; and, most importantly here, the focus on the development of David Antin's work as representative of both postmodernism and current culture. Specifically, I consider the construction of the self in respect to art, literary theory, memory research, and science and technology.

During the second half of the twentieth century, computers have permeated almost every facet of society. Transmission of information in a high-speed, electronic society is represented as fragments and collage, and Antin's early disjointed autobiographies reflect this. His work, however, does not merely extend or expand upon traditional autobiographical methods; it turns sharply and breaks from long-held cultural notions of how nature and the self function as illustrated in autobiography, rejecting all previous beliefs of order and where the self may be located. As he ages, his work moves toward a radical type of order or unity, reflecting the current technology and the ongoing cultural desire for order. This desire is reinforced by the growing interest in neural networks, quantum physics, and chaos theory, all of which promote the premise that underlying patterns or recursions exist throughout various levels of a highly interconnected system. By finding the recursion, we allow the order of the system to emerge. However, because patterns may not be immediately observable when a system is in a particular stage of change or scale of measurement, a system often is
mistakenly considered random or without order. Essential to finding the pattern or order of the system is increasing the scale used to measure the system until period doubling, repetition, or a strange attractor is established. Similarly, Antin believes that no definitive view of the self can be constructed in a limited, single text called an autobiography. Instead, numerous works spanning a vast time period are necessary to allow patterns that create sense and coherency to emerge, thus defining the self.
CHAPTER 1. INTRODUCTION

"i like the fringe...it seemed to be the place where everything meaningful happened"
(David Antin 1993, 6)

The classic autobiographies of any given age reveal much to us about the culture in which they are written. In particular, they reflect the definitive theories of recalling and practices of presenting memory for a specific age. In revealing the cultures from which they come, these autobiographies can be examined to determine how literary theory, memory research, and science and technology simultaneously affect one another and are mutually reflective of the construction of the self in that society. Although this interaction is most immediately prominent in postmodern works, it is not unique to current culture but, rather, is part of a continuing pattern that is observable in the autobiographical texts of writers who define their periods. Additionally, as autobiography has developed from historical to contemporary times, the representation of the self has shifted, in response to culture, from a cohesive being, as in St. Augustine's work, to a random assortment of fragments in postmodern autobiographies, to a nebulous externally constructed web in current texts.

Autobiography has been well discussed in terms of both memory and the self and occasionally in terms of the interaction of literary theory, memory research, and culture (some notable scholars of this area include Eakin 1985, 1992; Gudorf 1956; Spengemann and Lundquist 1965; and Weintraub 1975, 1978). In addition to discussing how these various disciplines interact, scholars for the most part address how culture forges the individual. However, they barely, if at all, touch upon the way
autobiography may be used to examine a culture--its theories of literature and memory as well as scientific technologies that in part define that culture. As autobiography has evolved since the first major work, St. Augustine's *The Confessions*, culture, of course, has also changed. Society has become markedly diversified, fast paced, and disjointed. The institution of the Church, which was the dominant force in Augustine's time, has--like other social institutions--been splintered, increasing the challenge for autobiographers searching for a way by which to show the subject in relation to numerous institutions--or none. As writers have striven to define the self as it is affected by society, the study of autobiography has provided a way for scholars to study past cultures in contrast to current society.

In this study, I look at the mutually reflective changes in society and autobiography in works definitive for their various periods: Augustine's *The Confessions* from antiquity; Rousseau's *The Confessions* from the eighteenth century; the autobiographical writings of Gertrude Stein from the modernist period; and, most importantly here, the focus on the development of David Antin's work as representative of both postmodernism and current culture. By looking at Augustine's autobiography, we see how his culture defined itself completely in relation to religion. In Rousseau's time, religion still occupied a role in society; however, culture was becoming more secular. As a result, Rousseau and those in his culture considered how their actions affected both their relationship with other members of society and their relationship with God. In the modernist period, the number of sources to which people were accountable continued to increase as society became more diversified and complex due
to global changes ranging from the Industrial Revolution to World War I. By examining the autobiographical writings of Stein, we can see how changes in society affected the individual, who, like society, was perceived as more diversified and complex. In contrast to preceding periods, David Antin's autobiographical work shows sharp turns and abrupt breaks in long-held cultural notions of how nature and the self function. His work begins as representative of postmodern thought but develops to represent contemporary ideas that break and question all previous beliefs of order and where the self may be located. When looking at his early work, readers see a collage of unrelated fragments presented in various unidentified voices. Antin's work indicates that the number and identity of elements to which individuals bear a relationship during the postmodern period are multiple and undefined—a significant change from the single, well-established concept of the individual in relation to God during Augustine's time. However, Antin's work evolves to emphasize the relation between interconnected elements that affect and compose the self, which he sees as a retrospective construction that exists outside of the human body.

In looking at the various phases of Antin's writing, we can see his work as part of a pattern in autobiography which began with Augustine, in which the culture of a writer is manifest in the work. The scientific thought and accompanying technology prevalent in a given period affects how everything in society functions at that time, and in turn the technology shapes what and how people in that society remember. In Augustine's day, science and philosophy were synonymous; theories concerning the brain and memory were not the result of the invasive experimentation that defines
science today. In *The Confessions*, while Augustine recounts his life story, he also explores his thoughts on how he believes his mind is able to remember his past. During antiquity, an individual's life was considered to be a reflection of the larger providential story and was viewed linearly, having a start (birth) and finish (death). The ultimate goal for Augustine and those who share his culture was to be with God. Likewise, Augustine believes that his memory unfolds linearly, and he writes his text using the same linear, chronological structure to reflect both his memory and the assumptions of his society.

Rousseau's autobiography, like Augustine's, unfolds in a linear, chronological style, reflecting the belief that linear progression is the correct order. In contrast to Augustine, though, this desire for linear order is not due to a belief in providence but to an understanding that because humans develop in time, so, too, should their life stories. Rousseau's text also differs from Augustine's in that it reads more like what is now considered to be a traditional novel. That his text resembles a novel is no accident; the novel was becoming a major literary form during the period in which he was writing *The Confessions*. His writing, like other ground breaking writers whose work characterizes their historical period, takes a shape (in this case, a new genre) that eventually became the popular form associated with his era. At this time, the invention of the printing press made the production of texts easier, allowing for new and longer forms of writing to emerge, and allowed for greater distribution of these texts to a more widespread readership.
With more copies of his book available to more readers, Rousseau found himself compelled by the idea of being understood by all of his possible readers—people that he considered to be as much his judges as God. In telling his life story, he shows that he, like Augustine, is accountable to God, but, more importantly for Rousseau, he is accountable to his community. Whereas Augustine's culture was largely a religious one, and so responsibility to God and community was the same, Rousseau's largely secular community splits the individual's responsibility between God and society. When Augustine's and Rousseau's texts are examined as reflective of their culture, the shift from a largely religious to a largely secular society can be traced. In showing that he is accountable to more than God alone, Rousseau begins to develop an idea that subsequent writers also address—that the individual is shaped in part by an increasing number and variety of influences.

In the modernist period, Gertrude Stein continued in the vein of previous autobiographers by presenting the self as it is shaped by current culture. She, however, takes autobiography further as she delves into how the self is constructed through memory, not just how one remembers while writing an autobiography. Because the modernist period is characterized by, among many things, technology that made distant areas of the world more easily accessible, people at this time were influenced by a variety of cultures and events. Technological advances also increased the speed at which information to and from these areas was communicated, which, in turn, affected the way in which people remembered that information. As technology advanced, the introduction of automobiles and airplanes into society allowed people who were
previously separated geographically to interact with one another more easily. World War I also brought together people from a variety of cultures. As diversity increased within geographic regions, a sense of distinct community and personal history began to fade; people were now challenged to maintain some sense of individuality as they assimilated into a global community.

As the individual became more multifaceted in response to the increasing number and variety of influences, the self became more difficult than ever to represent as a complete, definitive being. Writers continued to address the limitations of language as representative of thought, but conceded that words were still the best mode of communication available. Conventional writing styles could not adequately reflect the changing society or ways that thinking occurred, so writers again searched for styles that would better complement the representation of a multifaceted individual in a society that was more globally united by technology. During the modernist period, avant-garde writers experimented with styles that mirrored thinking processes as understood by advances in science and technology and that took into account the multiple perspectives that comprise individuals.

One of the most influential and experimental modernist writers concerned with language both as an end in itself and as an accurate representation of thought was Gertrude Stein. Her writing style, which is fluid and circular, reflects her thinking process and creates a sense of motion and immediacy, as if her ideas are unfolding for the first time on the paper before her. This style mimics the way both Stein's mind and the culture of her time work. With World War I and the advent of technologies leading
to the automobile and airplane, the speed at which society functioned increased significantly, which is represented by the intricate time- and motion-conscious texts of avant-garde writers of the period.

The days in which science and philosophy were synonymous had given way to two distinct fields, where science was now considered a discipline based on physical experimentation to support intellectual theories. Stein, who studied to be a doctor, writes in a circular style that parallels the scientific brain and memory theories of her period. In the 1920s, scientists who were interested in learning about the brain placed electrodes on human scalps in an attempt to measure brain activity (Rose 1993). From these experiments, they concluded that the brain regularly underwent "rhythmic waves of electrical activity" (Rose 1993, 78). The resulting metaphor of the brain sending messages and searching for memories in waves, although still basically a linear model, complemented the stream-of-consciousness writing styles that were also gaining popularity in literature of the period. Although the developments in these fields were similar, their relationship was not necessarily causal, but, probably, more a result of general cultural undercurrents of the time. As N. Katherine Hayles points out, "Different disciplines are drawn to similar problems because the concerns underlying them are highly charged within a prevailing cultural context" (1990, xi). She describes the simultaneous influence of different fields, including literature, as a feedback loop that "connect[s] theory with culture and culture with theory through the medium of technology. Literary texts and theories [are] also involved in this cycle, for they too [are] affected by technology at the same time that they [are] affecting it" (xiv). So
while brain research and literature may not directly influence one another, the ideas arising in each do reflect and permeate the current society. Thus, disciplines eventually affect one another, even if they do so unintentionally or unknowingly, making the study of one discipline helpful in revealing developments in the other.

What Augustine, Rousseau, and Stein show—how difficult it is to represent the self through language and how as the world becomes perceived as more complex, so does any attempt to present the self as a whole—David Antin continues in his postmodern autobiographies. Simply titled Autobiography and "Autobiography 2," Antin's texts provide a window through which to view how changes in society affect the self and how it is presented in autobiography. His work, however, is not merely an extension or expansion of traditional autobiography; it is a break from conventional ideas of what constitutes autobiography in reaction to what he saw as a totally new culture after modernism.

Reflecting the increasing complexity and interconnectedness of society, Antin's work brings together numerous aspects—such as unidentified voices, clips from advertisements, and news items—that had never before been considered appropriate for an autobiography. His break from convention, paradoxically, continues in the traditional vein of autobiography to a degree; like previous autobiographers who incorporated the various influences of their cultures in their writing, Antin incorporates the major influences of the time—in his case, rapid developments in science and technology and their effect on other fields of study. It is just that these influences are the very causes for the break in how the self is viewed and, therefore, constructed in
autobiography. For example, during Antin's period, scientific research on the brain affected developments in numerous other fields such as computer technology, and Antin's work comments upon the significance of technology in his period, while his writing style reflects that technology.

During the second half of the twentieth century, computers have impacted almost every facet of society, including brain research and writing. Advances in computers have led to the testing of similar theories in brain research and have changed the way we receive and send information and, therefore, the way we write. Since computers were first introduced in the 1940s, they have increasingly been compared to the brain. From that time until the 1980s, computers transmitted information in a linear, sequential manner. Although this method was fast, backups in processing occurred because of fixed speed limits built into linear transmission (Rose, 1993). Information processing in computers needed to be improved, and communication between brain scientists, computer experts, and Artificial Intelligence researchers in the 1980s led to this improvement. Through interdisciplinary communication, researchers inspired by biological models determined that if computers could be designed to process information in parallel, then the speed limitation associated with the available linear processing models could be eliminated. The scientific community's acceptance that nonlinearity is representative rather than exceptional (Hayles 1990), coupled with growing technology, coincides with a society in which methods of transportation and communication have gained tremendous speed. To meet the needs of a faster-moving society, information must also be transmitted faster, producing a barrage of stimuli that
is represented in art as fragmentation and collage. The multiple perspectives and influences that have emerged have made common, or defining, social institutions practically extinct, leaving individuals on their own to search for some way to define themselves. Because there are now so many combinations of influences possible with which to identify, it has, in turn, become increasingly difficult for individuals to identify and communicate similar experiences with each other.

A contradiction seems to arise, however, when a greater focus on the self appears in postmodern thought alongside a theory that emphasizes a break from tradition, a calling into question of human relations, especially the notion of a cohesive, continuous self or of a subject as the central orchestrator of an artwork. This contradiction is even more significant in terms of autobiography. Antin responds to the paradox of postmodern autobiography by creating a text in which the self is hinted at in terms of how it is defined by surrounding objects, a view similar to Michel Foucault's in which individuals do not compose culture; rather culture composes individuals (Foucault, 1970). In Antin's autobiography, the "I," "he," and "you" are unidentifiable and constantly changing; they are often clearly not Antin and are never absolutely Antin. This shifting of person and voice mirrors current culture, which is marked by an increase in speed and volume of information. Antin's voices reveal shards of other people's stories, sometimes sensical and sometimes not, and force the reader to determine how these shards of stories may have bearing on the autobiographer who is not clearly present in the text. His emphasis on fragmentation and his lack of an
obvious subject or center to his text reflect his belief that conventional writing styles do not accurately represent postmodern culture.

Furthermore, Antin's fragmented writing style, like fast video cuts, directly results from and reinforces the frenetic culture that acts on the brain, thus influencing how the brain adjusts to assimilate, remember, and present experiences. By eliminating a defined subject, Antin comments both on the perceived view of individuals in present society and on the inadequacy of traditional autobiography techniques in a postmodern world. The autobiographers who precede Antin acknowledge that, although traditional writing styles are inadequate, language remains our most prominent method of communication. These predecessors, therefore, continually attempted to show who the self was by writing descriptions of their own lives as seen from the outside, as well as by trying to articulate the internal experience. In contrast, Antin sees the attempt to present a self through narrative descriptions and personal anecdotes as futile, so he breaks from all conventional autobiographical writing and abandons these methods altogether. Instead, he presents various quotes, phrases, and stories from many sources that are important in shaping his life.

Antin's early disjointed autobiographies that lack conventional textual transitions correlate with trends popular in the science and art of postmodern thought. Current work in brain and memory theory indicates that when particular neurons usually used in transmitting information are damaged, the brain will find other paths of neurons to follow. Therefore, the need for particular neurons to make specific connections is in dispute; the brain can actually function without all of its connecting fibers and neurons,
or can substitute neurons, altering the final output or message. Likewise, current video, photography, music, and performance art present images that seemingly are unrelated and that lack the unifying elements present in traditional narrative. Because the images are unrelated, any images can be substituted, and numerous interpretations are possible that the viewer must instantly decipher and assimilate for herself. In all of these instances, the transitions that show the relationship between images or ideas either are missing or are interchangeable, creating the possibility for countless meanings and interpretations. Because everyone's schema is unique and constantly changing, the attempt to present one authorial meaning is not a realistic goal for the postmodern writer.

As Antin develops, his texts continue to address the issues of his society, and in doing so, his writing style changes significantly. By the end of *what it means to be avant-garde* (1993), Antin has gone from presenting fragments without any cohesiveness for the reader to showing how we ultimately can and must make some sense of the disjointedness in society. He takes seemingly unrelated fragments and finds a way to make some type of sense or coherency out of them. Ultimately, he moves toward a form of unity, just as the modernist writers, Rousseau, and Augustine do.

Antin's move toward unity reflects the current technology and the ongoing cultural desire for unity, which is reinforced by the growing interest in neural networks, quantum physics, and chaos theory. Neural networks in computers, which were initially based on biological models, search for patterns within an existing system so that new
information introduced into the system can be assimilated through identification with those patterns. Similarly, a major premise of both contemporary chaos and quantum theory is that underlying patterns exist throughout various levels of a highly interconnected system; the system changes shape as information within it shifts continually, allowing new forms of order to emerge before collapsing back into the system. We see order in recursion, but this recursion often is not apparent when systems are in particular stages of change or at a scale where patterns are not immediately observable. For new forms of order or patterns to emerge, the scale used to measure or view the system often has to be increased. To visualize this, imagine looking at an object through a zoom lens camera and then lengthening the lens so that the object is seen in context with its surroundings. Suddenly the object is defined by and seen in relation to everything around it. Antin's work follows this shift to a larger scale. In a break from the notion that the self can be constructed and presented definitively in a single text called an autobiography, he argues that showing the patterns, sense, and coherency that define the self reach well beyond the boundaries of a single text or genre to something broader and all encompassing, which is nothing short of a life's worth of work. Yet again on the fringe, tangled in paradox, Antin's ideas of what is necessary for the most comprehensive view of the self--a complete body of work--preclude the writing of one's own autobiography, calling into question a genre already surrounded by blurred boundaries at best.
CHAPTER 2. THE FOUNDATION OF AUTOBIOGRAPHY WRITING:
THE CONFESSIONS OF ST. AUGUSTINE AND JEAN-JACQUES ROUSSEAU

Any meaningful study of autobiography must consider the works of St. Augustine and Jean-Jacques Rousseau. These writers established the foundation upon which autobiographers continue to build and that critics continue to reference. Their texts, considered ground breaking in their time, introduce ideas about memory and representation of the self in society and, in doing so, reveal the culture in which they were written. Their works serve as reference points when exploring autobiography in any period and allow us to see the changes through which the genre and culture have evolved to arrive at where we are in contemporary society.

Although separated by almost 1300 years, Augustine and Rousseau consider similar issues in their texts, issues that remain to be addressed by autobiographers who succeed them. Both of these writers are interested in memory and its role in defining who they are, and both are concerned with their ability to communicate experience and meaning to others. Augustine and Rousseau detail these introspections in ways that can be seen to reflect the ideas, ways of thinking and communicating, and the concept of the individual in their respective societies.

Representation of culture in St. Augustine's The Confessions

St. Augustine's The Confessions, generally recognized as the first major autobiographical work, can be examined for many purposes. One such purpose may be to determine the role of the self and the theories of memory commonly accepted in Augustine's culture. Both the book's content and structure are representative of his
period; and through examining both, we can see the conceptions that defined life at that time. During latter antiquity, Christians had become the majority of the population in Europe (Weintraub 1978, 20). Christianity dominated to the degree that, for the majority of the people, and especially for Augustine, the purpose of life was viewed completely in relation to one social institution—the Church. An individual's life was considered to be a reflection or microcosm of the larger providential story, and it progressed linearly, having a start (birth) and a finish (death). Karl Weintraub describes autobiography as late as 1681 as still being closely tied to religion and asserts that events in people's lives acquired meaning from their relation to eternal truths (1975, 844). People had to stay on the straight path to God or else be considered lost, as is made clear by Augustine's regard for anyone who deviated from Christianity. In The Confessions, the goal of life is to reach God, and, according to Augustine, a way to reach God is through memory: "One may attain joy in one way, another in another way, but the end at which they are all aiming is one and the same, namely, a state of joy. And joy is something which no one can say he has no experience of; therefore, he finds it in his memory" (232). For Augustine, God and joy are one and the same, and they are only recognizable, hence attainable, because of memory. Therefore, memory is integral to achieving the single, well-defined purpose of life in his culture.

The Confessions reflects its creator and his society; and in doing so, it reflects the prominent role of the Church at that time. The title alone brings us into the church where we, the readers, are eavesdroppers listening to Augustine speak to God. Every page provides testimony of the error of Augustine's ways—whether it is stealing pears,
being unchaste, or following the Manichees—until his conversion to Catholicism and a
life with God. That God and the Church permeate every page of his book reinforces the
role of the Church in Augustine's period; the Church was the institution by which
society defined itself and individuals gauged their worth. Correspondingly, the
Christian subject matter of art and literature of the period illustrates the strong influence
that the Church maintained in society at the time.

Narrative structure of Augustine's *The Confessions*: rhetoric and chronology as
supports of Christianity during antiquity

Both the extension of the confession box metaphor and the denunciation of the
Manichaean religion in favor of Catholicism demonstrate Augustine's awareness of his
audience. He writes as if his words are intended only for God's ears, but he, of course,
is writing for mortals. To appeal to his readers, he uses rhetoric, which he taught for a
living (70). Following the guidelines of rhetoric, he calls upon a higher authority, in the
case of this book the highest authority, i.e., the word of God, to enhance his arguments,
and, hence, he cannot be contradicted. When Augustine criticizes the Manichees for
using rhetoric to gain control over people, he uses rhetoric at the same time to persuade
readers that Catholicism is preferred by God and to debunk the Manichaean religion
whose "arguments are checked, overturned, and put out of court by you, God of truth"
(178). He condemns the Manichaean religion, saying it is plagued with fallacies (108)
and lacks proof (117). His condemnation is based on the inability of the Manichees to
produce a flawless argument. Augustine supports his argument against the Manichees
by providing a detailed example of a choice between two evils, one which takes a
person to the theater and the other which takes a person to the Manichees. The passage continues to unfold like a model argument, deferring to a higher authority and following up with more support, such as that which compares a person's decision to join the Manichaean religion to other bad choices—specifically murder, theft, and adultery. Finally, the section ends by reaffirming his thesis that the Manichaean religion cannot stand up before God.

In addition to using his mastery of rhetoric to present his story, Augustine structures his book to reflect the cultural desire for order, which, in his case, leads directly and purposefully to God. His book unfolds chronologically and in a series of numbered sections, each of which tells of an event leading up to his eventual conversion. He organizes his story into what he considers to be the required "perfect order," which for him is chronological (217). Current society, as in Augustine's period, desires order, specifically chronological order in autobiography. Because we live in time, it is convenient and sensible for us to organize events in the order in which they occur in relation to the passage of time. However, this linear organization tends to imply that events in time possess a cause/effect relationship that may not necessarily be true. It often leads autobiographers to ignore events that may not directly contribute to the cause/effect development of a specific story.

Despite the problems associated with chronological presentation of events in autobiography, it remains the most commonly used organizational pattern. P. J. Eakin, in *Touching the World: Reference in Autobiography* (1992), most satisfactorily addresses the continued use of linear narrative in autobiography and sees it as more than
only a convenient form already in place; he sees it as a "response to the fundamental temporality of human experiences" (86). Because the self develops in time, presenting its story following that time line seems sensible. However, this presentation of the life story must not be viewed as interchangeable with the representation of how one naturally remembers the self's story unfolding. Memory is actually very non-chronological (191).

To believe that we naturally remember our lives chronologically, or to insist, as Augustine does, that this is the correct or perfect order because it resembles the order of God is no longer reasonable. James Olney in *Metaphors of Self* (1972) discusses the relationship between the natural sciences and faith. He writes that as late as the beginning of this century, the sciences were based on the following assumptions:

- first, that there is a causal order in nature and the universe...second that there is some unfailing relation between the formal organization of the human mind and the formal organization of nature; and a faith, therefore, that the human mind is capable of discerning and describing the ordered processes that rule the natural universe. (11-12)

Possessing such faith can only come from having absolute trust in God, as Augustine does, and believing blindly that "the universe is an orderly place because I know it is" (Olney 1972, 12). Scientists now accept that chronology or linearity is not the natural order (Foucault 1970, 82; Hayles 1990, 143) but is, instead, one way for us to make sense of our lives and to impose meaning on either a part or all of it more easily.

Olney, in *Metaphors of Self*, supports this need to order when he comments, "the vital impulse to order that has always caused man to create and that, in the end, determines both the nature and the form of what he creates" (1972, 3) is the purpose
behind autobiography writing. The impulse to order, to get one's story to make sense regardless of what events are included or excluded from a particular perspective, I believe, is constant in human nature; however, the actual or resulting order, i.e. narrative structure, and approach to the creation of the narrative changes with culture.

Lawrence Byrne (1989) reiterates what is commonly accepted by scholars of autobiography and memory (for example, Gusdorf 1956 and Olney 1972 and 1993), which is that autobiographers unconsciously impose a narrative coherence on events that may not have been coherent at the time that they actually occurred. This has always been the point of constructing a narrative; anyone concerned with the writing of autobiography is aware that events are random and do not obtain meaning until they are put into some context or perspective. Byrne does not, however, distinguish between creating a narrative that makes a well-written story and creating a narrative that resembles the actual development of the self through time. Augustine addresses this issue in his discussion of memory and its relation to the self.

**Recalling and presenting information: Augustine's models of memory**

Writers since Augustine have organized their autobiographies in many different ways in the attempt to reflect more the process of remembering. This attempt to illustrate how the mind operates or orders has, as Olney (1972) points out, allowed for the creation of autobiographical texts of varying forms. Augustine's text provides a starting point from which we can track, chronologically for the purposes of this study, the evolution of narrative structures and popular theories regarding how the mind searches for and categorizes information in autobiography. Because Augustine was in the habit of using
one format repeatedly when presenting his arguments, it is likely that how he thought about his life when he was constructing his arguments was either consciously or subconsciously influenced by this style. Bearing this in mind, we can see how the communication tools available affect the way in which writers are able to remember as well as the way in which they choose to write. Like the actual tools available, information and how it is communicated also affect how writers receive and process material in their minds. During antiquity, the concepts of science and technology as we know them were unheard of, and theories regarding how memory and the brain work were not based on the experimentation associated with science since the late 1800s.

In *The Confessions*, Augustine presents his views of the role of memory in one's life and how memory actually works, which are also the accepted cultural beliefs regarding memory at the time. By looking at Augustine's treatment of memory, we can gain insight into what his society believed and valued. While several scholars (Eakin 1992; Gusdorf 1956; Spengemann and Lundquist 1965; and Weintraub 1975) assert that a writer's culture and personal environment shape the writer and her or his autobiographical work, they do not address how examining autobiography may answer questions regarding the nature of a particular culture itself. In Augustine's case, he and his community saw memory as the pathway to God, reaching whom was the sole purpose of their existence. Because reaching God was the ultimate purpose of and reason behind every decision in life, memory became significant to living correctly according to the beliefs of the time. Additionally, and perhaps more importantly for this dissertation, Augustine's ideas reflect the scientific theories of memory accepted by his
community, and by examining his text, we can determine the level and perspective of science regarding memory during antiquity.

In Book X of *The Confessions*, Augustine contemplates the power of memory. For him memory is neither easily definable, nor is it fully comprehensible. He does, however, in this book, arrive at two types or models of memory: one which views memory as a receptacle or physical location in the mind and one which considers memory to be a force or active agent. Olney has named these models archaeological and processual, respectively (1993, 872). In the archaeological model, Olney describes memory as a noun that Augustine refers to in terms such as "harbor" and "stomach." According to Augustine, experiences enter through the senses and are sorted and stored in various compartments where they become memories. It is in these compartments, Olney says, that memories reside until they are needed and, hence, are then retrieved or dug up by the autobiographer. In the processual model, Olney describes memory as a verb, possessing the ability to weave together memories and patterns.

Augustine expounds on the versatility and power of memory when he writes, "From the same store too I can take out pictures of things which have either happened to me or are believed on the basis of experience; I can myself weave them into the context of the past, and from them I can infer future actions" (219). This description of memory as having the capacity both to hold information and to assimilate new experiences onto our existing mental schema serves as a transition into Augustine's description of memory as a powerful force that may be used to reach God. He compares his search for God to that of animals returning to their homes. Memory is so vital to life and to
forging the self that he believes all creatures, "even beasts and birds have memory; otherwise they would not be able to find their ways back to their dens" (227). Just as memory is necessary for beasts and birds to find their way home, memory is also necessary for humans to find their way home, and, for Augustine and his fellow Christians, home is God.

Augustine's ideas about memory are highly sophisticated and interestingly similar to the theories currently popular in the scientific community. Throughout time, there have been numerous theories in the sciences and humanities regarding memory; however, concrete evidence has yet to be produced to confirm the plausibility of any particular theory. Augustine's philosophically oriented view of memory remains equally possible of becoming the definitive theory of memory as current views that are based on extensive invasive experimentation on the brain. Specifically in this regard, consider Augustine's perspective on how the brain distinguishes complete from partial memories:

The whole thing had not slipped from our memory; part of it was retained and by means of this part the other part was sought for, because the memory realized that it was not carrying along with it the totality which it was used to and, going unevenly, as it were, through the loss of something to which it was accustomed, eagerly demanded the restoration of what was lacking. (229)

The proposed ability of the brain to recognize when a memory is incomplete and to work with available information to retrain itself in order to recreate the initial experience is a theory currently being investigated by numerous scientists and various disciplines (for example, John Briggs and F. David Peat in chaos theory 1990; Daniel Dennett in psychology 1991; Bart Kosko in fuzzy logic 1993; Karl Pribham in
neurophysiology, discussed in Briggs and Peat 1990; and Steven Rose in biochemistry 1993).

The individual and the self in Augustine's culture

While hypotheses and theories regarding how memory functions have not advanced significantly in terms of producing conclusive evidence to support any of these theories, this limited understanding has not diminished the role of memory in defining the self. When Augustine writes, "Yet this force of my memory is incomprehensible to me, even though, without it, I should not be able to call myself myself," (226) he acknowledges his limited understanding as a human while yet again forwarding the purpose of his book. Just as the force of God is mysterious yet necessary to directing his life and shaping who he is, memory, which for Augustine is directly linked to God, is incomprehensible yet necessary to defining the self. The complexity of memory is at the same time an inexplicable curiosity and a necessity, for, although Augustine and other writers throughout history have tried to define memory because of its integral role in determining who we are, it has escaped full comprehension. The inability of humans to comprehend memory supports Augustine's description of its vast boundlessness, because without boundaries, like the universe, something cannot be contained, hence it always retains a sense of mystery and curiosity because of the unknown that exists beyond our range of comprehension.

Despite the human inability to grasp a complete understanding of memory, memory remains vital to creating and identifying the self. This acknowledgment of the role of memory in understanding the self, as well as the concern with the self at all, was
scarcely considered prior to Augustine (Freeman 1993; Gusdorf 1956; and Weintraub 1975). There was autobiography, for example Emperor Augustus' Res Gestae, but this only recounted historical feats and did not address any type of self-examination (Weintraub 1975). Outside of Heraclitus, who as Olney points out was the first "to declare that every cosmology begins in self-knowledge," (1972, 4) Augustine was the first formal writer to concern himself with questions of selfhood and individuality. Using memory, Augustine is able to recall his past experiences and to show how these experiences, guided by the hand of God, have formed the person he has become.

In The Confessions, Augustine obviously is represented prominently. However, during antiquity, people saw themselves in community with others and not as individuals (Eakin 1985 and Gusdorf 1956). In a culture where the self as an individual does not exist, autobiography, as we have come to consider it, cannot be possible (Gusdorf, 1956). Therefore, it seems both bizarre for Augustine to search for a self through memory and contradictory, almost hypocritical, for him to write an autobiography when his society, as he would have us believe, was so closely identified with the Church, which stressed unity with God and not individuality. In writing about African cultures, Olney points out about that individual and group identities merge so that the part represents the whole and the whole is embodied and personified in the part (1973). If this rationale is applied to Augustine, who believed he was a typical representation of his Christian culture, his decision to write about himself is no longer problematic because in speaking about himself he is speaking about his community.
Karl Weintraub's statement that during antiquity, people believed wise men should only talk about themselves for didactic purposes (1978, 12) certainly applies to the intentions of Augustine, who told his story to show himself as an example by which others could hopefully learn and convert just as he had. Weintraub writes:

The text in no way suggests that Augustine self-consciously thought of himself as a unique individual with the life task of translating his uniqueness from mere potentiality into actuality...Quite to the contrary, the indications are that he saw the story of one Christian soul, the one he could know best, the typical story of all Christians. (1978, 45)

Augustine never sees his life as special in relation to the lives of his fellow Christians. He, like they, had unique experiences that eventually lead to the same place--God. Weintraub writes that The Confessions have one center--the relationship of Augustine's soul and God--and that everything else, even Monica, is only peripheral (1978, 44). While this may be true, it is not because Augustine is egocentric but because he believes his story is also the story of his Christian community, and so there is no need to pause long on their stories, which would only be modified versions of his own. Augustine excludes from his book influences outside of the Christian community, such as the Manichees, except for how they played a role in his eventual conversion. Is it remiss to disregard any person or group that is outside of his Christian community and to give the impression that it had no power or presence within the culture? Perhaps, if we judged Augustine's intentions using contemporary criteria. However, Augustine's dismissal of elements outside of the Christian community again reflects his culture's linear view of life and refusal to recognize any deviation from the accepted "correct path" of living.
The idea of one correct path, one Christian soul, one self and community representing and embodying each other, permeates Augustine's culture and text.

The limitations of language

In describing the unique experiences of his typically Christian life, Augustine struggles with the notion that he cannot adequately convey the meaning of his experiences and his conversion. He recognizes the limits of language in representing internal experiences. His description of his attempt to communicate as an infant parallels a writer's attempt to communicate at any age:

I wanted to express my desires to those who could satisfy them; but this was impossible, since my desires were inside me and those to whom I wished to express them were outside and could not by any sense perception of their own enter into my spirit. And so I used to jerk my limbs about and make various noises by way of indicating what I wanted, using the limited forms of communication which were within my capacity and which, indeed, were not very like the real thing. (21)

His desire to be understood and frustration with the inadequacy of the communication tools available to him are common issues that writers continue to address and which inspire experimentation with language, structure, and style in the attempt to match the internal experience with the external interpretation. Augustine recognizes that in trying to express the inner self, meaning is lost in the translation. Although he understands this limitation, he continues the attempt using language and a writing style that mirrors what he believes to be the natural or proper thinking order, i.e., linear structure. He can write his story countless ways, trying to somehow represent the self fully and correctly, but the meaning will never be complete. Michel Foucault seems to articulate this
deficiency most accurately when he writes of the differences between visual and oral communication:

It is not that words are imperfect, or that, when confronted by the visible, they prove insuperably inadequate. Neither can be reduced to the other's terms: it is in vain that we say what we see; what we see never resides in what we say. And it is in vain that we attempt to show, by the use of images, metaphors, or similes, what we are saying; the space where they achieve their splendour is not that deployed by our eyes but that defined by the sequential elements of syntax. (1970, 9)

Although Foucault is writing about the discrepancy in viewing and in talking about Dutch painting, his argument applies well to the problem that arises when any medium is used to represent another: one cannot be reduced to the other's terms.

Augustine recognizes the possibilities and the limits of language. Language, in general, allows us to communicate our thoughts effectively with one another. However, in making our emotions or internal experiences understood to someone outside of us, we find language falls short. Despite this limitation, language remains our most prominent method of communication. Regarding this issue in terms of autobiography, Spengemann and Lundquist write, "Autobiography does not communicate raw experience, for that is uncommunicable. It presents, rather, a metaphor for the raw experience" (1965, 502). Autobiographers, including Augustine realize that no matter how vivid the metaphor is, it remains a layer between the raw experience and the external receiver. By no means should this layer be viewed strictly as a hindrance because, although it separates, it also joins the raw experience and the external receiver. Metaphor makes meaning possible. With this in mind, writers create metaphors that represent their experiences more exactly, and, to have meaning, these metaphors usually
correspond to the technology and conditions of their particular culture. However, merely updating the metaphor does not significantly improve the communication of the internal experience. To do this, most experimentation occurs with the structure of the language, where the writer attempts to mirror the working of the mind while it is recalling the experience. The hope here is that, in taking the mental journey with the writer as she or he recalls an experience, the reader will understand how the writer arrived at the metaphor, and its meaning will be enhanced.

Forging the self through memory and writing style to reflect cultural constructs

Memory and language (writing style) can only partially reconstruct an actual experience. The challenge of any autobiographical text is to overcome the combined effect of this inadequacy. Augustine's effort to meet this challenge is immersed in cultural expectations, which are reflected, perhaps even magnified, in text. As the organization and narrative structure of his book reflects the culturally accepted notions of order, Augustine's stylistic approach to language also mirrors the literary techniques popular in his day. His sentence structure often relies on repetition and meter to create a rhythm that further builds and reinforces his argument. Augustine uses these techniques throughout his text and most effectively to conclude his book when he writes:

"How can one man teach another man to understand this? What angel will teach an angel? What angel will teach a man? This must be asked of you, sought in you, knocked for at you. So, so shall it be received, so shall it be found, so shall it be opened. Amen. (350)"

By closing his book this way, he leaves the reader with an impression that is strong because of both its message and its delivery. He intellectually affects the reader through
Biblical echoes and words and basally affects the reader through rhythm. His knowledge of form and ability to use it skillfully impresses the reader who may be unaware as to why she or he is affected and perhaps even convinced by Augustine's words.

While his writing style is representative of the literary techniques popular in his day, its reliance on providence for direction and structural order is indicative of the belief that remained unchallenged until the end of the 18th century, which was that nature possessed an inherent, usually linear, order (Foucault 1970; Hayles 1990). Whereas humans were thought to be messy and disorganized, nature, in contrast, possessed a pattern, a sense of order to which humans aspired. According to Karl Weintraub, the Christian doctrine indicates, "In his Fall man had lost control of himself as a unified being and become prey to the multitude of perverted forces within which pulled him in so many conflicting directions that he lost himself and his way" (1978, 38). To unify the self again, to be whole by being with God, one had to devote all of life to this effort. This desire for unity was a distinguishing philosophy between the Manichaean and Christian religions. As Weintraub points out, "while the one saw the life task in learning to separate what had unjustly been condemned to coexist, the soul with the body, the other saw the salvation in reuniting in one healthy whole what man by his own fault had permitted to be torn asunder" (1978, 45). So, in rejecting the Manichaean religion for Christianity, Augustine reinforces his desire for unity, coherence, sense, and wholeness.
Augustine's goals for the self parallel and represent the goals of his culture, and his choice of Christianity indicates the cultural acceptance of unity with God. After his conversion, Augustine was awed by the inherent, God-created order in nature and believed that his life's work was to find a way and place to fit into that order and to be complete with God again (Weintraub 1975, 830). Augustine writes that he is in shattered pieces and so writing *The Confessions*, tracking how his life relates to God's purpose, creates an order and reconstructs him as a whole person (Jay 1984, 176). In attempting to achieve the divine order of nature and God, Augustine structures his communication to mirror what he believes to be the perfection that exists only in nature. When he writes, "Let your works praise you that we may love you, and let us love you that your works may praise you. For they have a beginning and an end in time a rising and setting, growth and decay, form and privation. So they have their succession of morning and evening" (347), he is using rhetoric and style to mimic and approach as closely as possible the linear order in nature believed to be created by God. Hence, he is praising God both directly by what he says and indirectly by how he says it.

Although Augustine proposes several models of memory, as discussed earlier, all of the models ultimately reinforce the linear order that is prescribed by his culture. The practices or codes of a culture shape everything in that culture, including language, values, and empirical orders (Foucault 1970, xx). During latter antiquity, linear, chronological order dictated society to the degree that anything or anyone that deviated was considered just that—a deviate. The emphasis on linearity affected even the subconscious, as we see in one of Augustine's descriptions of memory: "some things are
produced easily and in perfect order, just as they are required; what comes first gives
place to what comes next" (217). The need for order is so imperative that even the
subconscious is not allowed the freedom to act as it might naturally, associating
memories because of their relationship to one another rather than as occurrences in a
sequential order.

Elizabeth de Mijolla writes that Augustine tries unsuccessfully to find God's
place in memory (1994, 24). Augustine, however, does not actually look for God's
place in memory but looks for the way in which memory may help him to reach and
recognize God wherever He dwells. Memory as a force has the ability to guide an
individual up toward God. However, it is limited at the same time because God is
found beyond or above memory. As Augustine describes, "I mount up through my
mind toward you who dwell above me, and now I shall go beyond this force of mine
called memory, for I desire to reach you at the point from which you may be reached"
(227). Memory is the catapult by which one can reach God, but it does not bring an
individual completely to God. It is necessary for living correctly because with it
individuals define who they are according to the rules of the Church. It is only capable
of helping individuals to know who they are and to stay on the right path.

Although the force of memory does not deliver individuals completely to God,
memory as a receptacle is absolutely necessary for recognizing God after death.
Augustine questions both how people will know God if they have never before seen him
and "whether the happy life is in our memory. For we could not love it, if we did not
know it" (230). In addressing this concern, he writes extensively about the power of
memory to help us recall the sight, smell, or taste of something when it is not in front of us. Just as memory allows us to recall that which we have previously experienced, it will allow us to recognize God when we reach Him again, although we are unable to reconstruct as mortals what His image is. The implication is that we once were with God and will return or ascend to Him at the end of this life, since "from the time I learned you [God], I have not forgotten you"(234). Because we can only recognize that which we have previously experienced, we must have known God before we began life on earth. Therefore, building on Plato's proposal of memory, Augustine argues that we must have entered the world with the beginnings of a mental schema or memory already in place from God and onto which we assimilate new experiences so that they follow the order that focuses life on, and toward, God. If this is the case, then memory becomes the single most significant property of our being (234).

1300 years of slow progress: cultural developments from antiquity to the Eighteenth century

As may be expected, in the 1300 years that separate St. Augustine and Jean-Jacques Rousseau, scientific and technological developments occurred and cultural beliefs shifted, impacting the view and role of the self in society. Science went from being a purely philosophical discipline to one which required, in addition to theoretical assumptions, physical experimentation. In the late 1400s and early 1500s, Leonardo da Vinci, an artist, architect, and engineer, produced intricate drawings of the brain and its ventricles (Rose, 1993, 76). Correspondingly, memory models reflected the changing views of the scientific community as more was learned about the structure of the brain.
and as technology, such as electricity, developed. Memory models evolved from Augustine's theory of memory as both a place and force to René Descartes' hydraulic model of memory in the 1600s to the electrical maze or "telegraphic" model of memory in the late 1700s and early 1800s, reflecting the permeation of electricity in society.

Also during this 1300 year span, European culture shifted from being wholly situated in religion to being predominantly secular. As Michel Montaigne's Essays from the late 1500s reveal, secularization allowed individuals to see themselves as just that--separate, unique entities, and not microrepresentations of a larger society. The growth of secularization coupled with advances in science and technology shook the long-held belief that the self is a cohesive, single-purpose entity that reflects the providential view of life that leads straight to God and self-completion.

**Representation of culture in Jean-Jacques Rousseau's The Confessions**

Whereas Augustine's The Confessions is generally recognized as the first major autobiographical work, hence making him the first major autobiographer, Jean-Jacques Rousseau is often considered to be the father of modern autobiography (Eakin 1985, 4). His work introduces ideas concerning the self within society and the representation of that self in such a way that subsequent autobiographers could no longer validly regard the self as the single, cohesive being of Augustine's text. Like Augustine's text, Rousseau's autobiography reveals the culture in which the self is situated. Both The Confessions' content and organizational structure reflect the ideas prevalent in Rousseau's eighteenth-century society.
In Augustine's autobiography, culture is defined completely within the larger construct of religion, as Christians believed that they were on earth only in passage to God. However, as secularization grew, especially by the end of the Middle Ages, the providential view of life began to lose ground (Weintraub 1975, 844). By the eighteenth century, religion occupied a significantly less powerful position in society. God was no longer the absolute authority as judicial systems were put into place; instead, society became the judge of people (Elbaz 1988, 42). As society became more secular, individuals became just that--individuals concerned more with their own diversified existences than with the thoughts of a united Christian pilgrimage to the afterlife (Weintraub 1975, 844). Karl Weintraub points out the shift in focus of audience address in Augustine's and Rousseau's autobiographies: "while Augustine, befitting a God-centered view, confesses his soul to God and only incidentally to his fellow men, Rousseau, as a measure of the degree to which the world had become secularized, has nothing to confess to God, but everything to his fellow men" (1978, 299-300). This shift in audience address correlates with a shift in authority from Augustine's singular identity of the Church with community to Rousseau's identity with various institutions in his secular society. As a result, Rousseau must consider how his actions affect both his relationship with God and, more importantly, his relationship with the members of his society.

With an increased concern for how society judges one's actions and ideas, along with a diminished view that we are in this world only on pilgrimage to the afterlife with God, the here and now gains a tremendous sense of urgency, importance, and finality.
As Michel Montaigne wrote nearly two hundred years before Rousseau: "But it seems to me that death is indeed the end, but not therefore the goal of life; it is its finish, its extremity, but not therefore its object. Life should aim unto itself, a purpose unto itself" (1963, 405). This view contrasts starkly with Augustine's belief that the goal of life is to reach God: one way or another, "the end at which they are all aiming is one and the same, namely, a state of joy" (1963, 232). Montaigne's introspection detailing the development of the self and its responsibility to and interaction with society serves as a transition, in this case, to track the development of secular philosophy regarding the purpose of life from the time of Augustine to Rousseau. Montaigne's Essays, unlike Augustine's The Confessions, is neither a confession to God nor a model or representation of a Christian on the road to God. Montaigne presents his philosophy to his readers and writes:

For likewise these are my humors and opinions; I offer them as what I believe, not what is to be believed. I aim here only at revealing myself, who will perhaps be different tomorrow, if I learn something new which changes me. I have no authority to be believed, nor do I want it, feeling myself too ill-instructed to instruct others. (1963, 25-27)

Montaigne writes about the need for one to look inside of oneself and take stock, to come to terms with the philosophy that shapes who one is.

The effect of secularization, the celebration of living for the present moment, expressed so eloquently by Montaigne, underscores every story in Rousseau's The Confessions. In one sentence which reads, "I have not been able to cut this tale short, for it has been important to trace it in exact detail, this period of my life having had an influence upon the future which will extend to my dying day," (453) Rousseau
encapsulates the many purposes of writing his autobiography. Rousseau's autobiography is a tale--i.e., a story containing an uncertain amount of embellishment--and he repeatedly reminds us, the readers, that he has had to use his imagination to fill in the gaps of his failed memory when constructing this narrative. As proof of his story's veracity, he says to us that he has had to trace every detail or else chance either that his words be disputed or that he be accused of intentionally hiding some truth. So Rousseau fills hundreds upon hundreds of pages, undoubtedly grateful for the introduction of the printing press into Europe during the Renaissance. He traces, like a pen on his memory, the events of his past, with the pen moving steadily forward on a firm (so Rousseau believes) time line. He recognizes that every incident or personal encounter has its place in the continuum of our lives and influence on our character. In these last two aspects, Rousseau's ideas closely resemble Augustine's, although these writers are separated by some 1300 years.

Obviously, more than time divides Augustine and Rousseau. Rousseau's statement, "this period of my life having had an influence upon the future which will extend to my dying day," (453) punctuates the view of life in a secular culture, which is far removed from Augustine's Christian community. Rousseau understands that every action that he or someone else makes causes a ripple, sometimes a wave, in society and on the lives of everyone in that society. Furthermore, this change alters in some way the development of his person and life until death. This view is also shared by Augustine, but the two writers' philosophies diverge beyond this point. Where Augustine sees our actions in this world as affecting our lives in the next, Rousseau sees our actions as
affecting us in this world only. Rousseau, reflecting his culture, is not concerned with the notion of an afterlife. His and his culture's goal was to live this life fully for itself.

With a shift in the defining goal of life from that of reaching God in the hereafter to that of living fully in this world came a shift in the emphasis on the self and the reason for telling one's story. The disintegration of community with the emergence of individuality allowed, perhaps required, individuals to tell their personal achievements in order to carve out their position in society. At last it was acceptable to write about oneself for the sole purpose of distinguishing oneself among others and not, as Augustine, to teach or to show oneself as an example. In the introduction of his 1953 translation of Rousseau's *The Confessions*, J. M. Cohen writes:

> Before his day there were perhaps two great autobiographies, St. Augustine's *Confessions* and Santa Teresa's *Life of Herself*; and both these works were written not for personal display or justification but to tell of a vital experience which might serve as an example to others. By Rousseau's age, however, men had begun to see themselves not as atoms in a society that stretched down from God to the world of nature but as unique individuals, important in their own right. It was possible for the first time, therefore, for a man to write his life in terms of his worldly experience, and to advance views on his place in the Universe that bore only a distant relationship to the truths of revealed religion. (7)

The purpose of autobiography had shifted in response to a culture that had moved from being almost exclusively religious to being primarily secular. No longer was the purpose of writing solely to provide an example of how to follow the correct path leading to the ultimate joy of once again being united with God. Instead, writing was a means to attest to one's personal triumphs and accolades in this world in relation to other individuals. To meet the standards and expectations of his secular culture,
Rousseau goes to great lengths in his autobiography to tell as many stories as he possibly can with the hope that "whoever you may be that wish to know a man, have the courage to read the next two or three pages and you will have complete knowledge of Jean-Jacques Rousseau" (300). He is the writer to whom we look to find the inception of the personal memoirs genre, which remains popular even if it is not challenging or interesting as literature two hundred years after its introduction.

Whether his stories reveal his failed attempts to steal apples (amazingly similar to Augustine's childhood incident of stealing pears) or his blundered sexual exploits or his abandonment of his five children, Rousseau always aims to show that he is "like no one in the whole world" (17). While asserting his uniqueness he, at the same time, believes that his readers will eventually see in his faults their own shortcomings and, thus, not judge him too harshly or think, "I was a better man than he" (17). With Rousseau, we begin to see more complexity in how we evaluate ourselves and each other because the make-up of society is itself more diversified, rendering it impossible to weigh various people's lives with the same scale. Rousseau's stories illustrate the complex nature of the individual and are full of human efforts and errors in the attempt to capture the compassion of his readers. Every detail is crucial for Rousseau because it both reveals one's nature and records, as completely as possible, a moment in one's life; and in a secular culture, every moment is crucial because life is finite.

Just as the content of The Confessions represents the concerns of Rousseau's culture, the organizational structure of the text follows the popular literary form of the day and reflects ideas regarding life and order at the time. Rousseau's book opens with
a brief description of his purpose addressed to his audience. He then immediately moves into what has since become the conventional life-story opener: "I was born at Geneva in 1712, the son of Isaac Rousseau, a citizen of that town, and Suzanne Bernard, his wife" (17). From the outset, Rousseau lets us know that he intends to describe the events of his life, his position in society, and who he is in exact succession, with nothing intentionally omitted or rearranged in the always straight ahead time line. Each of his books contains sections dated to cover specific years. Rousseau's text actually adheres more stringently to a blatant chronological time line than Augustine's; but, as discussed previously, Augustine's text follows what he considers to be the natural linear progression of a Christian soul. At the end of The Confessions, Rousseau again addresses his audience to end simultaneously his book and the reading of his story to Mme d'Egmont and her companions.

The blurring of the listening audience and the reading audience addressed in The Confessions increases the complexity of the book's structure but by no means is original. This practice of framing a narrative can be found in works that precede Rousseau's, such as Sir Philip Sidney's Old Arcadia and St. Thomas More's Utopia. Rousseau, like Augustine, masterfully employs the literary techniques popular in his day. Using rhetorical tropes, he reiterates often his argument's thesis of, "you [the reader] will watch the march of events and judge whether I could have stayed it" (391). Following his thesis he describes an account of terrible circumstance in which no one, according to Rousseau, could have escaped unscathed, and then punctuates his argument with a final plea for understanding and empathy from his audience.
As previously noted, Rousseau's book, like Augustine's, unfolds in chronological order. Like Augustine, Rousseau and his culture still view linearity and chronology as the "proper order" (561). Unlike Augustine, however, this is not because the order parallels the path through life to God but because the order tracks the development and progression of one's life through time in this world. Elizabeth de Mijolla points out, "Rousseau's continual concern for the 'order' and 'sequence' of *The Confessions* reveals, in part, his respect for the norm of chronological narrative, a norm that works both for and against his self-knowledge. Carefully ordering his life for presentation in *The Confessions*, Rousseau sacrifices, to a degree, introspection for exposition" (1994, 80). In this observation, de Mijolla accurately points out that, while Rousseau's chosen structure does show how he became the man he is, it also prevents him from performing the meditative self-analysis that Augustine and Montaigne view as critical to understanding who that man is.

The use of classical rhetoric, chronological order, and the narrative frame all contribute to making *The Confessions* read more like a novel than nonfiction. This was obviously intentional, as the novel was becoming a major literary genre during the eighteenth century, with the purpose of entertaining taking precedence over that of teaching or setting example. Rousseau aims to construct a fluid, engaging narrative, even if that means delaying the mention of certain experiences "for fear of interrupting the thread of [his] story" (587). Particularly, he creates a work that mirrors the very popular picaresque novel. The adolescent protagonist bumbles through life, and, by sharing his mishaps and developments with an audience, hopes to gain the audience's
empathy and understanding. As Weintraub describes *The Confessions*, "It is the story of a youth, rarely settled for long, wandering about in search of life and himself" (1978, 311).

As part of creating the appearance of a picaresque novel and of validating his argument, Rousseau includes correspondence between himself and others, among them Diderot, Mme de Luxembourg, the Abbé, and Mme d'Epinay. The letters not only contribute to the appearance of the book as a novel or support the arguments presented, they also reinforce the prevailing cultural desire for linear order. Often Rousseau refers to chronological order as "proper order," and he supports this belief with the chronological dating and progression of his book. When he must arrange some undated letters so that he may place them in the book, he fills with anxiety, "as it were groping in the dark, in order to arrange them in their proper order" (561). The arrangement of most of these letters bears no significance one way or another on Rousseau's story, yet he becomes rather disturbed by his inability to remember which was written first. The desire for order, to see exactly how every event or word exchanged occurred in sequence, is so critical to his culture in which life is brief and composed of moment upon moment, that he feels compelled to order even unrelated letters.

**Narrative structure in Rousseau's *The Confessions***

The organizational structure of Rousseau's *The Confessions* mirrors the trends of his culture and is closely tied to the actual narrative structure. Like Augustine, who uses elements of the rhetorical argument, the popular literary form of his day, Rousseau also chooses from the tools available in his culture and composes a very readable narrative
that resembles any fictional novel of his period. In telling, or rather in creating, his autobiography, he admits quite freely, "Here is what I have done, and if by chance I have used some immaterial embellishment it has been only to fill a void due to a defect in memory" (17). From the beginning of his story, he lets the reader know that he is attuned to what the public enjoys reading—even if he does proclaim at one point that he does not intend for his book to be published while he or anyone in the book is alive (373)—and that he will do all he can "to provide enough interest to hold the reader to the end" (506).

In addition to presenting a detailed, seamless, and entertaining story, Rousseau hopes his narrative depicts the development of a complete, whole being in such a manner that readers may come to know who Jean-Jacques is. Using a chronological narrative in autobiography is common and logical because, as John Eakin points out, "the self is a developmental, time-embedded construct" (1992, 198). Charting "the trajectory of how one's self came to be" (Freeman 1993, 33), Rousseau follows the linear time frame because that mirrors the occurrence of the actual events. By insisting upon a linear time line, however, Rousseau refuses to acknowledge that meaning acquired from experience does not necessarily occur in the same order in which events may have taken place. Meaning is acquired and appropriated to events only in retrospect (Gusdorf 1956); therefore, selecting memories for presentation creates (more than Rousseau is aware or admits) rather than represents a self (Lloyd 1986, 180).
Eakin puts forth the question, "What kind of sense does it make that autobiographers should resort to narrative, especially chronological narrative, when they come to represent their lives?" (1992, 191). Resort, indeed, for as Eakin further asserts:

structure represents an important opportunity for self-expression in autobiographical narrative, although most autobiographers neglect it, assuming that content and style will serve to communicate their sense of individual uniqueness...any appeal to the order of memory will discredit the notion that chronological order is somehow an intrinsically 'natural' representation of human experience. (1992, 191)

Experimenting with various narrative structures in the attempt to mirror what the writer believes to be the way one actually develops and remembers is what ground-breaking autobiographers do. While the chronological narrative may be an outdated, ineffective form for contemporary autobiographers, it was the innovative form for an examination of the self in the eighteenth century because the practice of self-examination itself was still relatively new (Weintraub 1978, 325). In this sense, when Rousseau convinces himself that he remembers properly only when he does so in chronological order, he believes this is because that order mirrors the order in which his life unfolded. He does not acknowledge that various events occurring at different times work together to create a meaning, usually at a time far removed from when any one particular event took place. That meaning and selfhood do not follow a strictly linear progression is a concept beyond the understanding of Rousseau and his eighteenth-century society.

A problem with Rousseau's belief that selfhood and meaning unfold chronologically is that as he approaches the time of his writing he is unable to understand how his present fits with his past. As his ability to sequence or order events...
dissipates, he writes, "All the rest of my life has been nothing but afflictions and heartaches, which I find so sad to recall, and which come to me in so confused a form that I can no longer reduce my story to any sort of order. Henceforth I shall be obliged to arrange my facts haphazard, as they come to my mind" (553). He does not appear to recognize that he has all along selected specific events that contribute to the narrative and the Jean-Jacques he wishes to portray, or that the selection of these events requires time and distance in order to determine how they fit in with the image he tries to convey. As Montaigne wrote centuries earlier, "A man who does not have a picture of the whole in his head cannot possibly arrange the pieces" (1963, 159). As Rousseau nears the present in his story, he cannot possibly have the retrospect necessary to assimilate that part of his life with all that has come before. This case reinforces the notion that, while autobiography attempts to mirror a life, the narrative cannot merely be a tracking of events in time--it must be a selection and ordering of those events that have meaning from a given perspective (Gusdorf 1953).

The limitations of chronological narrative in representing the self, touched upon by Rousseau, remain topical to writers even now. Paul Jay credits Henry Adams' autobiography, *The Education of Henry Adams*, with being about "the end of history, the end of historiography, the end of the 'whole' and 'coherent' ego, and the end of 'Adams'--it is also about the ends to which autobiography, as a narrative practice, has come" (1984, 159). Furthermore, Jay writes that Adams' "observations about the real limitations of narrative as a form for the twentieth-century self-reflexive writer are tied to the expanding limits of humankind's conception of the self" (1984, 159). While
Adams certainly drives home the notion that there can be no one coherent self and that the narrative in autobiography is insufficient, Rousseau deserves credit for introducing these very ideas in the eighteenth century. Although he may not completely grasp why his narrative form is inadequate for his purpose, he is able to recognize and articulate his observation:

The further I go in my story, the less order and sequence I can put into it. The disturbances of my later life have not left events time to fall into shape in my head. They have been too numerous, too confused, too unpleasant to be capable of straightforward narration...Now my story can only proceed at haphazard, according as the ideas come back into my mind. (574)

Rousseau may not fully appreciate the natural relation or "haphazard" connection of different stimuli or memories in his head, but he does begin to see that time and retrospect are necessary for determining or appropriating meaning on past events that define the self. Also, he calls to attention, even though he does not explore, the issue that chronological order or narrative obviously falters when one is trying to delve into a meaning of the self. He views the non-chronological relation of memories as problematic, but writers who follow him will argue that these "haphazard" connections are, in fact, what make us unique individuals.

Eighteenth-century technology and theories of memory as reflected in Rousseau's text

In the time between Augustine and Rousseau, communication technology and theories of memory naturally changed with society. The invention of the printing press led to the privileging of writing during the Renaissance (Foucault 1970, 38) and made text easier to reproduce and more accessible to readers. It would certainly be more feasible
now to produce numerous copies of lengthy texts relatively quickly that otherwise would have been copied significantly slower, if at all, by a secretary.

While the printing press changed communication in the sixteenth century, science was influencing how society viewed life. New scientific theories and findings called into question society's foundation of absolute truth regarding nature as previously explicated by religion. Robert Elbaz writes:

With the scientific revolution, Descartes and Newton brought the modern world into a new phase which accelerated the displacement of religion by science. Common-sense knowledge based on the senses was replaced by mathematical reasoning; new experiments were carried out using quantitative methods of measurement...Religion was taken out of nature and confined to the expression of beliefs and morals, while science took over in the natural world. (1988, 41)

The scientific revolution ushered in not only advances in technology and machines but also new metaphors that described the brain and memory in contemporary terms.

Leonardo da Vinci, in the sixteenth century, was drawing intricate representations of the brain and its ventricles (Rose 1993, 76). By the seventeenth century, the scientific community had agreed that memories resided in these ventricles and flowed throughout the brain after passing through a control valve that separated the front and back areas of the brain (Rose 1993, 76). Descartes' amended version of this early hydraulic model of memory to a free-flowing spirit, that moved from side to side of the brain until it touched upon the desired memory, is actually quite similar to Augustine's model in which he searched his mind only to have memories flow forth. The major difference between these two theories is that the methodology of science had changed from one that was philosophically oriented to one that was more experimentally oriented. This
difference continued to grow as science separated from religion to explain the natural world.

The split of science from religion corresponded with the changes in society's view of life; for example, Rousseau's predominantly secular culture believed that living well, not preparing for an afterlife with God, was the goal of life. In turn, the role of memory as the path to reaching God faded, becoming, instead, a way to construct the self into a coherent, whole being in this life. Memory models continued to reflect the communication technology in society, such as with the shift in view of the nervous system from a hydraulic model to an electrical maze following Galvani's electrical experiments on frogs in the 1700s (Rose 1994, 77). Around the time of Rousseau's death, the telegraph was formally introduced into society and the brain and memory was, for the day, described as a telegraphic signaling system. This telegraph metaphor complements Rousseau's own earlier claim that he could call up on demand particular memories. The developments in and borrowing among these various fields reaffirms a premise of this study that in any given culture similar developments arise simultaneously in different fields.

Although Rousseau's claim about memory can be seen to foreshadow the arrival of the telegraph, he does not, as Augustine does, elaborate on his ideas regarding models of memory. He does, however, provide readers with a few brief insights into how he believes his memory works. Most strikingly, Rousseau claims his "memory calls up only pleasant objects" (261) and dismisses painful events so well that he "cannot recapture them when [he] need[s] them" (261). The mechanical nature of his
memory, similar to the telegraph which sends and receives linear codes, reflects the communication technology of his day and reinforces the belief in linear progression prevalent in his culture. However, unlike Augustine's ideas about memory that hold up consistently throughout his book, Rousseau's ideas often contradict what actually occurs in his work, eventually disintegrating by the end of the text. This inability to "call up" in order to reproduce a linearly developed, whole, coherent self marks the beginning of the "end" that Jay notes takes place in Henry Adams' autobiography, but which actually began to manifest prior to Adams' work.

Rousseau says that he remembers only pleasant events and forgets the painful, for which he is grateful "for never having known that vindictive feeling which is kept boiling in a resentful heart by the continual memory of insults received, and which inflicts upon itself all the textures that it longs to inflict on its enemy" (540). This proclamation, however, seems ridiculous when it is placed almost at the end of a work which inundates the reader with stories that expose the flaws and evils of everyone who Rousseau believes has worked to destroy him but against whom he harbors no resentment. Surely Rousseau does not expect us to believe this, but his content directly contradicts his claims of memory control. So, while he aims to present memory as possessing some type of mechanical quality, which does reflect the developments in culture, ultimately the mechanical metaphor is inadequate.

By the end of The Confessions, Rousseau is dejected by his inability to represent the movement of his recent memory: "I have so confused a memory of this whole affair that it is impossible for me to impose any order or connexion on the ideas which come
back to me. I can do no more than record them in the scattered and isolated form in which they come to my mind" (579). Rousseau does not recognize the coherency in free-associated images, although he does mention earlier in the text without significance that his memory of dinner at Château de Toune, "which was the sweeter for the innocence associated with it, recalled others of the same kind" (397). He passes on the opportunity to leave the linear narrative and to explore, as Montaigne does in his *Essays*, the natural associations of memory and how they may be mirrored in a nonlinear structure. Although Rousseau may not be as willing as Montaigne is to let his style and mind "alike go roaming" (1963, 375), he does, by ultimately calling attention to the failure of linear narrative and memory, provide the avenue which subsequent modernist period autobiographers will explore in depth, always in search of the best way to represent textually the working mind.

**The individual and the self in Rousseau's culture**

Georges Gusdorf writes that Rembrandt painted sixty-two self portraits throughout his career because he was aware that no single image could be the definitive self and that only in viewing many perspectives over time could a "common denominator" of the self be determined (1980, 35). Likewise, Rousseau provides numerous insights into his life so that we may come away from the text with a sense of his basic nature, despite the various ways in which he was forced to behave when dealing with different situations and people. In recognizing the fragmented nature of the self, Rousseau touches upon the problem of trying to represent the self in text or even of creating an autobiography.
that is not a fiction from the moment the writer decides to impose a coherent narrative on it.

Rousseau remains adamant in his belief that memory and life and, therefore, any narrative describing them must follow a linear, chronological order. When his memory and narrative diverge from this strict order, he grows frustrated and confused. His goal throughout his text is to show who he is, and he fears that without the order expected by his culture, he cannot possibly represent himself adequately or comprehensibly. In attempting to represent himself comprehensibly, however, Rousseau continues to be full of contradictions: first his plea that no one should read his book when he is alive, while at the same time he addresses his intertextual story and reading audiences; then his self praise for not being vindictive, while his entire book exposes what he sees as other people's wrongdoings toward him; now his claim of uniqueness, while hoping that others who read his story will identify with him.

*The Confessions* opens with Rousseau's almost adolescent proclamation of individuality:

1712-1719 I have resolved on an enterprise which has no precedent, and which, once complete, will have no imitator. My purpose is to display to my kind a portrait in every way true to nature, and the man I shall portray will be myself. Simply myself. I know my own heart and understand my fellow man. But I am unlike any one I have ever met; I will even venture to say that I am like no one in the whole world. I may be no better, but at least I am different. (17)

His belief that he is so different from everyone else in the world that no one will ever be able to understand him resembles the egocentric tantrum of a teenager. His immaturity aside, however, both Rousseau's assertion of uniqueness and promise to reveal his true
self are relatively unexplored concepts in the eighteenth century. With the exception of
Montaigne, whose *Essays* showed the change in Western European culture from
Augustine's Christian community to an increasingly secular society where the
autobiographer now had the responsibility of illuminating the private facets of the
individual (Gusdorf 1980, 34), Rousseau is the first major autobiographer to present
himself to an audience for its examination, recognition of uniqueness, and approval.

By first asserting his uniqueness, then hoping that others will come to see
similarities between themselves and him based on his behavior in certain situations,
Rousseau is basically reiterating Augustine's belief regarding human nature. Augustine
thought that all Christians had the same nature, although individual experiences along
the Christian path to God may have been different. Rousseau's similar belief that his
community will see themselves in his actions not only contradicts his statement that no
one is like him but also condemns the nature of his society to one that is mean-spirited,
irresponsible, and unconscionable.

Rousseau's delusional vision of himself as a unique but ordinary man noted, he
does point toward the changing idea of the individual. The shift away from Christian-
centered culture, the split in science and religion, and technological advances, such as
that of the improved mirror at the end of the Middle Ages, all contributed to a new
conception of the individual by the eighteenth century (Eakin 1992, 84; Elbaz 1988, 41;
Gusdorf 1980, 32). The individual was now seen as distinct from others rather than as a
typical representation of the community. As Guillemette Johnston notes, "the collective
self exists only through its primitive foundations and cannot survive when confronted

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by a social world whose foundations rely not on primitive similarities between individuals, but on differences between them" (1990, 277). With this dissipation of the collective self comes not only the need to show how one stands out in a community but also how one may still be accepted into that community. Rousseau's comment, "You cannot judge...till you have read me to the end," (261) is a plea for acceptance by the community he believes cannot understand him but which, alongside and with greater consequence than God, judges him nonetheless.

As Rousseau lays out his story for his readers' evaluation and judgement, he addresses the multiple institutions that judge and, hopefully, accept him. In addition to God, Rousseau is now judged by the judicial system; the literary, music, and philosophical communities; the aristocratic circle in which he mingles; his family; and the general public. The individual now has several private and public selves, quite possibly each with its own goals and agenda; this is far more complicated than Augustine's single life purpose that directed all facets of life in his culture. Now that society considers the main purpose of life to be to live well, individuals set their own life goals, which for Rousseau include various endeavors in music, literature, teaching, romance, and family--none of which has anything to do with living for God or preparing for an afterlife.

Because Rousseau splits himself among so many diverse groups, he cannot possibly be one persona that is identifiable as the same by each distinct group. He understands that Jean-Jacques must be different for each of these institutions, yet he remains surprised by his own behavior: "I think I have already observed that there are
times when I am so unlike myself that I might be taken for someone else of an entirely opposite character" (126). His recognition that the self is not constant and is sometimes unrecognizable even to our own person is an idea so far ahead of its time that it will be picked up by the modernist autobiographers and remains an issue for scholars even today. Because there is not a continuous, coherent self, Rousseau must create one. The fact that a self must be created makes the self an object left to the perception of others (Lloyd 1986, 170). Rousseau is acutely aware of this, which is why he desperately tries to ensure that his readers understand who he is within, because the object alone from the outside does not resemble its inside. In trying to gain the empathy of and prove his worthiness to his community, Rousseau presents a version of himself that explains why he is who he is and how he became that complex, sometimes unrecognizable, person. Obviously memory plays a key role in the creation of this version, for without it Rousseau could not select past events that contribute to the image he wishes to portray.

Rousseau, representative of a culture that emphasizes individuality, puts forth descriptions of his actions that distinguish his life from that of others around him. Gusdorf attributes this development in autobiography to the belief that:

The man who takes the trouble to tell of himself knows that it will not be repeated in the future; he has become more aware of differences than of similarities...he believes it is a useful and valuable thing to fix his own image so that he can be certain it will not disappear like all things in this world. (30)

In striving to distinguish himself among the other members of his society, Rousseau reflects the aim in his culture, which is that individuals establish a permanent place for themselves in an otherwise fleeting life. However, his desire to establish himself as
absolutely different in order to ensure his place in history perhaps carries Rousseau to
the extreme, where he certainly is remembered but in a most controversial light.

The need to assert one's self in a secular culture where the individual must
answer to numerous institutions destroys any possibility of a cohesive self, although
Rousseau tries to create one. However, as he admits, when he tries to assemble the
fragments of his life into a continuous narrative, he has gaps that he must fill using his
imagination (128). He recognizes that there are many sides to Jean-Jacques, and he tries
to show all of these in the hope that by presenting all of his sides he will create a whole.

The limits of language in secular culture
Rousseau recognizes the difficulty in trying to construct a single coherent Jean-Jacques
when he is actually composed of many different fragments, each corresponding to
various facets of his public and private lives. His struggle to represent the self is
compounded by the inadequacy of language to represent the inner experiences of those
multiple facets of the self. Like Augustine, Rousseau is concerned that he will not be
understood, hence his readers will never know the true Jean-Jacques. As de Mijolla
writes, "Rousseau [in his autobiographical attempts] has repeatedly found his written
selves inadequate, as what is private in him has gone public to be wrongly
interpreted...his elegant verbal selves become strangers as they are read by others, only
to find, time and again, that his words belong to the world and he is all alone, still
untold" (1994, 83). Rousseau tries repeatedly, relating story upon story in hope that
eventually he will tell the one which crystallizes the "true" Jean-Jacques, i.e., the one he
believes himself to be. However, just as he never comes upon the definitive story of
Jean-Jacques, he also fails to find the language that fully translates his feelings. His failures ultimately occur because none of these goals is realistically attainable. Critical of Rousseau, de Mijolla argues that Rousseau's insistence that language fails is actually more the shortcoming of Rousseau's depth and not that of language (1994, 84). Rousseau may have his shortcomings, but, to his credit, his assessment of the limit of language is not one of them.

Augustine's frustration with language resides in knowing that, in not being able to convey meaning or experience exactly, he falls short in his didactic purpose for writing his confessions. Rousseau, not interested in being an example of Christian living, is frantic, almost to the point of neurosis, because, if he cannot show in language who he really is inside, people will not understand and accept his behavior, which from the outside appears less than admirable. Early in the text he states, "I should not fulfil the aim of this book if I did not at the same time reveal my inner feelings," (88) but soon follows with the acknowledgment that, "Feelings can only be described in terms of their effects" (105). He articulates the belief that there is no language for describing one's inner experiences and changes. The best a writer can hope to do is describe the physical or external manifestations of the inner experience. Words alone are merely suggestions of what one really thinks and feels, and these suggestions become fainter and less effective as culture becomes more secular, splitting the common base of experience into smaller, more numerous pieces.

It makes sense that our ability to understand one another stems from our identification with one another. Augustine struggled with the inability of language to
express his meaning, and he had the advantage of a well-defined Christian community possessing the same set of beliefs and goals. As the shared values and common experiences of a society begin to disappear, as they do in Rousseau's secular culture, it becomes increasingly difficult for individuals with separate agendas to identify with and, therefore, understand one another. N. Katherine Hayles comments on the breakdown of story in postmodern culture:

"the texture of life [is] created from a wealth of small shared moments...In the absence of these shared contexts, experience is incommunicable. Facts can be told; events can be narrated; but experience cannot be shared, for the cloth out of which it is woven has been destroyed. (1990, 238)"

Hayles' observation may be about postmodern culture, but these contemporary ideas are certainly traceable in Rousseau's *The Confessions*, where we see the early stages of the unraveling of common experience in his culture. As individuals are affected by different stimuli, each person becomes a unique composite, and metaphors cease to have the same meaning for various people. The metaphors are no longer effective; the language is inadequate.

**Forging the self through narrative in autobiography to reflect cultural constructs**

Like Augustine, Rousseau uses writing style in his autobiography to reflect cultural constructs and to reinforce his purpose for writing. Rousseau's choice of the narrative frame and picaresque novel styling makes the text more accessible to readers of the popular literary genre of the day, i.e., the novel. Furthermore, Rousseau believes his stylistic approach infuses *The Confessions* with a greater sense of accuracy and veracity because he reportedly addresses an actual audience that is present to scrutinize his story.
and judge his character. In this regard, the form works to Rousseau's advantage in helping him to appear to prove his worthiness. The presence of the audience sitting in wait to approve of Rousseau's story acts as a substitute for the rest of society which looks upon, hears, and judges Rousseau. If Rousseau can convince his audience of Mme d'Egmont and her companions that he possesses honesty and integrity, then perhaps his reading audience (the rest of society) will be persuaded to follow suit. Rousseau is not alone in his position of being judged by his society; like Augustine, he is representative of his culture. In Rousseau's society, everyone judges and is judged by the community.

The narrative form, in addition to following the popular literary genre and creating the illusion of honesty on the writer's part, imposes a linear order that joins disparate events in the autobiographer's life. In The Order of Things: An Archaeology of the Human Sciences, Foucault describes the capacity of language both to fragment the "monotony of space" while it simultaneously unifies the "diversity of temporal succession" (1970, 113). Rousseau, aware of the fragmented self that has developed in his secular culture, where an individual has many private and public faces, uses language in the attempt to unify these different selves, to link together his pieces of time, and to create a complete story. This story--made possible through access to memory, language, and narrative--fulfills the needs of both Rousseau (for his own sanity and sense of coherency) and his readers (in their desire for a seamless, finished tale).
The fluid, chronological story that Rousseau presents follows the cultural belief that nature follows a linear order—a belief that was prevalent in Augustine's time and which went unchallenged until the end of the eighteenth century (Foucault 1970; Hayles 1990). At the time Rousseau was writing *The Confessions*, the belief that nature was linear was still privileged and was reflected in the approach to technology, as with the linear model telegraph. However, Rousseau's work reflects the loosening of this cultural truth. The cultural desire for linear, chronological order remains, but the recognition that this order may not be as natural as it was once thought to be is beginning to take place—if not yet in the open dialogue between scholars, then at least in the subconscious motivations of writers such as Rousseau. While Rousseau does try to arrange the details and letters of his life into their "proper order," (561) he does so to show the succession of events in a life that progresses in time.

Unlike Augustine, Rousseau does not write extensively either about the mind's power to produce things in a perfect order or at all about its capacity to lead us straight up toward God. Culture may still prefer linear order, but the degree to which this order is considered natural is starting to come into question, as we see with the difficulty Rousseau has in maintaining that order when trying to represent the self truthfully without fictionalizing. His claim to have control over memories, unlike Augustine whose memories "flood forth" hopefully in perfect order, indicates the need to control, to impose a particular order where one realizes (even if one does not acknowledge) that particular order does not exist. His claim to "call up" memories like a telegraph is an example both of the influence of technology on thinking and writing and of how he
must impose linear order where it is not present. When he writes, "I can no longer reduce my story to any sort of order. Henceforth, I shall be obliged to arrange my facts haphazard, as they come to my mind," (553) he seems at a loss, as if he has somehow failed because he is unable to impose the expected order on his life. What he does not recognize is the cultural implication of his observation. A shift in cultural understanding of order is occurring during Rousseau's lifetime. The previous belief that nature is linear is beginning to give way to other ideas regarding order and coherency. Where Rousseau considers non-chronological association of memories to be problematic and haphazard, subsequent writers will embrace these associations as a more natural type of order, calling it stream-of-consciousness.

Memory and narrative in Rousseau's *The Confessions* also reflects the individual need within one's culture to establish oneself as a distinct, respectable entity in a secular society. It is only through memory that individuals can tell their own stories, thus creating their identities both for themselves and their public. Because society as a whole no longer firmly believes that the life story continues and acquires meaning in the afterlife, individuals must somehow find meaning and purpose in this life. Memory and narrative provide the means through which individuals can do just that--search, evaluate, and arrange their lives into a meaningful, coherent story, which in the end produces some semblance of a unified self. When Rousseau mentions how he sometimes acts out of character--as when he schemes dinner and lodging out of M. Reydet (126)-- he shows that the self is actually fragmented, many pieces of which seem so different in composition that they cannot possibly be related to one another in one
person, yet they must be. The difficulty in representing these many selves textually and in assimilating these fragments into one whole increases as society becomes more diversified. *The Confessions* reflects the growing problem of representing a whole self that is breaking into numerous fragmented public and private selves. Rousseau's text is a pulse point at which we can determine the beginning of a cultural awakening to the dissolution of the idea of a single, unified self.

Rousseau's self-consciousness regarding the split between his private and public selves marks a "turning point," as Ann Hartle calls it, in Rousseau's life (1983, 139). It is at this point, when Rousseau begins his public life and tries to link it with his private life, that he realizes he will always be misinterpreted by others. As the division between public and private grows more distinct, he feels alone in his understanding of the "true" Rousseau. His moment of self-realization when looking back over his life is as significant as Augustine's religious conversion. Like Augustine, who relies on memory when describing his religious conversion, Rousseau also finds his moment of self-realization when he reviews his life through memory. Rousseau's conversion—the instant in which he finds the change that defines who he is—occurs when he recognizes the complexity of the self, i.e., its irreparable splitting. This recognition is also a moment of cultural conversion, for the self will never again be able to be viewed as a whole, at least not in the same way that it was in Augustine's society.

Tracing the shift in culture from the time of Augustine to Rousseau as reflected in their representations of the self, we can determine that as culture becomes more secular and diversified, it also becomes necessary for individuals to distinguish
themselves in society. Rousseau's culture does not identify or define itself solely with the Church, as Augustine's culture did; and as culture identifies with an increasing number of institutions, power to influence individuals is divided among these temporary institutions of authority. Whereas Augustine concerned himself with always behaving as a good Christian and staying on the track to God, Rousseau worries how scholars, the aristocracy, the law, and his family perceive his actions. In response to an increasing number of social institutions acting upon and shaping the individual, the self seemingly splits into more and more pieces, each very distinct in composition and unlikely to fit together again as a whole. Augustine saw that he was a man shattered in pieces who would come together finally with the help of God once he reached Him. Rousseau, too, sees he is a man in pieces but can only try to reassemble himself with the help of imaginative embellishment, which in the end produces what resembles a patchwork quilt containing unrelated cloths that are joined only by a common thread, which Rousseau admits is imaginative, i.e., fiction. With his admission, the notion of a continuous, linear, complete selfhood can never again exist as simple fact; it cannot exist at all.

Just as Augustine's and Rousseau's autobiographies reveal the changing ideas regarding selfhood, both texts also reveal the effects of technology on communication, culture, and memory. As technology advanced from Augustine's to Rousseau's period, communication changed to reflect the technology, both in the actual tools available for communication (e.g., the printing press and telegraph) and in the metaphors inspired by these tools to explain the working of the human mind. Similar ideas from seemingly
unrelated fields began to emerge, as we see when Rousseau describes the working of his memory in terms similar to the working of the telegraph.

Along with the shifting views of how memory works, eighteenth-century culture began to develop new schema to differentiate nature and human nature, because nature and human nature were no longer seen as reflective of one another (Foucault 1970). In Augustine's time, nature was thought to possess a linear order, and human nature aspired to mirror this "proper" order. By Rousseau's time, however, a fracture between nature and human nature was in place, and the linear view of nature was being called into question. Human nature, however, because we are time-embedded creatures, still desired order, even if it had to be imposed. The notion of order in regard to memory and the self only becomes more complex as culture changes and technology advances. The avant-garde autobiographers who succeeded Rousseau provided approaches to order, memory, and selfhood that were valid and influential for their day, but credit is due to Rousseau for leading the way in modern autobiography and in providing the first view of the fragmented self that yet remains an issue in contemporary autobiography.
CHAPTER 3. AVANT-GARDE AUTOBIOGRAPHY
IN THE MODERN PERIOD:
THE DESIRE TOCREATE A UNIFIED SELF OUT OF PIECES

The emergence of modernism: significant cultural changes in the 100 years
between Jean-Jacques Rousseau and Gertrude Stein

Relative to the cultural changes that evolved in the 1300 years between St. Augustine
and Jean-Jacques Rousseau, the advances in technology and science as well as resulting
shifts in commonly accepted social beliefs occurred at a rapid pace in the 100 years
between Rousseau and the modernist writers. In his autobiography, *The Autobiography
of Henry Adams* (1918), Henry Adams, a writer on the cusp on modernism,
acknowledged the importance of technology, specifically machinery, to his culture by
providing a brief history, noting particularly that the electric tram was introduced in
1883, followed by the automobile in 1893. No doubt these advances in transportation
were more than a convenience for Adams; they were an inspiration to his creative
processes, as he writes, "he hoped to project his lines forward and backward
indefinitely" (1931, 435) and, "matter was motion--motion was matter--the thing
moved" (453). The advances in technology, in this case those involving movement,
provided new vocabulary and metaphors through which Adams could convey his mental
exploration of the self.

Developments in science

The electric tram and automobile were only two of the inventions that crucially affected
society. The telegraph, which was introduced about the time of Rousseau's death, and
the telephone, which followed in the early part of the twentieth century,
also increased the speed at which people communicated. As communication technology improved, researchers who studied the brain borrowed the language and models from that field to create metaphors to explain the working of the brain. As Stephen Rose points out, "The telephone was even more promising [than the telegraph], for speech was here converted into patterns of electrical flow across a wire. In a telephone exchange metaphor the brain processes messages coming in and going out; signals from eyes connected to muscle contractions in the leg and so forth" (1993, 77-78). This new metaphor simplified the explanation for how the brain and body performed mechanical operations; however, it did not explain how the brain handled memory, which is critical to defining the self. Although the telephone exchange model provided a layman's explanation for the working of the brain, this explanation would remain strictly theoretical until science could provide physical proof of its plausibility.

Advances in technology in the nineteenth century were accompanied by changing views in science. Although scientists since antiquity were aware of the forces of electricity and magnetism and even studied them to some degree in the 1600s and 1700s, significant advances in understanding these forces did not occur until the mid-1800s when James Maxwell developed the electromagnetic theory (Penrose 1989, 184). In his study Maxwell determined that electric and magnetic fields push each other through space, causing the fields to oscillate and carry definite amounts of energy with them (Penrose 1989, 186-187). Maxwell's discovery of electromagnetic fields coupled with communication technology advances involving electricity (e.g., radio waves) provided points of research for scientists interested in studying the movement of energy.
through the brain. In 1885 Hermann Ebbinghaus published a book on memory that called for scientists and psychologists to reject speculation and to study mental processes with more quantitative methods, such as those used in physics and biology (Rose 1993, 107).

As science became more experimental or invasive, theories regarding the brain began to support the metaphors that had grown out of fields such as communication technology. Biochemistry—the predecessor to neurochemistry—emerged in the 1910s (Rose 1993, 39), bringing with it a new understanding of the brain. Rose points out the relationship between communication technology, metaphors of how the brain functions, and actual quantitative brain research:

When, during the 1920s, it was discovered that the brain was indeed in a state of ceaseless electrical flux, that electrodes placed on the scalp could detect regular bursts and rhythmic waves of electrical activity changing with thought and rest, sleep and wakefulness, this was instantly assimilated to the telephone exchange model, with subscribers dialling in and being connected to their required addresses by a central operator. (1993, 78)

Possessing a better understanding of the physical working of the brain, scientists began to question the more complex issue of memory, as evidenced by the more than 200 studies on eidetic (photographic) memory alone that were published before 1935 (Rose 1993, 103). The surge of interest in memory would not relent; it remains an issue for writers and researchers curious with the role of memory in self-identity.

As science began to solve more of the mysteries of life that Augustine's and even Rousseau's culture attributed to God, providence lost its power as the single force that directed the world. The providential straight path to God that gave purpose to life in
Augustine's culture began to splinter in Rousseau's secular culture to suit worldly pursuits, but progressed linearly forward nonetheless, ending with death. Paralleling this direction during the early 1800s were developments in science, specifically the second law of thermodynamics, which explained entropy. In an isolated system, entropy, which is movement toward disorder or the loss of energy, increases with time (Penrose 1989, 309). This would explain our forward progression toward death—a sort of ordered movement toward disorder arising from a total loss of energy. Although the prevailing scientific laws could not be used to answer all of the mysteries of nature, this rejection of providence as the explanation of life continued in the nineteenth century as scientists later became somewhat familiar with nonlinear equations and their application to discontinuous phenomena, such as explosions and high winds (John Briggs and F. David Peat 1990, 23). The recognition of nonlinearity in nature further diminished the authority of providence as the controller of order and life's meaning in a secular culture.

Because nature and human nature continued to be compared, when scientists began to detect nonlinearity in nature they also began to investigate what was traditionally seen as nonlinearity, or discontinuity, in human nature. As science produced more and more ideas that seemed contrary to those for so long accepted as God's truths, and the concepts of nonlinearity in nature and discontinuity in human nature took hold, the foundation of "truth" in society was radically shaken. No longer was it possible to consider the world or life as inherently possessing a linear order; this was a characteristic that had to be created if it were to exist at all.
Developments in art

Artists interested in creating coherency or unity in their work needed new tools for the endeavor. To break from the traditions that had apparently perpetuated misguided notions of order, nature, life, and God, the avant-garde modernists rejected the limited literary forms that had been available to them. They celebrated the creative medium for what it was instead of merely for what it could represent. They questioned cultural hierarchies, seeing that each thing was as important as any other thing (Burns 1970, 19). They rejected the emotive language of the Romantics and embraced more direct, descriptive language, such as that from the sciences, which were gaining prominence in and pervading society.

The rejection of the traditional view of life in light of cultural changes occurring because of scientific discoveries manifested itself in distinct yet similar ways for the various arts. In the visual arts, Cubism reflected the idea that there was no center to a piece, but that a composition consisted of equally important parts that needed to be seen in a completely new way so that they might be seen for the first time again without prejudice or preconceived value. Gertrude Stein described Pablo Picasso's Cubism as the attempt to see as a child who sees only a part of his mother's body or face, not the whole as an adult does. She said Picasso paints "to express things seen not as one knows them but as they are when one sees them without remembering having looked at them" (Burns 1970, 22). According to structuralist Randa Dubnik, "Both Picasso and Stein, in their pre-1912 work, present the fleeting, fragmentary nature of perception, and represent the integrity of the individual moment of perception before consolidation by
memory into a conceptual whole" (1984, 4). Dubnik points out that structuralist theories see these similarities as evidence that Cubism lends itself well to literature because the nature of language itself is concerned with perception and signification (1984, xv).

Stein, of course, was not alone in her pursuit of a new approach to writing that would reflect the way she saw the world. Because in a given culture similar ideas arise in different fields at the same time (Hayles 1990, xi), many avant-garde writers at the beginning of the twentieth century created texts that were described as Cubist, showing an idea or subject in disconnected parts from multiple perspectives within a single work. For example, Paul Auster in his book on twentieth-century French poetry remarks that the works of Max Jacob, Blaise Cendrars, Pierre Reverdy, and Guillaume Apollinaire are frequently described as Cubist because they exhibit "simultaneity, juxtaposition, [and] an acute feeling for the jaggedness of the real" (1984, xxxv). He explains that Reverdy's technique of accumulating or synthesizing fragments into a whole in his poems was an entirely new approach to the poetic image, which was necessary because Reverdy believed that the poetic image was a creation of the mind, not a representation of what he saw (ed. Auster 1984, xxxv). Fragmenting an image decentralizes it, and the artists believed this promoted the sense of movement in the work, a trait Gertrude Stein similarly admired about the painting of Paul Cézanne and tried to achieve in her own writing (Stein 1937, 321).

The concepts of movement, perspective, fragmentation, and decentralization prevalent in the avant-garde art of the early twentieth century reflected the concerns of
culture at the time. As Rousseau's *The Confessions* first suggested, the belief in the self as a continuous, single being was no longer plausible. This idea is illuminated further in Adams' autobiography: "The young man knew no longer what character he bore. Private secretary in the morning, son in the afternoon, young man about town in the evening" (1931, 194). The division of the self among numerous responsibilities or social institutions continued into the twentieth century, but accompanying these divisions that resulted from an evolving society was a change in human character and relations. Virginia Woolf wrote that "in or about December, 1910, human character changed...all human relations have shifted--those between masters and servants, husbands and wives, parents and children. And when human relations change there is at the same time a change in religion, conduct, politics, and literature" (quoted in Con Davis and Schleifer 1989, 15). Changes in every facet of society indicate a shift in cultural beliefs and hierarchies. When hierarchies are called into question, established ideas that center or define a culture are also disrupted, and this is reflected in the art of the Cubists and avant-garde autobiographers in the modernist period that focuses on fragmentation, new perspective, and decentralization.

Although the modernists recognized that the shift in established cultural hierarchies and human relations shattered how individuals defined themselves, thus compounding the problem of trying to see the self as continuous, they did not embrace the idea of a discontinuous self the way in which the postmodernists would. Instead, since the modernists could not represent a unified self, they attempted to create a unified self in their art. Adams believed that in 1900 philosophers and scientists were
continuing to promote a "unity unproved and an order [i.e., linear] they had themselves disproved" (1931, 495); and although the avant-garde artists attempted to break from established order, they, too, continued to promote a unity that simply did not exist. Through either Cubism or stream-of-consciousness or texts containing multiple perspectives of the same event (as in Woolf's Moments of Being), the artists tried relentlessly to create something that could represent all of what composed an individual. Despite their numerous approaches, they ultimately felt that they could not achieve an accurate picture of the self in text.

The combination of similar developments from the various fields of science, communication technology, brain research, and art led to a view of the self as a discontinuous entity. The coincidence of ideas from many areas is usually not due to chance but to the fact that the ideas are general concerns underlying the entire current culture (Hayles 1990, xi). During the modernist period, irreversible changes regarding the self occurred. Not only did scientists, philosophers, and avant-garde artists view the self as fragmented, but they challenged the idea of representing or recreating the self through memory. Memory has always been the facility through which any form of self-identity is possible; however, the shape of that identity is limited or determined by numerous external forces. Artists such as Stein, Adams, Picasso, and Woolf used memory in the attempt to construct or create a whole self from partial, inadequate, and inaccurate glimpses. They, following in the practice of Rousseau, presented as many perspectives of the self as they could in their work in the attempt to somehow create a cohesive whole within the work itself.
Representation of culture in Gertrude Stein's autobiographies: *The Autobiography of Alice B. Toklas* and *Everybody's Autobiography* as reflections of an increasingly secular and global society

By the beginning of the twentieth century, science was answering many of the mysteries of life that had previously been attributed to God and was dispelling many of the "truths" regarding nature, particularly the belief that linear order was inherent in nature. As the findings of science gained validity, technology derived from scientific theories regarding electricity and nonlinearity also became commonplace in society, in turn, further supporting the new truths of science. While many factions of the modernist movement shunned technology, some, such as the Futurists and avant-garde artists like Stein recognized the role of science and technology in society and incorporated it in varying degrees into their work. Fascinated by the possibilities she saw available through science and having had first-hand experience in the discipline as a medical student at Johns Hopkins, she writes, "Science meant everything and any one who had an active mind could complete mechanics and evolution, philosophy was not interesting, it like religion was satisfaction in a solution but science meant that a solution was a way to a problem" (1937, 251). What Stein found so interesting about science was not that it provided a final, definitive answer, but that it offered a way to explore and alter the hierarchy of cultural truths, because "the laws of science are like all laws they are paper laws," (1937, 251) thus they and the beliefs of culture are impermanent. For Stein, science and technology have the power to shape culture, and she reinforces this idea in her autobiographies by showing how these fields affect her very personal world as a writer.
Some artists considered the presence of technology in art, particularly its role in the mass reproduction and distribution of works, as the demise of the individual artist and art work (Huyssen 1986, 9; De Lauretis 1980, 82; Taylor 1989, 456). Others, however, embraced technology for the new creative potentials it opened in art and for its ability to connect art and everyday life. This union made art more accessible to people outside of the art community. Regarding the role of technology in the post-1917 avant-garde art movement, Teresa De Lauretis comments, "Changes in technological production bring about changes in the everyday life world which then are taken up (reflected, represented, reutilized, transformed) in art and literature. More importantly: these changes in technology transform the technological structure of art production itself" (1980, 82). In her autobiographies, Stein makes direct reference to numerous technological advances that have been incorporated into her life. In *The Autobiography of Alice B. Toklas*, she writes about installing electric radiators in her studio, resulting in her servant calling her modern for doing so (246). She goes on to say that her servant "finds it difficult to understand why we are not more modern. Gertrude Stein says that if you are way ahead with your head you naturally are old fashioned and regular in your daily life" (246). Stein and Toklas, however, were far from old fashioned in any sense. In the case of their everyday lives, they surrounded themselves with modern conveniences like the telephone, radio, and automobile. It is unlikely that anyone who could have a car sent from the United States to Paris during World War I was considered behind the time. To the contrary, Stein's economic privilege allowed her access to new technological inventions that most of society could not attain.
In addition to owning the latest conveniences, Stein also had access to the most current modes of public transportation, including flying in airplanes. The mere presence of these advances in society does not merit inclusion in the study of Stein's autobiographies. What makes these advances relevant to this study is how they improve the efficiency of communication in Stein's increasingly global society and how they influence how Stein sees and represents that world in her writing. When Stein had telephones installed at her rue de Fleurus and Bilignin homes, she joked, "now that I was going to be an author whose agent could place something I had of course to have a telephone" (1937, 45). In the same way that the printing press increased the production rate of texts, thus making a writer's work more accessible to a wider audience, broadcasts on radio (1937, 204) brought literature into the homes of people who otherwise may not have been exposed to Stein's work. Likewise, the telephone made it possible for Stein in Paris and her agent in the United States to negotiate editorial decisions, deadlines, publications, and speaking engagements that otherwise would have taken considerably longer to arrange by post.

These tools presented Stein and her work to a more far-reaching and varied audience than previously available, in turn, joining people who were geographically or economically divided. Stein observed this change in society due to technology, and in Everybody's Autobiography she describes it in terms of walking through Paris: "I used to say one of the things about Paris was that you never met any one you know when you were out walking. But now everything is changing and you know that is I well now any one often meets them people you know or people who know you" (1937, 12). She is
fascinated with the double-edged phenomenon, that as technology improves communication and transportation, the boundaries of the world begin to dissipate, thus homogenizing her global society and allowing once isolated and distinct cultures to influence each other. Her interest in this subject is explored in greater depth later in this chapter as I discuss Stein's role of the self and representation of the individual.

Charles Caramello makes another connection between technology and communication as it is reflected in Stein's work. He writes:

At a clearly related second level, she is drawing a parallel between increasingly modern and technologically accelerated means of locomotion (standing, walking, driving, and in Everybody's Autobiography, flying) and equivalent means of producing and disseminating representations (gossiping, writing/painting, broadcasting on radio, and in Everybody's Autobiography, filming). (1996, 157)

The parallel between technology and the production and distribution of art that Stein presents in her autobiographies later collides in the works of postmodern artists. Andy Warhol, for example, blatantly incorporated technology into his art and used it to mass reproduce his work, exploding the convention of the unique art piece. Before this would happen, however, Stein would show in her work how technology allowed her to view the world from a new perspective (the air) and at a new pace.

In the next two chapter sections I will discuss how communication technology affected the structure, and transportation affected the rhythm, of Stein's writing. Leading into these discussions, however, is the distinction that Stein makes between the nineteenth and twentieth centuries. For Stein, the airplane and Cubism both defined the line between the centuries by providing a new view of the world--a fractured, disjointed
picture that corresponded with cultural developments, including the nonlinear scientific
theories, their resulting technologies, and industrialization. In *Everybody's
Autobiography*, Stein writes that flying allowed her to see what the ground looked like
from a new point of view (197), thus giving her a new, twentieth-century perspective of
her world. Flying also allowed her to connect once distant and distinct places, bringing
them into the schema of her community. She elaborates on the impact of the airplane
on her world view, the twentieth century, and art when, in *Gertrude Stein on Picasso*,
she writes:

> The automobile is the end of progress on the earth, it goes quicker but
> essentially the landscapes seen from an automobile are the same as landscapes
> seen from a carriage, a train, a waggon, or in walking. But the earth seen from
> an airplane is something else. So the twentieth century is not the same as the
> nineteenth century and it is very interesting knowing that Picasso has never seen
> the earth from an airplane, that being of the twentieth century he inevitably knew
> that the earth is not the same as in the nineteenth century. (Burns 1970, 76)

This change in perspective brought on by the numerous cultural shifts is what Stein
shows us again and again in the content and form of her autobiographies. She sets
herself up as the quintessential twentieth-century writer--breaking from all that has
preceded her--just as she attributes the airplane in travel and Picasso's Cubism in art as
cultural markers of the new century and new world view.

**Narrative structure in Stein's autobiographies: resituating the fractured self in a
culture that still desires order**

Just as the narrative structure of Augustine's and Rousseau's work reflected their
culture's trends, Stein's narrative structure reflects the influence of technology and art on
her culture while providing a distinctly early twentieth-century idea of order. Her books
seemingly open with what Rousseau made the traditional introduction to an autobiography. *The Autobiography of Alice B. Toklas* begins, "I was born in San Francisco, California" (1933, 3) and continues with a brief description of family background. While this may appear to be a typical introduction, Stein has already broken from conventional expectations because this is information on Toklas (as Stein later reveals that "Gertrude Stein was born in Allegheny, Pennsylvania" [69]); and although the book may be titled as Toklas' life story, no one mistook it for anything but Stein's autobiography. Stein's break from literary convention with the first line, with the title, with the instant that the idea of writing the book in Toklas' voice entered her mind, is a break that follows throughout the entire text and is a part of every aspect of her writing. In *Everybody's Autobiography*, she drops the pretense of writing from Toklas' voice, but the narrative structure remains as nonconventional and fresh as that of *The Autobiography of Alice B. Toklas*, refusing to conform to an expected progression of straightforward chronology and singular, definitive perspective. From the moment the reader picks up either of Stein's autobiographies, expectations regarding the form, content, and purpose of autobiography are challenged.

If readers were only to peruse the chapter headings in the autobiographies, they would find that the texts overall follow a chronological order, starting with some point in the past—be it the detail of birth or moment of inspiration to write the book—and progressing to the present time of writing. This chronological development, which was also present in Augustine's and Rousseau's texts, more closely parallels Rousseau's purpose for such an order. That is, it supports the idea that humans are time-embedded
creatures who move and develop in time, even if meaning or understanding does not necessarily coincide with this chronological movement.

This organization of chapters is the only element of linearity that Stein follows. Beyond this element, she resists linear notions of order that were disputed by science as far back as the eighteenth century yet remained characteristic of the art of the nineteenth century (Adams 1918, 495; Briggs and Peat 1990, 24; Davis and Schleifer 1989, 18; and Taylor 1989, 301). Richard Bridgman describes the structure of a particular chapter in *The Autobiography of Alice B. Toklas*: "The fifth section, '1907-1914,' begins with Alice Toklas joining the household...and concludes at the precipice of the first great war. Except for occasional notices of the progress of *The Making of Americans*, the narrative is virtually random" (1970, 227). While Bridgman singles out a particular section, Stein's seeming random structure within chapters is typical of both of her autobiographies. However, what Bridgman concludes to be "virtually random" is Stein's attempt to maintain what she calls a constant present, and she does this by repeatedly pulling the reader out of the story with reminders of, "But to come back to Roché," (1933, 45) "but all that will come much later," (1937, 2) and "now it is today" (1937, 328). This is a way to see the fractured self as it is--moving and developing in all directions at once--and not as a fabricated linearly continuous being that has developed chronologically. The leaping of time and stories in her texts also captures the movement of the twentieth century, which is characterized by a shaking up of order as a result of developments in science and the first world war. She believed that the twentieth century had a rhythm that set it apart from the nineteenth century, making
former approaches to narrative now inadequate or inappropriate. As she writes in *Narration*:

> When one used to think of narrative one meant a progressive telling of things that were progressively happening...But now we do not really know that anything is progressively happening instead there is a movement in every direction. (1935, 29)

The attempt to capture movement in every direction eliminates any distinct center from the text and is actually characteristic of postmodernism, as David Antin's works discussed in later chapters reveal.

However, still a modernist, Stein ultimately hopes to create some unity or cohesion out of all this sporadic movement. Her intertextual tangents, repetitions, and fragments reflect the working of the mind as it remembers, but her overall structure remains the modern attempt to create a unified whole. For example, the first edition of *The Autobiography of Alice B. Toklas* contained 16 photographs. Bridgman points out that the final photograph, which also concluded the book, was of the first page of the manuscript--returning the reader to the beginning of the book (1970, 219). While the narrative moves all over in time within chapters, the chapters themselves progress chronologically, only to wrap the reader back around in time at the end of the book--thus, ultimately, creating a type of circular form of unity or wholeness and defying conventional linearity that has a definite beginning and end.

The wandering structure of Stein's narrative tracks the wandering of her mind as she remembers. Beyond this, however, it reveals the influence of culture on her identity, which was a constant issue for Stein. Specifically in the autobiographies,
Stein's first-hand knowledge of science, exposure to technology, and personal involvement in the avant-garde art community all affect her and, as a result, determine how she presents, or rather creates herself in writing.

In part because she was in a position of economic privilege, Stein was able to participate in a lifestyle few could enjoy. She was able to attend Harvard University and Johns Hopkins Medical School at the turn of the century—no small achievement, particularly at a time when women were heavily excluded from such opportunities. While at university and medical school, she researched brain tracts for a comparative work (Stein 1933, 81) and also studied automatic writing in psychology (Stein 1933, 78). Both of these interests apparently influenced her writing, as she had some sense of the theories regarding how the brain works. Her narrative structure emulates these theories by providing a sense that Stein is searching and presenting stories as they enter her mind. She does this with phrases, such as the earlier mentioned, "But to come back to Roché," (1933, 45) which guide the reader through her mental journey. The discovery during the 1920s that the brain was in a constant electrical flux of rhythmic waves (Rose 1993, 78) and studies in automatic writing to mirror this wave-like motion of the brain are apparent in Stein's work, which jumps from one piece of a story to a piece of another as an image or bit of information sparks her to remember a different situation.

Stein's switching from story to story, which is more abrupt in Everybody's Autobiography than in her first work, demonstrates the concepts underlying nineteenth-century nonlinear dynamics. Scientists at the time were beginning to realize how
prevalent nonlinear dynamics is in nature, which resulted in a better understanding of
nature and new approaches to technology that affected everyday living (Briggs and Peat
1990, 23). This discovery in science not only led to a better understanding of nature,
but its implications affected the view of human nature and identity as well. Briggs and
Peat distinguish between linear and nonlinear solutions in terms of contemporary use:

In linear equations, the solution of one equation allows the solver to generalize
to other solutions...nonlinear solutions tend to be stubbornly individual and
peculiar. Unlike the smooth curves made by students plotting linear equations in
high school math classes, plots of nonlinear equations show breaks, loops,
recursions--all kinds of turbulence. (1990, 24)

Nonlinear dynamics has impacted postmodernism more profoundly than it did
modernism. However, it still applies to Stein's period because the products of the
equations have not changed, and Stein's texts, which also break, loop, and repeat,
exemplify nonlinear theory. She is caught in the modernist middle ground that
accompanies shifts in paradigms, in this case that in science regarding order/linearity
and disorder/nonlinearity.

The effect of nonlinear solutions on Stein's cultural paradigm is detectable in her
work where individualism and fragmentation are emphasized. This paradigm is
radically different from the paradigms of Augustine's and Rousseau's culture. As
discussed previously, Augustine considered himself representative of his Christian
culture, and this belief was supported by the definitive institution of his society, i.e., the
Church. Moving away from this direct, providential relationship of the individual and
the whole, Rousseau felt he was a unique individual but still of the same basic nature as
his community. This concept was supported by the cultural belief in linearity (and
linear solutions, as Briggs and Peat explain, allow us to generalize an entire system based on an entity of that system, so we begin to see that as cultural "truths" change, they affect and reflect the view of human nature. In this vein, Stein's autobiographies show that she is not representative of culture, even if she would like to believe she can speak as everyone in Everybody's Autobiography, and her individual, fragmented identity is supported by scientific "truths" of her time. Stein's disjointed, recursive narrative simultaneously shows the movement of her mind while demonstrating how the principles of nonlinear dynamics in nature have changed the view of individual identity in her culture. No longer can the individual represent all of society, as David Antin's autobiographies make even clearer. Therefore, narrative structure must reflect the individual writer so that readers may come to understand better who that individual is.

Developments in science manifested themselves in everyday technology at the turn of the century in the form of inventions such as the telephone, radio, automobile, and airplane. These conveniences contributed to the changing face of culture and the manner in which individuals fit into and functioned within society. In The Autobiography of Alice B. Toklas, Stein references using the telephone, reading over the radio, and driving her Ford in service for France during the war. These technological advances eliminated geographical boundaries between Stein and her audience and worked on the principles that would be used as metaphors to describe the functioning mind. Likewise, improved transportation allowed Stein to move about more quickly and to reach distant places that otherwise would have been beyond her scope. While the automobile allowed Stein to see her environment more quickly in passing flashes, it was
still a nineteenth-century view of the world. It was not until the invention of the airplane that Stein in Everybody's Autobiography felt the twentieth century had arrived, and with the new century was a corresponding art movement—Cubism—that influenced her writing tremendously.

In her book, On Picasso, Stein attributes the making of Cubism to three factors:

First. The composition, because the way of living had changed, the composition of living had extended and each thing was as important as any other thing.
Secondly, the faith in what the eyes were seeing...commenced to diminish...[and] Thirdly, the framing of life, the need that a picture exist in its frame, remain in its frame was over. (ed. Burns 1970, 19)

What Stein saw as the forces that led to Cubism were the cultural changes that distinguished the twentieth century from the nineteenth. This breakdown of hierarchies, elimination of boundaries, and questioning of what had always been accepted as true created the need to find a new way of looking at the world; thus Cubism developed.

The twentieth century that Stein saw as very distinct from the nineteenth is evident in Cubism. Contemporary art critic Gaston Diehl describes the work of Picasso as "simultaneous points of view of the same object or of fragmentation of various objects glanced at" (1977, 46). No longer is one conventional or expected perspective considered to be the definitive perspective. In a culture where hierarchies have been disrupted and traditional centers removed, unfamiliar compositions emerge. Stein writes about the correlation between what was happening in her society and how these changes affected the art of the period. In On Picasso she tells a story of when Picasso saw a camouflaged truck and immediately referred to it as Cubism (ed. Burns 1970, 18).
In keeping with the new century, which was marked by changing beliefs in science and subsequent developments in technology, Stein believed that World War I was unique from any previous war. About the structure of the war, she comments, "the composition was not a composition in which there was one man in the centre surrounded by a lot of other men but a composition that had neither a beginning nor an end, a composition of which one corner was as important as another corner, in fact the composition of cubism" (ed. Burns 1970, 18-19). The unique composition of her society in the first world war, which she saw as Cubist, is what she strove to emulate in her writing. The structures of her autobiographies do not resemble conventional, linear narrative structures, just as Cubist paintings do not look like any previous art. However, both of these art forms do reflect contemporary reality (Caramello 1996, 12) as seen from new perspectives brought about by changes in scientific views, cultural beliefs, or technology, such as airplanes.

With all these changes taking place, disrupting conventional orders and hierarchies, Stein's work, like Cubism, may appear to lack any center or unity. Borders may have dissipated and structures may have been rearranged, however, a desire for order still exists, and Stein reinforces this desire even within her nonconventional structure. In Everybody's Autobiography she describes the human desire for order and how she believes she escapes this need for structure by freeing her paintings from frames. She writes, "pictures have been imprisoned in frames, quite naturally and now when people are all all peoples are asking to be imprisoned in organization it is quite natural that pictures are trying to escape from the prison of framing. For many years I
have taken all pictures out of their frames, I never keep them in them" (1933, 322).

Like the pictures without frames, she takes away the traditional narrative structure to "free" her writing. However, because society is becoming more global and cultures are meshing, identity is becoming threatened, and the human reaction is to create some line of definition or organization that will allow one to retain a sense of self-identity. The desire for traditional order, organization, and structure as seen through the resistance to the erosion of recognizable self-identity is the same resistance Stein sees that readers have toward her writing, which refuses to follow traditional, recognizable narrative structure.

Although Stein's autobiographies do not possess traditional narrative structure, and although she proposes that she frees writing from order or structure, ultimately her work creates an order or cohesive whole. Like her love of the detective novel in which "The detective, as logical force who, in solving the crime, tames the confusion unleashed by the mystery and therefore restores order and rationality," (Berry 1992, 146) Stein restores a sense of order and coherence by the end of her book, even as she sees everything moving in different directions. The solution to the mystery or the whole picture of Gertrude Stein, like the cryptogram in Everybody's Autobiography that needs to be decoded, is self-contained between the covers of the text. Randa Dubnik assesses, "Both Picasso and Stein, in their pre-1912 work, present the fleeting, fragmentary nature of perception, and represent the integrity of the individual moment of perception before consolidation by memory into a conceptual whole" (1984, 4). Dubnik sees that Stein's work presents a part of the puzzle that is fully constructed only through memory; and
although this is true, Stein's work also has a more micro-cohesiveness within the individual text, with its repetition and wrapping back to the beginning with photograph arrangement. Virginia Woolf, who also presented numerous perspectives and fragments to reflect reality more closely, writes in *Moments of Being* that "It is only by putting it into words that I make it whole...it gives me...great delight to put the severed parts together" (1940, 72). Whereas Stein does not concede to wanting to create a unified whole, her autobiographies do exactly that—a point that makes her writing distinctly modern, as opposed to the postmodern work of David Antin that is discussed in the next two chapters.

The overall narrative structure of Stein's autobiographies supports the idea that humans are time-embedded creatures and reinforces the desire for a unified, cohesive whole, while the internal structure reflects the idea that the world is moving in every direction. The narrative structure in total, then, presents a view of the self that is particularly twentieth century—the fragmented nature and repetition resembling the viewing of a Cubist painting, with the eye moving over the canvas, hitting the same object many times in relation to different things each time. This structure reinforces the notion that the self must be seen from a completely new perspective, influenced by different borders and removed from traditional hierarchies or roles (as Woolf said, human relations had all changed). Woolf gives distinct perspectives of the same event or person; Cubism breaks apart the expected composition of an object; and Stein reveals a piece of a story several times in a slightly new way each time out of the expected chronological order. All of these approaches force viewers to step back, to
"see again" for the first time, because the self as it once was no longer exists. This approach more realistically represents the self in conjunction with or in response to the early twentieth-century western world. However, all of these approaches also attempt to make a whole out of the pieces, to give the artist and viewer a sense of cohesiveness and order which does not exist in nature. Because this order must be created, attempts to do so always are inadequate and will be abandoned later by the postmodern artists, who, unlike the modernists, embrace the nonlinearity of nature.

Remembering and presenting information: the influence of literary trends, science, brain research, and communication on Stein's writing style as representation of memory

Stein's economic privilege afforded her opportunities that ultimately influenced not only what she wrote but how she wrote, which is generally the focus of studies regarding her work. As a university student she was involved in studies of automatic writing as well as of the brain. At the beginning of the century, when she was in medical school, numerous theories regarding the working of the brain were developing. For example, in 1875 experimentation on the exposed brain of a rabbit revealed that there were electrical pulses in the brain (Rose 1993, 180). This finding led to the 1929 published work by Hans Berger in which he taped electrodes to the human scalp and recorded continuous bursts of electricity pulsing through the brain. Berger's work was soon followed by neurophysiologists Edgar Adrian and Brian Matthews, who in the 1930s determined that "the brain's ceaseless electrical activity showed characteristic waveforms that varied with sleep and wakefulness, mental activity or tranquility" (Rose 1993, 180). These studies are representative of the work that took place in brain research during the period...
in which Stein was also involved in the discipline. Of primary interest here is the pervasive theory that the brain is a system in constant electrical flux. The notion of electrical flux is key, as it influenced the technologies of the day, as well as the metaphors used to describe the way in which the brain operates.

In addition to invasive studies on the electric and chemical reactions in the brain, psychologists during the first part of the century were studying memory and automatic writing. By 1935 more than 200 studies had been published exploring the difference between childhood memory, which is eidetic (photographic or timeless), and adult memory, which is linear and time-bound (Rose 1993, 103-104). The way in which the brain remembers and translates that memory into language was studied in automatic writing. Stein's work is often described as an example of automatic writing, and in Everybody's Autobiography Stein addresses this very point. She touches upon a newspaper article in which her writing is described as automatic writing, and she dismisses the theory, saying, "No. Writing should be very exact and one must realize what there is inside in one and then in some way it comes into words and the more exactly the words fit the emotion the more beautiful the words that is what does happen and anybody who knows anything knows that thing" (1937, 275). This sentence, which is typical of Stein's style, while dismissing automatic writing at the same time aims to create a sense of the mind in motion, of the language bubbling to the surface and coming out of the pen. And while the content of the sentence refuses to support the idea that it is completely automatic writing, the style contradicts that refusal, actually seems
far from being language that simmered inside her head until it came out of the pen exact and perfect.

In *The Autobiography of Alice B. Toklas*, she often thinks through a memory on the page as with the passage, "Who was there. We were there… and perhaps Marcelle Braque but this I do not remember" (1933, 106). Passages such as this are far from conveying perfected, exact thought, but are close to representing Stein's mind searching for the memory at that very moment in front of the page and reader. No doubt when language is restructured to represent most closely the emotion it hopes to convey, it is most beautiful and perfect; but even Stein (who insists she does not correct, but sometimes cuts a little [1937, 320]) must edit to give the sense of language evolving in her head--which if not in total is still the basic idea behind automatic writing.

The work that was being conducted by scientists and psychologists at the turn of the century was also evident in the technologies of the period. Inventions involving electric currents, such as telegraphs, telephones, and radios, resulted from the work in the sciences and, in turn, were used as metaphors, such as the telephone exchange metaphor described previously, to explain more simply to nonscientists the way in which the brain worked. While these metaphors continued to reduce explanations to basically linear procedures, the idea of currents and waves that was dominating science was beginning to be explored by avant-garde artists as well, who were very interested in capturing movement in their works. Virginia Woolf in *Moments of Being* goes so far as to describe what she calls her most important memory as one of listening to waves, and
she writes of this memory with the same rhythm that the waves originally had as their sound moved through her senses and brain and into her memory. The passage reads:

If life has a base that it stands upon, if it is a bowl that one fills and fills and fills--then my bowl without a doubt stands upon this memory. It is of lying half asleep, half awake, in bed in the nursery at St. Ives. It is of hearing the waves breaking, one, two, one, two, and sending a splash of water over the beach; and then breaking, one, two, one, two, behind a yellow blind. (1940, 64)

The rhythm of waves moving over the beach, pulsing through the brain, carrying the reader through the text ties together the modernists' interest in capturing movement in their work while using the metaphors from science that explain the motion of the brain. This interest in rhythm, of waves moving, be it in nature or writing or the brain, is evident in all of Woolf's writing; the bowl that gives one her identity, i.e., memory, which fills and fills as waves of experiences move through the senses, is the foundation of life that makes any meaning possible.

In keeping with the fascination with waves and motion, artists were also influenced by other technological advances at the time, such as automobiles and airplanes. Just as seeing the ground from the air provided a twentieth-century perspective that related to the changing decentralized composition of artworks, such as in Cubism and Stein's modern texts, modes of transportation affected the pace of society, which Stein and her contemporaries tried to capture through their writing style and brush stroke. She often refers to walking--how much she enjoys walking and how much she walks every evening. In writing about her walking, she attempts to reconstruct the rhythm of her walking and the way in which the world moves around her as she wanders and thinks. Her sentences tend to be lengthy and fluid, reemphasizing
the point she makes while walking with Thornton Wilder: "we talked about writing and
telling anything and I said...I had really written thinking" (1937, 311). Unlike the
autobiographers who preceded her and who had as the center or focus of their text some
great conversion or life revelation, Stein believes her autobiography merely shows her
thinking, not her life. As Virginia Woolf points out, however, showing her thinking,
what makes one who one is, is the only way to understand who someone is to any
degree whatsoever. In her own autobiography, Woolf writes:

Here I come to one of the memoir writer's difficulties--one of the reasons why,
though I read so many, so many are failures. They leave out the person to whom
things happened. The reason is that it is so difficult to describe any human
being. So they say: "This is what happened"; but they do not say what the
person was like to whom it happened. And the events mean very little unless we
know first to whom they happened. (1940, 65)

By Woolf's account, then, Stein's autobiographies, detailing the way in which Stein
assimilates information and events, reveal far more successfully who Stein is than does
an autobiography in which mere stories are related. Regardless of what Stein's original
purpose may have been, the second autobiography continues to show her thinking, and
jumps even more abruptly from thought to thought than the first text, which also
indicates the increasingly disjointed nature of a technologically advanced, faster-paced
mid-1930s society.

Stein's interest in capturing the movement of the world developed as she became
disenchanted with attempts to represent the inside character of people. In *The
Autobiography of Alice B. Toklas* she writes, "it was during that summer [in Granada]
that she first felt a desire to express the rhythm of the visible world. It was a long
tormenting process, she looked, listened and described. She always was, she always is, tormented by the problem of the external and the internal" (1933, 119). Her desire is to capture the rhythm of the world, to show that, like the world, "she has a great deal of inertia and once started keeps going until she starts somewhere else" (1933, 82). This inertia drives her text, like she drives her Ford, forward to a new beginning, a different way of viewing or describing an event.

Stein's abandonment of representing the inside character of people and subsequent interest in demonstrating twentieth-century movement resulted in her recursive texts, as well as her further admiration for the visual artists of her time. As previously discussed, she had great respect for Picasso's Cubist work as structural representations of a society with a new, decentered composition. Her fellowship with other painters and writers also influenced her work. Echoing Stein's words regarding the existence of movement in every direction in the twentieth century (Berry 1992, 140-141) was the observation of her contemporary, French poet Blaise Cendrars, who said, "everything around me moves" (ed. Auster 1984, xxxv) and who tried to convey the feeling of a single moment in his poems.

As technology improves, providing more efficient modes of transportation and communication, the pace at which society operates and information travels increases. The speed at which the external world moves affects the internal processing of the brain, which is forced to accept and assimilate new quantities and types of information as quickly and intermittently as it is presented. Stein gives the reader the impression of how information travels to and through her brain as it is first introduced to her and as
she tries to remember it as she writes. In her attempt to present her working memory to
the reader, she writes lengthy, fluid sentences without much punctuation so that she may
convey the feeling of the event she is describing. For example, in Everybody's
Autobiography she tells the following story:

We had a quarrel and I was not expecting to see him, it was very easy seeing
him everything being in confusion, I said and how did you come, oh Carley is
outside in the car, we were of course not seeing him, we had completely
quarreled with him, so I went outside the gate and once more kissed Francis and
thanked him and shook hands with Carley, but did not stop not seeing him, and
then we had lunch and then we sent Jean and the Polish woman away, she said
she had not come to be as happy as she hoped to have been but then she was
certain it never could happen that she could come to be happy again and then
Janet and her friend left Janet never does believe in staying, and the other two
the Frenchwoman and the Englishwoman left and there we were once more
looking for servants to have come in the house without our knowing anything
about them. (64)

The passage, the length of a full paragraph, is a single sentence with sparse punctuation
that requires several readings for clarity. By the end of the sentence, Stein has used
rhythm, length, and language successfully to create an atmosphere of confusion and
exhaustion to reflect the content of the passage. In this instance her writing style, as
Dubnik points out, conveys "a sense of process and duration, and of the time it takes to
know a person or understand an idea" (1984, 9). It is as if Stein were aiming to create a
sense of what is referred to as real time, i.e., the actual time it takes for an idea to move
through the brain as represented by the time it takes to read her words.

In trying to show another way in which the brain absorbs information, she uses a
fragmented writing style to show the speed at which information travels in her society.
When she abruptly changes topics or leaves ideas unfinished only to return to them
later, especially in *Everybody's Autobiography*, she creates the feeling of driving or flying, with images speeding past her. She cannot get all of her story out fast enough, as she begins so many passages with one idea and ends them with, "but all that will come much later," (1937, 2) prompting the reader to expect more of the tale to unfold later, but also creating a sense of urgency, of being unable to say all she wants to say as it comes back to her. She tries to create the sense of simultaneous communication reflective of the new reality of the twentieth century that postmodern writers later will develop more completely in their work.

**The modern self in Stein's autobiographies**

As the pace at which the world operated changed due to new technologies and scientific perspectives, the role of the individual in that society changed as well. Rousseau's *The Confessions* showed that the self was already becoming multifaceted as a result of secularization. Henry Adams' autobiography further developed this idea, speaking of the self in numerous persons and addressing the difficulty of trying to be one consistent being in many varied professional, social, and private situations. By the time Stein composed her autobiographies, the perception of the self had fragmented to the point that reassembling the fragments had become the very subject of many works produced by modern artists, as evidenced in Cubist paintings and in the poetry of writers such as Pierre Reverdy, who synthesized fragments to form an image that he felt was "pure creation of the mind" (Auster 1984, xxxv). Likewise, Virginia Woolf in her autobiography, as mentioned previously, used her writing to assemble the severed parts of her life into a whole story (1940, 72).
Stein certainly wrote her autobiographies in this vein, providing readers with fragments and perspectives that together created a sense of Stein's world, which was completed in the text even if in reality it lacked cohesion. She mentions in *The Autobiography of Alice B. Toklas* that the fragments of *The Making of Americans* when placed together produced a cohesive, whole view of otherwise unrelated people (1933, 249). In a similar manner, both *The Autobiography of Alice B. Toklas* and *Everybody's Autobiography* present a collection of stories and insights that alone may seem almost trivial but when considered with everything else in the text provide a Gertrude Stein for that particular text.

On Stein's use of autobiography as a genre, the critic S. C. Neuman comments, "Stein specifically sets herself against the tradition of the composite portrait" and does not attempt to trace continuity in the self (1979, 16). While Stein sets herself against the traditional autobiographies that preceded her, she does not, as Neuman believes she does, abandon the notion of continuity in the self completely. She, like her contemporaries, attempts to create, not represent, a continuity, or sense of a complete self, that derives from many perspectives in the text. In her cryptogram in *Everybody's Autobiography*, the words must be decoded by the reader to reveal a comprehensible message. This whole must be formed out of the pieces and is a fabrication of the artist (whose work is completed, in part, by the reader), perpetuating the cultural desire for order. A more accurate representation of the fragmented self would not come until the postmodern artists finally reject the attempt to restructure the fragments of the self into a false whole.
Improvements in technology contributed largely to changes in culture which demanded that individuals become more multifaceted in their social, professional, and personal roles. It is virtually impossible to read Stein's autobiographies without noticing her interest in how the technology of the twentieth century made all areas of the world more accessible. While this was, indeed, an advance in terms of communication, human relations, and experiencing the world in general, it also brought with it a loss of distinct communities or boundaries. And when boundaries disappear, individual identity is threatened. Stein addresses this point in Everybody's Autobiography. Regarding the difference in perspective between composing The Making of Americans and Everybody's Autobiography, she writes:

At that time I did not realize that the earth is completely covered over with every one. In a way it was not then because every one was in a group and a group was separated from every other one, and so the character of every one was interesting because they were in relation but now since the earth is all covered over with every one there is really no relation between any one and so if this Everybody's Autobiography is to be the Autobiography of every one it is not to be of any connection between any one and any one because now there is none. (102)

As technology provides the means by which different cultures may be joined, the boundaries between those cultures fade. As boundaries disappear, the need to maintain a sense of individual identity, of self-preservation, forces the individual to create new lines of definition that make that person unique in a more homogeneous, secular world (Daniel Dennett 1991, 174).

Unlike in Augustine's Christian community where the individual was at ease being a microcosm of his community, Stein's secular society encouraged its members to make their own individual marks. Making one's mark becomes more challenging as the
world becomes increasingly homogeneous. The publisher's note in Everybody's Autobiography says, "Stein transforms herself into the representative American, turning her story into everybody's story" (1937, viii). While this may sound like a neatly packaged transition at first, Stein is hardly representative of any typical American. At some point throughout the text, readers may identify with a particular part of Stein; however, it is improbable that many Americans at all have experienced her privilege of being independently wealthy, highly educated, openly lesbian (and, therefore, allowed to forgo the constraining social custom of marriage to a man), and associated with influential circles of artists and political leaders. She mentions having tea with President and Mrs. Roosevelt (1937, 264) as if it were almost commonplace, which is an indication either of her arrogance or of her ignorance of how most "typical" people really do live.

Aware of the breakdown in cultural boundaries, Stein strove to find and maintain a sense of individual identity in her world while accepting that her identity was increasingly intertwined with the influences around her. As she puts it in Everybody's Autobiography, "the world is getting all filled up with people and they all do the same thing" (1937, 46). If everyone does the same thing, differentiating the interchangeable becomes more difficult (Caramello 1996, 134). In The Autobiography of Alice B. Toklas, Stein presents numerous stories about Picasso, Apollinaire, Matisse, as well as many other artists and friends specific to the life of Gertrude Stein. Her sense of what composes an autobiography is farther reaching than that of Augustine or Rousseau, whose stories were always in some direct way about themselves. By expanding the
boundary of what is considered to be appropriate for her autobiography, Stein sends the message that this circle of friends—the art and literary community of Paris during World War I—is who she is. This extension is necessary to defining Gertrude Stein. The idea of the self as existing in any way other than as a part of all that surrounds her is not plausible.

As the parameters of what is considered to be autobiography expanded in Stein's twentieth-century society, the position of the self within those parameters split and shifted, disrupting the traditional center or focus of the life story as seen in works like Augustine's and Rousseau's. Certainly, each person was still the center of her own existence. However, unlike in Augustine's and Rousseau's texts where every story was strictly about them, Stein's autobiographies position her alongside many other people. She shares space in her autobiography with the people in her life, and the portraits of these other people do not necessarily have to have meaning for Stein or reveal anything about her at all. In her autobiographies, these other lives are important in their own right.

Like a Cubist painting in which familiar objects are dismantled and reassembled from a new perspective to allow the viewer to see again for the first time, Stein dismantles the conventional autobiographical form and reassembles it with discontinuous parts of stories from many people's lives. She calls her studies of her friends "portraits," (1933, 114) and by dispersing bits of them throughout the text next to stories about herself, she creates a type of coherency that is based on recurring themes and that is dependent on the text. Without the text, there would be no unity—
there would be only random fragments of stories. By using this technique, Stein forces
the reader to reevaluate expectations concerning autobiography and what composes the
self. She is making us see the self from a new perspective—much like a Cubist painting
or landscape from the air—that is outside of ourselves and that attempts to encompass
the many varied roles of the self.

As Stein shows in her autobiographies, to represent the self as the sole focus of
the text is no longer possible or reasonable. To be more realistic, the self must be
presented as part of a more global community. Stein writes in *Everybody's
Autobiography* that when she composed *The Making of Americans* she started with a
history of her family, then expanded it to a history of everyone her family knew, and
then expanded it further to be a history of everyone (1937, 113). The inclusion of a
more global community as the story of one's life indicates how the growing
communication technology of the early twentieth century had made the world more
accessible. As a result, once unfamiliar cultures and people were now integral to
defining individual identity and had to be acknowledged as part of one's own personal
history. This is not to say the self is a microcosm of the community or world, as it was
in Augustine's culture. As philosopher-scientist Bart Kosko describes in his book *Fuzzy
Thinking: The New Science of Fuzzy Logic,* "Every whole contains its parts...But in
general the part differs from the whole. Here the part cannot totally contain the whole.
But it always partially contains the whole" (1993, 58). The pieces of the self that Stein
presents do, in part, contain what defines Gertrude Stein, but none of the pieces can
contain a representation of all that defines Stein. Again, like a Cubist painting, each
piece holds something of Stein and reveals something quite different each time it is considered in respect to another piece of information or perspective. The parts are split and dispersed, eliminating the conventional center of self and forging a new one, i.e., the art work itself.

Bringing the pieces of the self together in the text as a way to create a whole picture of the self at the time of writing reflects the fragmented nature of early twentieth-century society while it also reflects the desire for order in human nature. The problem with this modern approach is that it still promotes linearity, which contradicts all that had been discovered in science at the time. In a nonlinear world, the parts do not add up to the whole. However, it is human nature to try to force a linear model on a nonlinear world (Kosko 1993, 108). Although the avant-garde works of the modern artists at first appear to reject linearity because they break from nonconventional presentation of linear order, they still, nonetheless, achieve the same result—a completed whole. Writers and artists such as Stein recognized that the self was actually fragmented and developed in a nonlinear manner; however, trapped in the gap between reality and desire, they still attempted to force a linear model of "the parts add up to the whole" in their works. These artists have made steps to reflect the society around them by breaking objects into pieces, but all of the pieces come together to create a false whole in the work.

Language as more than a tool of communication

The inadequacy of language in the writer's quest to find just the right way in which to convey meaning has been addressed by all of the autobiographers in this study.
Undoubtedly, this issue is of great importance to all writers but is particularly a focus for writers who grapple with defining and revealing the self in their work. Augustine and Rousseau, as mentioned previously, were both concerned with ensuring that readers understood their intentions. Rousseau was somewhat distressed over the fact that he believed no one would ever understand who he was no matter how he said things in his book; therefore, he felt he would be misjudged by society. However, he continued trying to convey his inner emotions, hoping to be understood, but ultimately aware of his failure in this venture.

The possibility of representing the inside to the outside became more critical to modern writers as they reacted to the self splintering further in a growing technological and secular society. Henry Adams marked a turn in autobiography writing in that he departed from Rousseau's approach of attempting to reveal the self by laboriously describing one's inner emotions. Instead, he wrote of the exterior, of the universe that had contributed to the development of the many sides of Henry Adams. Through understanding the world that acted upon Adams, the hope is that the reader will, in turn, recognize some of those influences and experiences, assimilate them onto her own schema, and then arrive at some level of knowing who Adams may be beyond his public face.

Likewise, Stein's concern with what she called the inside and the outside was so great that she wrote about it specifically and at length in both of the autobiographies. In *The Autobiography of Alice B. Toklas* she mentions her interest in "mixing the outside with the inside" (1933, 156) and how in *Tender Buttons* "she began to describe the
inside as seen from the outside" (156). She, like many writers, however, found that it was virtually impossible to translate clearly the inside to the outside. The attempt to describe either in terms of the other was as futile as trying to represent a painting in music; the two mediums are not reducible to each other's terms. She had come upon the same problem of defining the inner self to outside people with which other autobiographers had struggled. Her contemporary, Virginia Woolf, wrote in her autobiography about the difficulty of making one's self understood, of describing the human being to whom things happened, and, therefore, conveying the implications of personal experiences (1940, 211). In the same vein, Stein argues in Everybody's Autobiography that everyone likes mechanics because they can only mean one thing to everyone, whereas everything else (e.g., emotions) has a different meaning for every individual. She writes, "nobody means the same thing by what they say as the other one means and only the one who is talking thinks he means what he is saying even though he knows very well that that is not what he is saying" (1937, 299). Even as one is uttering the words to describe the inside, she is conscious that the language is failing and the meaning is distorted.

Realizing the certain failure in trying to describe the inside in terms of the outside, and "possessed by the intellectual passion for exactitude in the description of inner and outer reality," Stein broke from "associational emotion in poetry and prose" and embraced, instead, the "exact reproduction of either an outer or an inner reality" (Stein 1933, 211). Neither emotions nor their results should be either the cause or material of writing. This clinical attitude toward writing resembles the objective,
detailed approach toward description in the sciences with which Stein was intimate.

Her insistence on keeping the inside and outside separate, as she says in *Everybody's Autobiography*, maintains their unique functions and by doing so makes it necessary for the self, whatever that is, to exist as the vessel between the two (1937, 271-272).

Establishing distinction in order to maintain identity or selfhood parallels Stein's comment regarding the dissipation of geographical borders as global communication technology improved, making it necessary to find and assert one's uniqueness in a society where everyone seems interchangeable.

Stein's effort to establish objectivity and maintain the distinction between the inside and the outside translated into the distancing of the narrative voice from the subject's life described in her autobiography. However, she is not the first writer to address the difficulty in describing a self that is constantly changing and, therefore, indefinable. Prior to Stein, Henry Adams attempted to establish objectivity in representing the multisided, changing self by writing his autobiography in the third person. For Adams, when he considers how his existence is reflected in his memory, he sees many forces and perspectives of Henry Adams, but he does not, cannot, see the self or I of the present moment. As a result, Adams refers to himself as Henry Adams, the boy, he, one, the secretary, the traveler, and so on, but never as I, myself, or me. The voice he uses in the text reinforces both the reality that memory recalls a past self that no longer exists in the present and the notion that because the inner self cannot be conveyed adequately in the language of the outside, the writer may as well speak of
one's own life as an outsider would, because when looking at our past selves that is ultimately what we are anyway.

Adams' use of the third person when talking about himself provided a way in which the autobiographer could attempt to view his own life objectively, without the emotion of the internal experience coloring the description of the outside. Taking Adams' approach even further, Stein, in The Autobiography of Alice B. Toklas, writes about herself in the third person and behind the screen of another person as narrator altogether. In addition to letting Stein ignore information that she does not want to reveal to readers, writing in the voice of Toklas provides Stein the distance of an objective external voice. Using this technique, she writes about the outside from the outside, like a scientist, eliminating the problem of inept translations she had found in trying to write about the inside from the outside.

Even in Everybody's Autobiography when she drops the voice of Toklas, she continues the search for identity and the attempt to give language to that which has no language. Assuming her own voice, she describes the life of Gertrude Stein as objectively or clinically as an external narrator by providing pieces of stories as if she had merely turned on a recorder and absorbed all that was occurring around her. (Actually, some postmodern artists do take this very approach in their experimental writings; however, the recorder was not yet available when Stein was writing.) Neuman sees Everybody's Autobiography as the fusion of theory and practice in that, "Both its subject and its form are the 'human mind.' 'Human minds,' lacking identity contact rather than relate to things" (1979, 47). Because of its almost postmodern
structure, Stein's second autobiography feels even more detached from the inside of Gertrude Stein than the first. The second book does, however, create a picture of how Gertrude Stein's mind processes the information and stimuli around her, even if she is unable to give appropriate language to the effect that the information and stimuli have on the self. Readers may see how a human mind in the twentieth century reacts to the increasing pace of society, but they also see that giving language to the internal changes that occur in reaction to society remains an unresolved problem for writers. Readers also get the sense that the inability to describe the inside is not entirely the shortcoming of language, but that it is not possible to describe effectively that which is not completely understood. What is the self remains a universal unanswered question, and for Stein, even after probing the issue from numerous perspectives, voices, and persons, she still comes up unsatisfied in the end--reduced to the point of saying, "perhaps I am not I even if my little dog knows me" (1937, 328).

Stein's attempt to capture the motion of the mind is the closest she brings readers to any representation of the inside. While critic Ellen Berry (1992) argues that the fragmented nature of Stein's narrative is postmodern, it actually aligns itself more with Cubism in that the artist's aim is for the fragments ultimately to compose a whole--an idea fundamentally modern, not postmodern. Many critics, and Stein herself in her autobiographies, have discussed the connection between Cubism or art in general and Stein's writing (Bridgman 1970; Burns 1970; Caramello 1996; Dubnik 1984). In Everybody's Autobiography, Stein acknowledges her admiration for the work of the French poets, Cézanne, and the Cubists. Cézanne, she says, had the ability to paint "a
feeling of movement inside the painting not a painting of a thing moving but the thing painted having inside it the existence of movement" (1937, 321). Her own writing conveys a sense of walking or flying in the world or thinking through an idea and arriving at a new place or epiphany at the same time that the pen does. Likewise, she felt that by destroying the centralization of composition the Cubists "would arrive at movement being existing" (1937, 321).

When trying to convey a sense of movement that corresponds with twentieth century culture, the visual arts prove more adept at simultaneously presenting information. Dubnik argues "that in painting, the isolated fragments are seen almost simultaneously, and each bit of visual information remains on the canvas while the mind reconstructs the entity portrayed. Reading goes much more slowly. Images are presented serially, and the entity portrayed appears less immediately than in painting" (1984, 24-25). Because painting is able to present images simultaneously and because, as stated previously, the movement of the eye allows the viewer to see a distinct image in relation to other different images numerous times, it surpasses writing as a medium for conveying the feeling of the twentieth century. Stein knew this, but, as she was a writer and not a painter, her challenge was to imitate in her writing, which is a very linear medium, as closely as possible, the effect of painting, which could be a nonlinear medium. In what was surely a limitation of language, Stein tried to realize potential. To create a feeling of movement in her writing, she went beyond the use of a disjointed narrative structure and long fluid sentences. She used language itself, in conjunction with structure and style, to construct a version of the human mind in motion.
Stein's use of plain language in unusual linguistic constructions is directly linked to the ideas in Cubism of capturing movement in the work and seeing familiar images new, as for the first time. These ideas were present in the works of avant-garde artists in the early twentieth century, as Ezra Pound called for artists to "make it new." Literary theorists Robert Con Davis and Ronald Schleifer in describing the motivation of Formalism write:

Since language is a medium of communication before it is used in art, its expressions and conventions inevitably will be overly familiar to the reader and too feeble to have a fresh or significant impact in a poem. To be made new and poetically useful, such language must be "defamiliarized" and "made strange" through linguistic displacement, which means deploying language in an unusual context or effecting its presentation in a novel way. (1989, 20)

Stein and the Cubists were both accused of producing compositions that did not look like reality, when, if fact, these works came closer to contemporary reality and nature because of their shattered, decentered form than any work that presented a false, continuous whole (Caramello 1996, 12).

What critics and readers considered to be Stein's lack of clarity in her writing (Stein 1933, 35) was actually a way for Stein to show language as more than only a tool of communication. By taking away standard punctuation and word order, Stein forces readers to see language in unexpected combinations and to reread even the simplest of words for comprehension and subtleties in meaning when the same words or phrases are considered in relation to a slightly different combination. Readers have to view each word in relation to what precedes and follows it, often backtracking in an attempt to pick up Stein's intention. This both causes the readers to see language new again, as if
they are just learning to read, and provides an alternative to the strictly linear (or serial) method of reading. Stein's built-in repetition of ideas along with the readers' going back and forth to reread adds a circular type of progression to the text. If not entirely circular, the aim of the text certainly is to be nonlinear or recursive, like the movement of the mind. In this, even though writing can never present simultaneous images as effectively as visual art can, Stein still manages to give a new dimension to writing—thus raising the potential of language beyond the inadequate communication of the inside.

Forging the self through memory and writing style to reflect cultural constructs

Like the ground-breaking autobiographers before her, Stein uses writing style to present a picture of a self that aims to be both representative of society and unique at the same time. In Stein's case, the self is forged rather than reproduced in the text. To create the Gertrude Stein who appears in *The Autobiography of Alice B. Toklas* and *Everybody's Autobiography*, Stein tracks the working of her mind as it functions in early twentieth-century culture. Unlike her predecessors, however, she does not choose to write in an already popular literary genre, but, instead, leads the literary world by creating a style comparable to the compositions in other avant-garde art works that responded to the changing culture. Because these forms were avant-garde, they met with great resistance when introduced into society, as Stein tells about critics mocking and scratching at the paint of a Matisse work that they did not understand (1933, 35). These forms, as we know now, became standards for art and later proved to reveal more about
contemporary culture than conventional forms, which were out of touch with the day's accepted scientific ideas and technology.

Stein's autobiographies indicate that the literary theories prominent in what would become known as the modernist period were similar to ideas in other fields, such as art, science, and communication technology. The theories and ideas from these various disciplines (specifically those regarding nonlinearity in nature, electromagnetic currents, and the decentralization of established hierarchies) affected the role of the individual in society and, in turn, how that individual defined selfhood. In the literary community, groups that would be termed the modernists, Russian Formalists, and New Critics had their own philosophies that often contradicted one another. Regardless of where each group stood on the specifics of issues, the fact that between them they incited a dialogue on coherence, order, and unity challenged long-held cultural beliefs and called into question conventional hierarchies. While the literary community was doing its part to raise social awareness of changes in cultural constructs of "truth," it was sharing company with art movements such as Cubism and Surrealism, which also reflected the decentering of established hierarchies and prevailing recognition that nature is nonlinear. These ideas, as discussed earlier, resulted directly from discoveries in science (such as nonlinear dynamics and electricity) and the technologies that were then developed using this knowledge (electrical appliances, telephones, radios, automobiles, and airplanes for example).

The many changes in the make-up of society that, in part, resulted from new perspectives in science and developments in technology naturally affected the view of
the self and how writers expressed that self. By working backwards (as with memory) and examining how the self is presented in Stein’s autobiographies, we can see the effects that the changes in culture had on the self. What is of particular interest in this study is that the changes taking place in society did cause artists to be more introspective and to reveal that introspection in their work. This was a move away from nineteenth-century fictional novels and representational or external-to-the-self painting.

In *Everybody's Autobiography* Stein tells of a conversation with Dashiell Hammett during which they discussed how in the nineteenth century, men created interesting characters in literature but women always seemed to make their characters mere reproductions of themselves (1937, 34). However in the twentieth century, she says, the men, too, only write about themselves, and she asks Hammett why he himself does this. His response is that when writers have confidence they can make other people in their work, but when they have no confidence, as in the twentieth century, they cannot make other people because they need to hold on to themselves. What Stein and Hammett leave unsaid but understood is the reason men lost confidence in the twentieth century. Women—like any minority who, for the most part, were traditionally excluded from the literary community—when they were able to write needed to assert their own existence before they could even consider creating another character. For centuries, they had not been in positions of privilege that would allow them to examine and determine who they were and, therefore, were not ready to create another; they first needed to create themselves. Likewise, in the twentieth century with the onset of two world wars and changes in science and technology, all contributing to a shift in cultural hierarchies and
social roles, all notions of the self, including men's, became unstable. Because the "I" was no longer a singular, centered entity, as Rousseau began to address in *The Confessions*, the autobiographer needed to find the "I" through writing, through gathering the pieces in memory and assembling them into what could be labeled a whole person.

In attempting to create a whole person, Stein writes about what she calls the inside and the outside and that, because both are necessary to the formation of the whole self, they must be kept separate and distinct. Although she theorized that she could keep the inside and outside separate when describing one or the other, they affect and change one another beyond human control. While the external world affects what we can do and how we can respond to its effects, our minds create and influence what occurs in the external world. The self acts more like a permeable membrane than a solid barrier or "vessel" between the two, and memory is necessary to translate information between the internal and external. The combination of internal and external factors assembled by the faculty of memory forges what we call our identity or self. As Richard Terdiman points out, memory is "the means by which the coherence of our identity and our history is constructed and sustained" (1993, vii). What type of coherency is possible in twentieth-century culture, as we have seen, is at best limited and is at least unconventional. Of note, though, is Terdiman's recognition that coherence and identity are constructions, not representations, of the writers. Stein, as we know from previous discussions, was very interested in identity but was never able
to determine satisfactorily what identity was, although she did construct a composition of the self that reflected the composition of a fractured culture.

Stein's disjointed narrative mimics the nonlinear order of nature and the fragmented manner in which actions and information from the world enter Stein's senses. Likewise, the fluid style of her writing parallels scientific theories regarding the brain, with the development of biochemistry and the resulting finding that the brain is in ceaseless electrical flux (Rose 1993, 78). The determination that nature is actually nonlinear led writers to reconsider the development of the self, as well. In Everybody's Autobiography Stein writes about the relationship between the development of the self, time, and memory:

I meditated a good deal about how to yourself you were yourself at any moment that you were there to you inside you but that any moment back you could only remember yourself you could not feel yourself and I therefore began to think that insofar as you were yourself to yourself there was no feeling of time inside you you only had the sense of time when you remembered yourself (1937, 307)

In this passage we see the path of her thinking as she questions whether the self is actually aware of the construct of time. Her arrival at the answer that the self is only aware of time when we use memory to situate it in a particular time supports the idea that the self, like nature, does not develop linearly but, rather, in circular loops and jumps—just as the brain works and her writing reflects. She is showing the creation and development of a self. Her writing style also captures the rhythms of the world, of Stein walking or driving or flying; and although she would like to maintain a sense of the constant present, she still needs memory to recall these rhythms. In reconstructing how these external rhythms and fragments of information move throughout the writer's mind
via electrical and chemical means and back out again, the mind asserts itself, creating a picture of a unique individual—only that person's mind is reflected in the text.

Therefore, even if Stein is not intentionally describing the inside and the events described could be anyone's experience, the form still comes from the inside (Olney 1972, 17). It is the mark of the writer and reveals that specific person. Showing a unique mind working, selecting, and prioritizing is how the writer maintains a sense of individuality in a fast-paced, global society where individuals seem interchangeable and superficial.

Finding the balance between asserting individuality and living in a community has been an issue for writers, notably since Rousseau was torn between wanting to be both like everyone else and unique at the same time. Finding this balance and coming up with a whole, coherent self becomes increasingly difficult as society requires us to live on many levels and in many roles. At some point, the idea of a unified self must give way to the fact that we are too split by culture ever to form a cohesive whole again (Taylor 1989, 480), a belief accepted by the postmodernists. The modernists, however, Stein included, persisted in their attempts to salvage the idea of a unified self. They did this using memory to create a unified and coherent self that existed as a work of art—the text. Unlike Augustine and Rousseau who use their autobiographies to reveal a great conversion or epiphany, Stein uses her autobiographies to create a unique and complete self in the text. Her writing style and narrative structure progress in a somewhat recursive, electrical current fashion to bring the reader full circle (like her signature "a rose is a rose is a rose") and to create a complete, self-enclosed text. Perhaps this is
Stein's epiphany: In a global society where the self is so fractured and disjointed that it cannot be reconstituted into a cohesive whole in society, it must be created in text.

The desire for unity persists, even as Stein notes, "Human nature is so permanent in France that they can afford to be as temporary as they like with their buildings" (1933, 16), and memory is necessary to the consolidation of the many fragmented selves into one (Dubnik 1984, 4), even if it is a false, textual creation. Ultimately Stein combines elements she wished to keep separate—the external, the internal, and memory—to form a complete identity recognizable as Gertrude Stein that is reflective of the culture in which she lives. Like a Cubist painting in which all the pieces are present, only in an unfamiliar or unconventional fashion, and more specifically like the painting of her by Picasso, she came to look like the created art work because the self had to be created anyway. Both *The Autobiography of Alice B. Toklas* and *Everybody's Autobiography*, in their experimental approaches that led the literary world to accept new forms and ideas, in the end reinforce the traditional cultural desire for unity and order. For all of Stein's intellectual discussion about the difference between the nineteenth and twentieth centuries and the prevalence of nonlinearity in nature and disrupted hierarchies, her autobiographies, in their Cubist resemblance, reinforce cultural conventions of closure, cohesion, and wholeness, of the ability for everyone to find "his own self inside him" (1937, 271). She is torn by the disparity between the human desire for unity and cohesion and the search for reality, which is disjointed. At the end of her autobiographical quests, she has not determined either who the self is
inside of her or how a unified self can exist within this system—a question that postmodernists will answer, not so simply, it cannot.
CHAPTER 4. THE PARTS DO NOT ADD UP TO THE WHOLE: FRAGMENTATION, COLLAGE, AND DISAPPEARANCE (RELOCATION) OF THE SUBJECT IN DAVID ANTIN’S AUTOBIOGRAPHY AND "AUTOBIOGRAPHY 2"

Significant cultural developments between the 1930s and 1960s

Although only 30 years elapsed from the time Gertrude Stein published Everybody's Autobiography in 1937 to the appearance of David Antin's 1967 text, simply called Autobiography, numerous significant developments occurred in this relatively brief period. World War II brought about the widespread use of and dependence on emerging technology. For example, communication advancements such as telephones and radios allowed for more efficient tracking of troops and distribution of orders. And, as N. Katherine Hayles points out, "by World War II, transportation and aircraft had progressed sufficiently so that rapid troop movements were possible, which in turn made accurate and timely information as critical to the war effort as weapons and soldiers" (1990, 269). What had begun in World War I, previously referred to as the Cubist war because of its effect upon and perpetuation of dissipating geographical boundaries and decentralization of power, reached new levels as orders could be communicated immediately from great distances away from the actual fighting zone. Thus, a major center of power need not even be physically present in the obvious structure of the war.

After the war, technology developed exponentially compared to previous time periods. An increasingly global society and advances in technology mutually perpetuated one another and influenced developments in other areas of culture as well,
such as science, education, communications, and the arts. All of these factors affected
the role of the individual in what had become a technology-driven world.

**Developments in technology and science**

As the victor in war directly correlated with who had the best equipment, which was
now associated with the best technology, governments dedicated research to the
development of technology that could be used for tactical purposes and then later used
to maintain a position of global leadership. This emphasis encouraged research in
electronics and computers, which utilized breakthroughs in sciences that included brain
research. The thinking was that by understanding how the human brain and memory
worked, scientists could further their understanding of how to build machines that
functioned like intelligent beings. Ironically, as computers have become more
sophisticated, they have provided insight regarding how the brain works; therefore,
both fields have been able to progress mutually. During the post-World War II period,
several seemingly disparate fields began to influence one another more directly than in
the past—specifically, for the purposes of this study, technology and brain research, as
just mentioned, as well as literary theory, which will also be addressed in this chapter.
These interacting fields, in turn, responded to and affected culture and the role of the
individual within society.

Improved technology allowed us to gain a better understanding of the world. A
resulting battle to possess the best technology and the brightest scientists ensued
between governments because to lead the world technologically was to have control and
superiority. This struggle for world supremacy determined not only what scientists
researched and developed but also what schools taught children. Between the modern and postmodern periods, technology developed exponentially compared to similar time periods in the past largely because of this struggle to gain control in an increasingly global society. The airplane, which was introduced in the early part of the twentieth century, became commonplace, and air travel began to take on greater challenges of space and time. This period also saw the advance of video and electronic technology with talking movies, television, video cameras and stereos in almost every American home. Access to remote areas of the world and galaxy was increasing, and satellites and television made it possible for the general public to witness current events. A result of the increased interest in visual and electronic technology was a shift in the cultural paradigm away from print and once again toward oral communication, conveyed through technological means.

On its way to becoming common at this time was the computer. Although computers would not actually become practical for home use until the 1980s, development for government use (i.e., military) began in the 1940s. Since their inception, computers have been used as metaphors for the brain, while the two fields have been essentially intertwined in their research developments. The comparison between the two fields begins when we consider the language used to describe computers. Terms such as memory and neural networks are taken directly from biology. In turn, the language used to describe the biological processes of the human brain and memory since the advent of the computer encompasses terms such as input,
access, process, store, and recall—all of which give the brain a mechanical, inanimate quality.

The sharing of language between these disciplines is not surprising considering that developments in computers have all along been inspired by a desire to model the brain. According to Laurene Fausett, who offers an excellent history of the development of neural networks in the recent textbook, *Fundamentals of Neural Networks: Architectures, Algorithms, and Applications*, "The development of artificial neural networks began approximately 50 years ago, motivated by a desire to try both to understand the brain and to emulate some of its strengths" (1994, 1). Fausett chronicles that in the 1940s Warren McCulloch and Walter Pitts developed what is considered to be the first neural nets, which aimed to arrange neurons to represent logic functions of the brain. The entire history of this field, she says, has been grounded in the "interplay among biological experimentation, modeling, and computer simulation/hardware implementation" (1994, 22).

Biology continued to inspire research in technology. Alan Turing, who developed the code-breaking machines that helped the Allies to win World War II, used how his mind worked to approach the building of a computer. As Daniel Dennett points out, "he took the important step of trying to break down the sequence of his mental acts into their primitive components" (1991, 212). By figuring out his mental processes step by step, he could attempt to simulate this function in the construction of his machine. In the 1950s John von Neumann, generally considered to be the father of modern computing, built on the work of Turing, also modeling the brain’s functions (Fausett...
The new von Neumann machines, Dennett explains, "were called 'giant electronic brains,' but they were, in fact, giant electronic minds, electronic imitations--severe simplifications--of what William James dubbed the stream of consciousness, the meandering sequence of conscious mental contents famously depicted by James Joyce in his novels" (1991, 214). As Dennett's example shows and as the previous chapters here have demonstrated, the developments in technology and brain research made themselves apparent in the avant-garde literature of the period that reflected culture.

Additionally in the 1950s, Frank Rosenblatt performed computer simulations with a system that he called a "Perceptron" (Rose 1993, 82). The perceptron attempted to model the brain's neurons by learning from possible experiences introduced into the system and then changing the system's output as a result of this learning. The system behaved like the brain by learning, remembering, and adjusting--much like the neural network systems currently used by post offices to read and sort hand-written addresses automatically.

The capability of the computer for all of its advanced complexity, however, remains rather simplistic in comparison to the human brain and is not a substitute for or representation of the brain or memory. The interest in this study is with how these two fields intertwine, affect one another, and shape culture both in research developments and in the metaphors used to explain how each works. Constructing metaphors using the language and developments in brain research and technology to compare the intricate workings of elements within the two fields has been practiced since Descartes created his hydraulic model of memory. As earlier chapters here show, Rousseau
claimed he possessed the ability to "call up" memories in a manner similar to the electric telegraph which was emerging at the time, and Stein, who had, in fact, studied the brain extensively at university, made the science and technology of the day part of the subject and writing style of her autobiographies. As brain research became a more prominent area of study, the results of that research inspired constantly changing theories of how memory worked, which avant-garde autobiographers tried to capture in writing about the self.

As discussed in the previous chapters, human nature and nature have been long compared, so when scientists note new ideas in one area, they usually investigate how these ideas may also prevail in the other area. This is the case in point: As members of the scientific community increasingly agreed that nature is primarily nonlinear and applied nonlinear equations to explain many phenomena in nature, they also began to investigate how human consciousness might, likewise, follow nonlinear order since attempts to explicate consciousness using Newtonian linear equations had failed. While these radical developments were taking place in science, a general acceptance of nonlinearity in nature and the existence of chaos as an actual order was only beginning to root and would not take hold until the 1970s, after postmodernism had peaked. Avant-garde artists and writers, however, captured these shifts in the scientific understanding of nature and the self in their postmodern works, which eschew linearity and classical ideas of Newtonian order.
Developments in memory research

The roots of brain research are considered to be in biochemistry, a field which first developed in the 1910s and 1920s. However, in the late 1950s and early 1960s, the biochemist Henry McIlwain helped to bring about the emergence of a new area—neurochemistry—or, the biochemistry of the brain (Rose 1993, 41). The research conducted in the 1950s focused on brain disorders, such as Alzheimer's and epilepsy, because it was easier for scientists to determine how the brain worked if they experimented to correct an obvious abnormality. The processing brain during this era continued to be described in metaphors of electric currents and waves, directly reflecting the day's technology. Consequently, during the 1950s, the first invasive experiments on the human brain were conducted to see what conscious subjects experienced when parts of the brain were stimulated electrically by placing electrodes on the surface of the cerebral cortex (Rose 1993, 129).

Karl Lashley was also conducting invasive experiments on the brain during the 1950s. His work, however, involved removing various quantities of cortex tissue in rats in an effort to pinpoint which areas of the brain corresponded to specific types of memories. After being unsuccessful in determining if any one area of the brain was responsible for specific memories, he concluded that "memory resided simultaneously everywhere and nowhere in the brain" (quoted in Rose 1993, 281). Lashley's conclusion about the brain and memory would ring familiar in the next decade as postmodernism emerged with its notion of the self—which is constructed through memory—as an assortment of fragments lacking any distinct center but, instead, having
multiple dispersed centers. Thus, according to postmodernists, the self, if it existed at all, did so simultaneously everywhere and nowhere specifically in one's mind, therefore allowing for numerous combinations of possible selves to be recalled or constructed.

Aside from invasive experiments in memory research, the 1950s saw the beginning of a new branch of science—Artificial Intelligence, commonly known as AI. Like every science, dialogue within the AI community itself is diverse, sometimes contradictory. In his text, *The Emperor's New Mind: Concerning Computers, Minds, and The Laws of Physics*, mathematician Roger Penrose points out that the strongest proponents of AI compare the mind to a serial computer, or Turing machine. He writes:

> There is an input (like the Turing machine's input tape on the left) and an output (like the machine's output tape on the right), and all sorts of complicated computations being carried out in between...when one simply thinks, calculates, or muses over recollections of the past. To strong AI supporters, these activities of the brain would simply be further algorithmic activity. (Penrose 1989, 379)

This metaphor adopted by strong AI supporters echoes Beckett's *Krapp's Last Tape* (1958), in which memories are recorded on and represented by the spools of tape that feed from one side of the machine blank and wind around the other full of recollections. Beckett's metaphor of the tape recorder, which is rich in layers of memory and meaning, is merely an audio version of the electronic computer Turing machine. As technology changes, so do the metaphors used to describe brain processes; and as the computer age emerges along with developments in science, comparing the mind to electric wires and currents becomes an insufficient metaphor. Scientists have found the brain to be much more complicated and, thus, use some of the same metaphors as AI proponents in describing the brain's neurons and "logic gates," which are necessary to memory.
(Penrose 1989, 394). The sharing of language and metaphors reinforces the influence of computer technology and AI on brain studies.

As further scientific research revealed that the brain functioned nonlinearly (a theory that was proposed at the turn of the century), the comparison of the brain and serial computer became obsolete. In the early 1960s, AI supporters who believed that linear equations might not suffice for conscious, living entities tried to develop a nonlinear mathematical model to represent the mind (Penrose 1989, 294-295). Other members of the AI community, such as Penrose, had problems with this theory because they believed that consciousness or awareness relies on the progression of time—much like what we have seen again and again in the autobiographies in this study: the self develops in time.

While Penrose thinks the nonlinear mathematical model is inadequate, he maintains a belief that science, specifically quantum physics, is the key to understanding more about the mind and self. He explains that, according to classical physics, because our bodies and brains are part of the physical world, they, too, evolve like other elements in the physical world, i.e., they are fixed by precise classical mathematical equations (1989, 226). However, these classical equations fail to account for the phenomenon of consciousness. Therefore, he offers quantum theory as an explanation of consciousness. He clarifies that quantum descriptions, while different from classical ones, are just as precise and are necessary to explain many properties and phenomena in nature, such as the existence of solid bodies, chemistry, colors, and freezing and boiling. Likewise, he believes that the phenomenon of consciousness, which cannot be
understood entirely in terms of classical physics, must be explained in quantum terms because "Perhaps our minds are qualities rooted in some strange and wonderful feature of those physical laws which actually govern the world we inhabit, rather than being just features of some algorithm acted out by the so-called 'objects' of a classical physical structure" (1989, 226). Classical physics alone is not sufficient to explain how everything in the world works but must be considered with quantum theory, and that combination, Penrose writes, "forces us to change our view of physical reality" (1989, 225). With a change in perspective of physical reality comes a change in view of the mind, as Penrose says, and that affects how we define and construct the self. So, as we have seen numerous times, a shift in perspective in science affects the theories governing the self, which then enter the discourse of various disciplines.

In the 1960s and 1970s, memory research in general suffered setbacks as experiments turned into catastrophes, seriously harming the validity of, and advances in, the field. Various studies involving biochemical exchanges in the brain or even physical isolation of brain sections attempted and failed to answer the questions of where memory existed and how it could be transferred (Rose 1993). The rejection of any belief in the physical transfer of memory, however, eventually led to a theory in which memory is considered to be a property of the brain affected not only by chemical changes in the body and brain, but also by which cells and synapses undergo chemical changes (Rose 1993, 201). This whole-body approach, in which memory depends on, as Rose says, "a multitude of specific neuronal circuits," (1993, 204) raises the question of the possibility of transferring any memory meaning at all. Because every individual
body is so distinct in its chemical makeup and interaction with the nervous system, producing the same meaning in two separate people seems impossible.

As previously addressed, the struggle to translate the inner experience to the exterior world by way of language has been a frustration for writers for centuries. In chapter three we saw how Stein tried to address this problem by separating the two, which, ultimately, she could not do. Antin's perspective on the same issue is that "there is no such thing as a perfect medium that's why they call it a medium because its in the middle so to speak its between it mediates a transaction and deflects it" (1984, 56). However, at the same time that the scientific community began to understand just how distinct the individual is, postmodern writers not only acknowledged the futility in trying to transfer meaning, but they saw that the problem existed beyond the limits of language: it began at the level of the physical composition of the body.

Developments in art

As we saw with the modern period, avant-garde artists responded to and perpetuated the ideas prevalent in culture. Likewise, postmodern artists and writers captured in their work the constructs of culture. Avant-garde works of the period concentrated on the increasingly problematic role of the individual in society and on the effect that technology had on the individual and art—very often glorifying technology or making it the subject of a piece. While the art community saw the arrival and passing of numerous movements inspired by technology, it also experienced a newly found social and commercial acceptance because of its incorporation into everyday life and of an improved American economy.
In the 1950s, modernism remained, as avant-garde artists continued to represent the internal experience of the self through their work. Because translating the internal to the external was inherently problematic and because the self was changing its definition in response to culture, attempts to represent the internal or evolving self resulted in more ambiguous styles of abstract expressionism, action painting, and gesture painting, where representation and interpretation were key to understanding the art (Sandler 1988, 17). However, as the 1960s approached, technology and economics altered art significantly. After World War II, the economy of the United States improved so much that the gross national product doubled from 1955 to 1965 (Sandler 1988, 82), allowing broader access to technology and education. By the late 1950s, more than forty million American homes had a television, as opposed to ten thousand a mere ten years earlier (Sandler 1988, 81). For the first time in history, people could turn on a switch and instantly view wars, natural disasters, political events, and the daily routines of others. Also, with the improved economic status of the country, many people who could not attend college in the past now could, and they were there exposed, often for the first time, to contemporary art and literature courses. A continued interest in the arts beyond college requirements led to a greater popularity of art in general. The increased interest in art, coupled with artists' attempts to appeal to mass culture, contributed to the changing style and production methods of art.

The presence of technology continued to depersonalize many aspects of culture while it also provided people ways with which to watch and scrutinize world events more closely. At the same time, art, because it is of culture, reflected the effects of
technology on the individual. Postmodern art evolved through several phases—including minimalist sculpture and painting, pop art, optic (op) art, process art, earth art, and conceptual art. While these movements were each unique, their commonality was that they all stressed the external object over the internal experience. Art critic Irving Sandler, in his text *American Art of the 1960s*, distinguishes the avant-garde of the 1950s from that of the early 1960s as "instead of the hot, dirty, handmade, direct-from-the-self look of fifties art, sixties art looked clean, mechanistic, and distanced from the self" (1988, 60). Clearly, this was the general motivation behind works of artists who strove to achieve mechanical reproduction of objects, geometric shapes, and other materials external to the self. Andy Warhol went so far as to say, "I think somebody should be able to do all my paintings for me...The reason I'm painting this way [with silkscreens] is that I want to be a machine" (quoted in Sandler 1988, 8). That an artist would want to be a machine contradicted every traditional conception of what an artist should be--original, distinct, cerebral.

While postmodern artists may have striven for mechanical depersonalization in their work to reflect the increasing role of technology encroaching on the individual in society, the mark of the individual artist still managed to prevail to some degree. Just as we have seen in past works, the idea or style that originates within an individual reveals itself in that person's approach to and form of work. While the works of Frank Stella, Robert Morris, and Carl Andre, or of Andy Warhol, Roy Lichtenstein, and James Rosenquist may initially seem indistinguishable in either their geometric presentation or silkscreen, cartoon-like reproduction, the artists each actually use painstakingly
meticulous methods to produce what appear to be spontaneous, commercially manufactured pieces (Sandler 1988, 149). On the production and creativity of his commercial art, Warhol comments, "I was getting paid for it, and did anything they told me to do. If they told me to draw a shoe, I'd do it, and if they told me to correct it, I would...I'd have to invent...after all that 'correction,' those commercial drawings would have feelings, they would have a style" (quoted in Sandler 1988, 9). This style, invented from within Warhol, is what makes his work uniquely and unmistakably his—even in its machine-replicated form. The mark of the individual artist, even in the face of technology and the dissipating existence of the traditional self, remains in postmodern culture, despite all claims to the contrary.

In its aim to capture the pulse of culture, postmodern art generated shows with revealing titles, such as "9 Evenings: Theater and Engineering" and "Technology for Art's Sake" (Sandler 1988, 236). The infusion of technology into the mindset of culture in the 1960s forced artists to find a new way to express themselves because, as Richard Estes points out, "All the things I was trained to paint--people and trees, landscapes and all that--I can't paint. We're living in an urban culture that never existed even fifty years ago" (quoted in Sandler 1988, 217). With people and landscapes being replaced by computers and skyscrapers, many artists saw a responsibility to fuse art and everyday life, especially since art was more popular than ever due to its extensive use in commodities such as fashion, television, and advertising. John Cage, like many artists and critics in the past (such as Stein and Picasso in the last chapter), believed that art could both reflect and lead culture. He asserted that "if the new technologies were
central to contemporary life, then they and art ought to merge. The purpose of art was to sensitize the public to the radical changes taking place in their life" (quoted in Sandler 1988, 236).

If one purpose of art is, indeed, to sensitize people to radical cultural changes, then postmodern art aimed to prepare the public for "radical" ideas that had actually been developing since the time of Rousseau—that the representation of the internal experience is doomed to failure, that the notion of a unified self is unrealistic, and that nature is nonlinear and chaotic. Whereas modern artists acknowledged these ideas but did not use them extensively (if at all) in their work, postmodern artists embraced them wholeheartedly. In general, the work of the period aimed to reconstitute the object, the external, as art itself and not as a representation or metaphor for some internal experience or meditation. Increasingly, artists and writers viewed the self as incapable of being a whole, cohesive entity. And as they more than ever considered nature to be nonlinear or chaotic, they tried to reflect these ideas in their work by emphasizing the ongoing process over the finished product. This is seen in works such as those of Philip Pearlstein, whose painting seems arbitrarily cropped, showing that any slice of reality is as worthy of being presented as another (Sandler 1988, 208)—an approach that David Antin takes in his postmodern autobiographies as well.

Furthermore, in stressing their belief that nature is nonlinear and that the self is not a cohesive concept, artists, such as Robert Smithson with his earthworks, used the outside natural environment as a way to juxtapose the human construction of geometry against the chaotic composition of nature (Sandler 1988, 333). By taking the artwork
out of the conventional museum space, avant-garde artists also exposed a greater population of people to art and diminished the long-held view that art was high-brow and incomprehensible to the masses. Also, in using geometry, modules, grids, and other mathematical or technological themes in their works, artists reinforced the idea that a cohesiveness was possible in work, but only if the work was of nonhuman quality, i.e., an invention or machine that can be manipulated and controlled. These works did not show a human mind in action; they showed a lifeless object that existed strictly for consumption by humans.

Performance art and interactive exhibits also emerged during the postmodern period. Live performance gave an immediacy to art, and because of the nature of the form, changed in response to its audience. This is much like Antin's idea of the self, which he believes takes its shape by colliding with and responding to external factors (1993, 98). Performance art, then, possesses the capability of presenting a more accurate perspective of a self than any other art form because it is temporary, constantly changing or adjusting its shape in reaction to external influences, yet composed of the same basic material at its core.

While performance art has the potential to be highly interactive, the postmodern period also saw the introduction of nonperformance interactive museum exhibits. Pieces such as these usually depend upon technology, such as recorders, film, lights, and sound equipment, to motivate viewers to participate in the exhibit and then to incorporate their contribution into the piece. This extremely technologically busy approach to art did not appeal to Antin; however, interactive work as a means to
enhance the viewer's experience of meaning did. Therefore, in one of his 1960s art exhibits described in *tuning* (1984, 252), he arranged tape recorders in various rooms of a museum and allowed participants to listen to stories told by other museum visitors. If inspired, they could then tell, record, and incorporate their stories into the exhibit. If not inspired, they could simply leave silence. In doing this, Antin hoped to infuse art with meaning for viewers who now had a personal investment in the piece, which was never possible in conventional art forms.

**The debate over the emergence of postmodernism**

Academicians and theorists have varying views on the emergence, definition, and even the existence of postmodernism. To begin, depending on the critic, postmodernism emerged sometime between the 1940s and 1970s (Best and Kellner 1991). However, the majority of critics—including Fredric Jameson (1991), Andreas Huyssen (1986), and Steven Best and Douglas Kellner (1991)—trace the appearance of postmodernism to sometime near either the end of the 1950s or beginning of the 1960s (which coincides with the technological developments discussed earlier) and see its wide acceptance (in the world of artists and critics, that is) as occurring in the late 1960s and early 1970s.

Just as it is difficult to pinpoint an exact date for the emergence of postmodernism, it is even more difficult for critics to decide if it actually emerged (or, was merely a continuation of modernism), and, if it did, then why. To them I say look at the world. Regardless of what that period in history is called, something undoubtedly changed in American culture between 1940 and 1970. Ihab Hassan acknowledges the debate over postmodernism in *The Postmodern Turn: Essays in Postmodern Theory*
and Culture. He writes, "postmodernism suffers from a certain semantic instability: that is, no clear consensus about its meaning exists among scholars...Thus some critics mean by postmodernism what others call avant-gardism or even neo-avant-gardism, while still others would call the same phenomenon simply modernism" (1987, 87).

The debate over the existence or non-existence of postmodernism complements the argument of the decentered (or non-existent) self. This period in time especially is marked with the upheaval of cultural truths regarding coherence, order, hierarchies in nature, and society. Therefore, it is feasible to view the mercurial quality of postmodernism as an extension of the same quality of the self. That is, the inability to pinpoint or define cultural change during this period reflects the same difficulty in locating or determining the existence of an identifiable self within this changing culture.

General instability at the time put everything and every concept on shifting ground.

Instead of debating whether modernism or postmodernism is superior, this study focuses more on the concrete actuality that they are working toward different goals. While both movements share characteristics, such as multiple perspectives and nonlinear narrative, they ultimately split in opposite directions. Whereas in modernism, the aim was to take multiple perspectives and create some semblance of a unified self or whole, postmodern artists revel in knowing that the fragments can never be put together again to create a traditionally recognizable self.

In his text, *Postmodernism, or, the Cultural Logic of Late Capitalism*, (1991) Fredric Jameson explicates the significant differences between what he terms postmodernism and high modernism. Generally he describes postmodernism in terms
of flatness; superficiality; multiple surfaces; fragmentation of the subject; pastiche; the waning of affect, feeling, emotion, and subjectivity from a work; the end of individual artistic style resulting from the emergence of mechanical reproduction.

Beyond describing the characteristics of postmodernism, he focuses on why he believes postmodernism emerged and writes, "what happened to culture may be one of the more important clues for tracking the postmodern" (1991, 16). Jameson's assertion is correct, if not obvious, and is the reason why examining what occurred in culture between the late 1930s and the late 1960s is critical to this study.

Ihab Hassan and Andreas Huyssen express views similar to Jameson's. Like Jameson, Hassan sees modernism and postmodernism as two very distinct movements. In addition to fragmentation, multiple surfaces, and lack of unity, Hassan recognizes other, more strictly postmodern, characteristics, including an emphasis on process, performance, absence, anti-narrative, play, and the signifier (1987). Huyssen, in line with Jameson and Hassan, sees the rejection of unity and the decentering of the self as markers of postmodernism (1986). However, he rightly emphasizes the role of technology in his definition of the postmodern. He believes that mass culture depends on technology, and that modern technology allows for and encourages mass reproduction (thus echoing Warhol's comments on art and machines).

Like Jameson and Walter Benjamin, Huyssen sees the results of modern technology manifest in collage, montage, and photomontage, i.e., art forms that can "not only be reproduced, but are in fact designed for mechanical reproducibility" (1986, 9). As we have seen in the previous section, Huyssen's assertion is supported by
postmodern artists' works and philosophies. Huyssen and Jameson, like many artists and critics, argue that mass reproduction destroys the individual artist's identifying brushstroke. However, as countered earlier, the signature of the artist remains even in a culture with advanced technology because technology merely provides the art tools; the individual is still responsible for creating a work with those tools. This is why, in theory, anyone can produce a work exactly like Warhol's. But, in practice, when I view a four-panel work of Queen Elizabeth II in London's National Portrait Gallery, I know it is a Warhol without looking for his signature. It is also why the postmodern poems of Frank O'Hara, Ted Berrigan, John Giorno, or Allen Ginsberg are distinguishable. Individual style continues to emerge from the mind, despite machines, technology, or postmodern classification.

Two critics who also focus on the role of technology in society and literary theory are Steven Best and Douglas Kellner. In their book, *Postmodern Theory: Critical Interrogations* (1991), they divide postmodern theorists into two groups: one believes that technology and changes in the socioeconomic system have produced a postmodern society; the other believes postmodernism developed out of the global homogenization that resulted from widespread capitalism. According to Best and Kellner, both of these processes produce "increased cultural fragmentation, changes in the experience of space and time, and new modes of experience, subjectivity, and culture" (1991, 3). As the previous chapters and sections on technological advances demonstrate, technology, economics, global homogenization, and capitalism (or the
quest to dominate) are all very much intertwined and cannot realistically be separated as Best and Kellner would like to categorize.

However, in continuing to present their argument, Best and Kellner see the emphasis of postmodern theorists on plurality, fragmentation, microanalysis, individuality, and singularity as a rejection of totality, collective struggle, and the system (1991, 222). In rejecting the system, postmodern theorists tend to map fragments and to ignore the systemic features that help us to see how elements either work or do not work together in our culture. On this point, Best and Kellner seem to possess an understanding in common with theorists who study chaos. Going beyond Best and Kellner, I believe that presenting fragments in writing demonstrates that the fragment is the only commonality of the whole; therefore, the fragmentation, in its attempt to reject, actually recognizes and is a part of the totality after all. The totality may not be attainable using conventional approaches, but it did exist in some form once and the concept remains as a goal for artists and theorists who succeed postmodernism.

Perhaps what is most intriguing about Best and Kellner is that they go to great lengths to explore the various concepts in the discourse of postmodernism only to reject any acceptance of its existence in the end. They offer two possible definitions for the prefix "post": one as signifying a rupture from what came before it, and the other as indicating a continuity with or dependence on what preceded it (1991, 29). Ultimately, after they explore the claims of numerous postmodern theorists, they find that none offers significant empirical support for the theorized rupture in society. They conclude, "We thus argue that no adequate analysis of the imputed break between modernity and
postmodernity has yet been produced, nor is there an adequate account of the allegedly new postmodern society" (1991, 274). I am inclined to agree with Best and Kellner in that I see society, in general, desires to achieve a type of unity and coherence. But, I also see that to meet this desire, society is willing to look beyond conventional ideas to consider different types of unity (such as chaos models) and coherence (as with nonlinearity). However I must emphasize that the defining difference between modernism and postmodernism is that modernism works to restore some semblance of traditional or Newtonian ideas of unity and coherence, whereas postmodernism rejects the attempt to impose or create a traditional unity (unless it is a nonhuman entity such as geometry or a toilet) out of apparent fragments.

The postmodern embracement of fragmentation and nonlinearity is directly related to and is a reflection of the technology in postmodern society. For example, imagine recording the landscape and dialogue in a situation where someone is driving in her car on a busy city street while, at the same time, she is having a telephone conversation and sending a fax. All of this is now possible and common (if television commercials are to be believed) because of technology; and because this scenario has become common to us, we may not immediately see its incoherence in conventional terms. Avant-garde artists who try to capture "reality" in their works have dealt with the changes in perception brought on by technology and shifts in cultural constructs of truth, as we have seen with Stein in the preceding chapter and as we will see with David Antin in this one.
David Antin's postmodern problem: what is this piece?

David Antin opens his 1993 collection of autobiographical essays or sketches, *what it means to be avant-garde*, with a quote from Denis Diderot: "Foreigners because they never have enough words to express their ideas, often invent remarkable new modes of expression. Poets are all foreigners." That Antin places this quote at the beginning of his book in interesting because Antin's work itself defies classification, as he says in one of the book's pieces:

> i have a publishing problem with publishers I used to have difficulty convincing new directions that they shouldnt list me in the poetry section i could never convince them...people pick up my book expecting to find some kind of verse in it and not finding verse in it theyre afraid they havent found poetry which is not so much of a problem for me but it is for a publisher if he starts to get returns because this somebody says "this is not poetry take it back" (1993, 125)

New Directions, incidentally, lists this book as poetry. Furthermore, Antin refuses to categorize himself as any particular type of artist. In an attempt to describe his creative technique, he refers to himself as several things, including poet, performance artist, talk poet, and language artist.

Like Diderot's description of foreigners and poets, Antin invents new modes of expressing his ideas by refusing to adhere to what has by now been established as coherent, traditional, or expected, methods of writing autobiography. His early work is postmodern or avant-garde or on the fringe. But how can Antin create what are considered to be postmodern autobiographical works when the very construction of postmodernism is one which, *supposedly*, debunks subjectivity, authorship, coherence, history, and unity? Since the publication of his first book, *Autobiography* (1967), Antin
has incited debate over the genre of his texts and even over the classification of himself as a postmodern writer. Wherever one finds herself in the Antin debate, he is certainly a writer with whom to be reckoned, if not for his monstrous body and bald head, then for his abilities to incorporate his theories into his creative texts and to provide insight into how technology, science, and culture have shaped the individual and relocated the self.

**The paradox of postmodern autobiography**

As the previous chapters have shown, autobiography reveals much about the culture in which it is written. Writers simultaneously make conscious decisions and follow subconscious tendencies that are ingrained in them by the society in which they live. They are parts of the system regardless of how they may try to observe it objectively (which is not possible). These decisions regarding content, narrative structure, and writing style, as we have seen with Augustine, Rousseau, and Stein, reflect the society of the time. Therefore, autobiography during the postmodern period should be expected to support the characteristics of postmodernism—among them superficiality, montage, simultaneous communication of information, and complete loss of center and unity.

Some critics, among them Fredric Jameson (1991, 16), argue that autobiography cannot exist under the conditions of postmodernism. The short-sightedness of this view is that these critics are using traditional methods of evaluation to study postmodern writing. Whereas traditional autobiography cannot exist within the constructs of postmodernism, resituated autobiography can. As Antin in "Autobiography 2" writes, "the terrible thing Gadaliah said would be if all our ideas of reality were based on the evidence of 200 years of experimentation and measurement and the constitution of the..."
universe was changing all this time" (1968, 45). Because our ideas of "truth" constantly shift with culture and discoveries in science, we must adjust our understanding of reality to fit the current cultural frame. Likewise, as culture changes, writing that represents that culture also changes, and we must also adjust our methods of reading new texts. For a critic to state that postmodernism is all about a break from the conventional and then to use conventional expectations to evaluate a piece of postmodern writing is unreasonable. For critics who insist on using outdated tools to examine contemporary writing, it is easy to say that if postmodernism entails the disappearance of the subject then autobiography cannot exist in the postmodern period. However, critics, including William Epstein, Jonathan Culler, Stanley Fish, and Sharon O'Brien (ed. Epstein 1991), argue that postmodernism does not preclude autobiography, but is about accepting the disappearance of the traditional or conventional idea of self. The self cannot completely disappear from this world; that is not possible. Its role or how it is perceived, however, can change, as we have observed in earlier autobiographies, particularly Adams' and Stein's.

In her essay, "Feminist Theory and Literary Biography," O'Brien questions whether or not biography is possible in deconstruction and Lacanian psychoanalysis (ed. Epstein 1991, 125). She proposes, "Leaving aside the question of language and representation, how can any genre purport to give us the 'presence,' 'essence,' or meaning of a self? Is not biography then inevitably naive--if not downright dangerous--insofar as it promotes the outmoded and bourgeois ideology of the individual" (quoted in Epstein 1991, 125). To a degree O'Brien plays both sides of the fence here, as she

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immediately follows with an example that addresses these questions. She discusses
David Nye's "anti-biography" of Thomas Edison, which she says abandons chronology
and linearity, challenges the notion of a unified self by presenting numerous Thomas
Edisons rather than one definitive Edison, and refuses to synthesize ideas for the reader
(Epstein 1991, 126). Arguably, while Nye's attempts are characteristics of
postmodernism, they are not all new. These writing strategies, as we saw, are present in
Stein's and Adams' modern autobiographies. The difference between these modern texts
and Nye's biography is that he, in writing a postmodern text, presents multiple views
and fragments of the self to challenge the idea of a unified self, whereas Stein and
Adams present multiple views of the self in the attempt to create a unified subject.
Nye's account of Edison is one example of postmodern biography. However, because it
is biography, it does not have to account for issues associated with autobiography, i.e.,
how the subject, who is also the writer, can disappear (not just write from another
person's perspective as Stein did) from the text and still produce what is considered to
be an autobiography. David Antin addresses the paradox of postmodern autobiography,
as I will show in the remainder of this chapter, as well as the role of the self after
postmodernism, which I will discuss in the following chapter.

**Representation of culture in David Antin's Autobiography and "Autobiography 2"**

In the same way that the introduction of the airplane and telephone into early twentieth-
century society increased the speed of communication and access to all parts of the
world, television and satellites in the late 1960s when Antin's autobiographies first
appeared were bringing together previously unfamiliar cultures by broadcasting into our
living rooms immediate coverage of events such as the Vietnam conflict, the 1968 Democratic convention and riots in Chicago, and the U.S. expedition to the moon. Daily montages of chaotic war-related events, interspersed with commercials and lighter stories during our evening meals may have been shocking initially, but ultimately worked to desensitize the effects of the war on viewers. Additionally, pictures of Vietnam and the moon--far-away places that may have been either unknown or unimaginable to most Americans prior to television broadcast--made a very large, remote world easily accessible via satellite signal. As a result of this onslaught of communication and information technology, concepts of immediacy and coherency were completely revised at this time. Once unrelated events and information gained a new type of coherency, a "radical coherency" as Antin refers to it, that would have never existed in any other situation had it not been for the technology of the day.

In addition to these changes, the role of language was also being challenged during the postmodern period. The way language functions in society ties together political and cultural studies and literary theories and practices--all of which Antin is familiar with, as his writing to come will indicate. In *The Order of Things: An Archeology of the Human Sciences*, Michel Foucault theorizes about the changing role of language in society from the Classical period to the present. At length he fully opens the dialogue concerning concepts that have been simmering since the eighteenth century regarding the conflict between the order of nature and the order of human nature and how these ideas of order have affected language. He explains that "nature, through the action of a real and disordered juxtaposition, causes difference to appear in the ordered
continuity of being; human nature causes the identical to appear in the disordered chain of representations, and does so by the action of a display of images" (1970, 309). This statement summarizes what we have seen addressed by philosophers, scientists, and writers since Rousseau's period: nature inherently possesses a random disorder that human nature works to structure and order. In the attempt to organize the jumbled elements in a manner that is comprehensible to the mind, to establish a pattern in what may otherwise be considered noise, humans have arranged language in a linear sequence that allows all the components to be processed one at a time because we have not learned how to absorb everything as it is actually presented in nature, i.e., all at once.

Foucault's reasoning supports accepted theories of language and processing because it works with how we have been taught to read. His argument, however, does not recognize what writers of the time are attempting to do, which is present multiple elements simultaneously, even if they can only be read one at a time. In saying that humans process thoughts linearly, Foucault neither considers the possibility that this is a trained skill nor that it may not at all be completely "natural." It is no accident that writers who are trying to recreate their thinking in process produce very little of what resembles a strictly linear text. As previously revealed, the modernists tried to represent thought processes through stream-of-consciousness and fragmentation encased by repetition or circularity. Postmodernists, in contrast, use fragmentation that refuses to meld in the end in order to show thought processes in a high-speed-information world. To represent the working mind accurately, the style of writing, or the structure of
language, needs to reflect process as it occurs in society. Antin comments on this concept in his 1976 book, *talking at the boundaries*. He writes:

> all these considerations are based on this man's way of talking about his way of seeing there is no way around it a report is a report it has the problem of adequacy its not only a question of whether the report is true but whether its adequate whether his way of talking is an adequate way of representing his way of seeing and whether his way of seeing is an adequate way of representing the way something is happening (123)

In describing how he believes the telling of something should represent how it is coming to and through the mind, Antin illustrates his philosophy because the description seems to come straight from his mind and land on the paper, no time even for formal punctuation, which is not present in the thought process.

As simultaneous communication or distribution of information became more prevalent in postmodern culture, the demands of an increasingly fragmented and faster-paced society impacted the individual. The effects of society on the individual have caused significant division of the self since secularism took hold, and, whereas modernism stressed the need to maintain individuality, as we saw with Stein, postmodernism emphasizes the loss of the individual to society (Hassan 1987, 92). Antin's autobiographies show the absorption of the individual into society to the degree that the individual Antin is not discernible in his own life story—emphasizing the point that he exists merely because, and only as a sliver, of his family and social schema. This movement away from the self-important "I" as the only driving force of one's life story began to emerge in Stein's work as she included stories of numerous friends in her
books. More substantially in Vladimir Nabokov's *Speak, Memory* (1947), Nabokov stresses finding his place in the ongoing pattern of his family's history. While these writers show the changing role of the individual, from one of absolute center to one that is increasingly a part of a social structure, they continue to emphasize that the self is, ultimately, the absolute authority and controller of one's life story. Antin, in the postmodern period, yields his position of absolute center, authority, and controller when he produces two autobiographies that refuse to identify voices, stories, or time lines. His collection of snippets reflects his culture's pace and technology. Like avant-garde writers before him, he uses the technology of the day as a metaphor for how the mind works as demonstrated through the presentation of the text. In this case, Antin's texts are like a television set and remote control, where the viewer/reader continues to hit a button, flipping through the various channels of David Antin's relatives, friends, acquaintances, and overheard conversations to date. All of these snippets combine to produce the story of "David Antin," even if he is not necessarily present in them because, in keeping with the postmodern cultural construct, he is lost or absorbed into society and, therefore, not the center of his own story.

Even though Antin does not limit his autobiography to one set of people of one particular time period, his texts, like Stein's, Rousseau's, and Augustine's before him, include references specific to his postmodern culture. To begin, he starts *Autobiography* (1967) by introducing his mother as a woman with the desire, and, more importantly, ability to leave her husband repeatedly. While this may seem innocuous, almost humorous, to readers today, the idea of a woman leaving her husband six times
is allowable only in a society where all women (not only the economically privileged like Stein) are considered as more than property or dependents, where they are viewed at least as independent, free-thinking humans like their male counterparts. Such a society, unfortunately, did not begin to take form in the United States until the latter part of this century. Other more blatant indicators of popular culture in Antin's texts include driving high-speed vehicles; talking of naked women and diaphragms and condoms; and referencing the National Football League, science fiction stories, and transvestites. Similarly, "Autobiography 2" (1968) refers to hitchhiking, the invention of electric eyes on advanced machinery, extensive interest (approaching paranoia) in Communists and the Secret Service—all of which are markers of the 1960s.

**Narrative structure in Antin's autobiographies: fragmentation as reflective of a culture that has shattered and absorbed the individual**

As previously noted, evaluating a postmodern text using the same criteria traditionally used to evaluate conventional texts is unreasonable and impractical. Antin's splintered, nonconventional autobiographies force readers to find new ways in which to locate and evaluate the self in these texts. One way that Antin proposes we approach both texts and the self in today's culture is to consider the self in terms of narrative and story (1993, 95). He believes the two are specific and distinct, and that story is the "configuration of events or parts of events that shape some transformation," (95) whereas narrative, which defines the self, is more of a psychic function involving a paradoxical collision. More reductively, he is saying that story is what occurs externally to cause a transformation, and narrative is the internal change that takes place
because of the transformation. Once again, the distinction between representing the internal and external arises in the thinking of the avant-garde. In this sense, narrative defines what the self is and what it is capable of assimilating into its structure or schema of coherency.

Like other avant-garde texts, Antin's autobiographies break from the established popular convention in both narrative structure and writing style. However, because his approach to autobiography is particularly postmodern, these features become even farther removed from convention as they take form to support the radically changing role of the self. Narrative structure is perhaps the most immediate property of Autobiography and "Autobiography 2" to strike readers as completely different, even from the fragmented modern texts of Stein. To begin, Autobiography is only 12-pages long, by far the shortest autobiography I had ever encountered until I read "Autobiography 2," which is just over nine pages. "Autobiography 2," included in Code of Flag Behavior, was, according to Antin, completed a couple of months after the first autobiography but could not be included in the original Great Bear pamphlet because of a lack of space (1991, 15). The two autobiographies are quite distinct from one another (apparently affected by even a couple of months separation) and, therefore, actually work better as two separate texts. Aside from the shocking lack of length, the autobiographies possess other anomalies, such as strings of unrelated paragraphs, unattributed quotes, incomplete sentences, and a biographical sketch.

The first autobiography consists of an assortment of story pieces and quotes that, for readers coming to Antin's work for the first time, lack any sense of coherence,
narrative, or meaning. For example, the text typically presents a quote (which may or may not be Antin) followed by a brief story (which may be, but usually is not obviously, related to the preceding quote) followed by a part of a sentence (which often sounds like something heard on the television). A representative series reads:

"You know what's the most dangerous animal alive?--Wolverines. They fierce. We goin up to Connecticutt and hunt em with bows and arruhs."

in high school I used to visit the offices of the Cannonite wing of the Trotskyite party, where we were greeted by a lecturer who began each session with the words 'what are the contradictions in the world pattern today, comrades?'[...]

--the tree was smaller, the dogs were older and Getzler didn't have the grocery anymore-- (1967, 5-6)

To begin, the quote that opens this block is not attributed to anyone, even though Antin sets it off in quotation marks. The speaker's relation to Antin, and in particular to his life story, remains a mystery. The section that follows also concerns an unidentified "I," who may or may not be Antin because the speaker is recalling memories of communist rallies in an unidentified location. He follows the story of the Cannonite rally with a sentence, not set off in quotation marks, that sounds like a sentimental reminiscence of an aged adult returning home after a very extended absence.

As already stated, Something Else Press calls these informal recollections by the poet; however, many of these "recollections" very well may not be--as the Cannonite example demonstrates and Antin's later writing attests--Antin's at all. In talking about autobiography in what it means to be avant-garde, Antin proposes that the genre should go beyond the first person and should, instead, aim to address the truth (1993, 163). Apparently, to Antin the idea of truth is more difficult and important to determine than
establishing who is speaking. Providing an accurate representation of the culture that defines him (finding the contradictions in the world pattern today) is more critical and valid in autobiography than knowing who is saying what. This philosophy is almost alien to the centralized, egocentric works of previous writers, including the modernists who addressed the shifting role of the individual in a global society while still attempting to maintain some construction of self, and seems contradictory to the very definition of autobiography.

In presenting the various voices that define who he is, Antin borrows from the postmodern art community by creating a collage of text comparable to photomontage. The collage is assembled without transitions to link the fragments meaningfully for the readers. Sometimes the relationship between, or at least the leap to, fragments seems clear. For example, in "Autobiography 2," several of the passages contain common elements, such as references to sport jackets or teeth. These ties, however, are not the smooth, recursive themes that emerge in the modernist writings to bring together various ideas that form a satisfying picture in the end. Instead, in many cases, they seem to repel any attempt to form a complete picture. The images bounce off of one another, taking the piece in a new direction each time, usually never to return to a previous idea in the way that Stein's and Nabokov's pattern-driven texts do. For instance, consider the following string of text from "Autobiography 2":

he asked me if I was a Jew and told me they were the greatest people in the world. They invented the sport jacket--
Kneeling in a sugar drift beside the stalled machine—taking in the little girl
leaning idly against the gum racks--Honey colored hair, brown eyes lighting into
a welcoming grin. She had no teeth.

She went to the clinic because she had a toothache and the dentist was a young
guy so she told him how she was Rimbaud going up in smoke and they wouldn't
let her out (1968, 43)

and then five sections later:

he disappeared into a room in his parents' house and came out with a sport jacket
and a wife who had five children (1968, 43)

These fragments apparently are related only in that they contain some of the same
words. For the most part in the autobiographies not even this connection between
sections is evident. The second autobiography, although written only months after the
first, has many more transitional phrases and, at times, what could be considered
legitimate or blatant cross references. However, these transitions and recursive images
reinforce the spontaneity of the text, which contrasts to Stein's writing, in which they
indicate what is to come. For example, in one instance Antin describes what he calls,
"the only image of my father" (1968, 39). However, soon after, he returns to his train of
thought in mid-sentence with, "another/carefully fitting together the corners of
cardboard boxes" (1968, 40). The manner in which he returns to the memories of his
father creates a sense that the poem is being written as a recorded conversation, or as the
reader turns the pages. This is a way that Antin builds a feeling of process--which is
key to postmodernism--in his work.

In presenting incomplete passages without regard for time or apparent
relationship or ranking of importance, Antin's work reflects and perpetuates the way
information is presented in his culture. His autobiographies may seem absurd in what they include at times and in the jarring juxtaposition of images; however, Antin believes, in retrospect, that the works are still too connected thematically and are not "quite arbitrary enough to represent our American fate" (1991, 18). While the second autobiography at times possesses some connective tissue, the first autobiography seems connected only in that it contains information that somehow was channeled through Antin. His disappointment, then, can only be in his inability to determine "the contradictions in the world pattern today" by conceding more than he would like to the human desire to find patterns or cohesiveness in an apparently random world.

In keeping with his creation of a nonconventional narrative structure to represent the changing position of the self in postmodern society, Antin includes a biographical information section at the end of the first autobiography that provides some of the life details that readers usually expect to find within the body of the text, but do not come across in this case. Antin's inclusion of a nontraditional feature in his autobiography, however, is not new. Nabokov's *Speak, Memory*—published in 1947, serving as a transition between the modern and postmodern periods—contains an index. While the index itself is unexpected, some of its listings are even more surprising, particularly those for "Nabokov, Vladimir." In approaching autobiography, especially that which precedes postmodernism, readers generally expect every page of the text to be somehow relevant to the author/subject. Yet, by including his own name in the index, Nabokov both indicates his life story is in partnership with all the other names that surround his and foreshadows the postmodern construct that the self is not the absolute or constant
center of one's life story. The expansion of what is considered to be appropriate for autobiography during and after the modern period, however, was just that—an expansion. As Stein pointed out in *Everybody's Autobiography*, "Anything is an autobiography" (1937, 3). In the postmodern period, writers do not merely build upon what has preceded them. The ideas regarding autobiography do not expand to include; they change and break radically, indicating that a new order is emerging to replace conventional ideas which prescribe unrealistic and unattainable goals of linear cause/effect development and completion. They present, as Antin does, some pieces of truths—no matter whose—and then undermine publishers' and readers' expectations for the genre by providing a sardonic look at the "facts" of the writer's life that usually fill out a lengthy book.

Antin's biographical sketch concludes the brief collection that seemingly does not reveal much, if anything, about the writer. Made to resemble a common publisher's biographical sketch, the paragraph comments on the futility of the feature by presenting both conventional and ridiculous information, such as, "At four he visited his uncle's business in the garment center where he went out on the fire escape and looked down at the people below. He also made two cardboard boxes. His first prose works were published at age 9 (Kensington Magazine). [...] In after years he had his apartment painted and is now considering moving" (1967, 15). Biographical sketches typically conform to a boilerplate of required facts and, therefore, neither reflect the individuality of the writer nor reveal anything particularly insightful or unique. In mocking the convention—and, in doing so, undermining its authority—Antin provides a better view of
his subject than many autobiographies achieve in an entire text. His approach exhibits his penchant for humor and for challenging traditions, while reinforcing the postmodern belief that a whole, cohesive self does not exist.

Antin's use of the biographical sketch to end his autobiography achieves an effect in complete opposition to Stein's use of photographs at the end of her first autobiography, and in doing so illustrates the difference between postmodernism and modernism. Whereas Stein's photographs wrap readers back around to the beginning of the work, thus creating a circular, cohesive whole by means of the book, Antin's biographical sketch jars readers, making them even more conscious that the conventions of autobiography and life writing fail to provide a whole, "real" view of the subject at hand. It reminds readers that to reflect the individual within culture accurately, writing cannot create or present a definitive self.

Although Antin's autobiographies aim to eschew any conventional, familiar organizational structure and emphasize entropy over unity, they ultimately possess a preconceived approach to form. I argue that nothing, not even the most daring postmodern work, is created without some type of organization, regardless of how difficult it may be to detect in the finished piece. As the next chapter reveals, new approaches to order and organization become more evident as writers begin to apply chaos models of order to the seemingly random fragments of postmodern culture and writing. Antin certainly approaches his texts with ideas of order in mind, even if his aim is to produce a work that looks as arbitrary as his American culture (Antin 1991, 18). His autobiographies, which appear random, are actually reminiscent of the very
traditional poetic form, the ghazal, which dates back to the thirteenth century. The
ghazal consists of a series of unrelated couplets that are written at numerous sittings so
as to ensure that the writer's mind has been cleared. The final couplet contains a
reference to—or signature of—the poet, adding a touch of blatant autobiography to a
genre that is already imbued with unacknowledged autobiography. Like the ghazal,
Antin's autobiographies possess a quality of being written at numerous sittings after the
mind has cleared (as much as possible) the memory of what was written previously. In
the end, the arbitrary appearance of the form somehow makes a type of sense, if for no
other reason, because it is of and shaped by the writer's unique mind, and, thus, provides
a picture of his character at the moment. This is the same feeling one gets after
completing Antin's autobiography. Antin, who is first and always an extraordinary poet,
provides a sense of who he is at the time, as shaped by everything acting upon him,
emerges, even if what he did in high school or how he decided to become a writer does
not. As the next chapter shows, his interest in conveying the general shape of the self
and how it changes across time becomes more evident in his later works, which present
ideas that support chaos models and challenge us to reconsider the genre of
autobiography.

Unlike the modernists, Antin's earlier work is decisively more splintered,
refusing to help guide the reader through Antin's mind and leaving it up to the reader to
construct a meaningful narrative out of the stories. After all, trying to convey Antin's
interior narrative would lead to failure anyway. It is this desire to infuse a piece with
some type of meaning that inspires the interactive works of Antin's career, whether it is his performance/talk poems or audience-participation museum exhibits.

**Emphasizing process: the influence of literary trends, science, brain research, and communication on Antin's writing style as a reflection of the working mind**

With David Antin, more so than with previous writers examined in this study, narrative structure and writing style blend into the same discussion. Whereas Stein often changed lines of thought abruptly in her narrative structure to reflect the external communication of information in society, writing within individual sections remained fluid, lucid, more stream-of-consciousness in style as a reflection of the scientific theory that the mind operates through the flow of electrical impulses. Antin, however, uses both random narrative structure to reflect the presentation of information in culture and irregularly punctuated, often incomplete, images and ideas to mirror the movement of those ideas through his mind. In making these structural and stylistic choices, he reinforces the postmodern emphasis on process as perpetuated by developments in literary theory, science, and technology of the time.

Antin, much like Stein, uses present tense in his texts in order to capture a sense of process--of the mind and pen reaching an understanding simultaneously. Unlike Stein, though, Antin does not remind the reader that this is a written and edited text as she does by mentioning what stories will come on later pages. In that sense, he achieves a feeling of spontaneity and process more successfully than Stein. According to literary critic Ihab Hassan, one of the characteristics that distinguishes modernism from postmodernism is that, whereas modernism aims to achieve the finished art work or
object, postmodernism strives to show process, performance, the occurrence as it is happening (1987, 91-92). In Stein's work, she, too, was driven by the motive to capture a "constant present" as she called it in her writing. Her goal was to have her writing represent the immediacy of thoughts entering her mind, even if those thoughts were recollections. Although Stein strove to capture process, ultimately her work followed a plan, as evidenced by her alerts to readers that a particular story would come later, and it did. In doing this, she created what amounted to a type of false spontaneity. Antin, on the other hand, because of what his society's technology affords him that it did not for Stein, is able to represent--particularly in his later works--a sense of process, the "constant present" about which Stein wrote.

This sense of process is certainly what Antin spends his career trying to convey--first in his written texts and then later, when he finds writing to be inadequate, in his performance pieces. He is more interested in how to go about doing something than in what actually results from that endeavor. His preference for process over product is closely tied to his discussion of oral and written cultures and how these cultures view art. In his book, *talking at the boundaries*, Antin argues that in oral cultures (which is what American culture during the 1960s and 1970s postmodern era has been called), process is privileged over product. To illustrate this, he points to the art of pot making in certain oral cultures, explaining that very often there are extensive and elaborate routines for making pots as well as many other objects (1976, 192). The art in these cultures, he states, is in the making of the object, not in the finished object itself. He says that he keeps this in mind because sometimes people will forget which stage is
really the art and will rush to look at the pot to see the art, which is both wrong and probably disappointing. Antin's autobiographies support his view that the value of art should be in the making, not in the end result, of the work. His texts are built from his selection of details and stories as told in the voices of the people who have touched his life (Antin 1991, 15). By preserving the voices of these people in the present tense, he achieves Stein's goal of the constant present, of the story in the making, because distinguishing between details that have been related two days or forty years ago is not possible.

Antin's penchant for process, as illustrated by writing style, reflects the cultural shift toward orality with the widespread appearance of television and other nonprint media as primary sources of information and communication. However, it is important to bear in mind that he, in breaking with convention, is actually following the tradition of being an avant-garde or forward-thinking artist. By incorporating the latest theories and technologies into his style and subject matter, he follows in the vein we have seen since Augustine, who used the popular tools of his day, rhetoric, when writing *The Confessions*. Like the writers considered avant-garde before him, Antin adopts the cutting-edge approach of his day that reflects the movement of society as affected by advances in science and technology. Also like the avant-garde writers before him, his style is on the fringe, and, therefore, popular only within an eclectic group. The majority of writing remains what has up to this point become conventional, comfortable, familiar to the masses. All things become mainstream in time. In Antin's case, as with postmodern art in general, it may take 30 years before dissolution of
center, jarring juxtaposition of images, and indeterminable jumps in time become comprehensible to the general audience, who will then probably think it is all new, even though the roots of this thinking are in modernism at the turn of the century.

The pace at which society functions increases with new communication technologies, and this is especially true with the introduction of computers and visual media. The challenge for writers is to incorporate in their work the effects of these advances on the individual. Writers who try usually attempt to have their writing style mimic stimuli moving through the mind. As previously discussed, since the advent of computers in the 1940s, the human brain and computers have been compared and have inspired research in each other's discipline. Changes in technology and science affect how society is structured and viewed, which, in turn, determines how texts are created, read, and discussed. Sometimes the effects are subtle, as previously illustrated by military strategies ultimately affecting what school children are taught; other times they are more explicit, as with the corresponding work in brain research and computer technology. Gordon Shaw points out in *Brain Organization and Memory: Cells, Systems, and Circuits* that, in some regards, brain research has been the leader in cultural developments. As an example, he refers to psychologist Donald Hebb's 1949 work in brain organization, which the technological community adopted almost immediately to create a mathematical model of memory as a neural network and then to incorporate this model into a computer simulation (McGaugh 1990, 301).

While biology may have been the initial inspiration or model for computers, developments in computers have led to a better understanding of how the brain does not
work (Rose 1993, 83). The belief that brains "carry out many operations in parallel, and in a distributed manner, [with] many parts of a network of cells being involved in any single function, and no single cell being uniquely involved in any" (Rose 1993, 83) may not have gained significant credence in the scientific community until the late 1980s and early 1990s; however, it has been a viable theory since the 1950s, when, through his experiments on rats, Karl Lashley proposed that memory existed everywhere and nowhere specific in the brain. This distribution of memory throughout the brain as a simultaneous processing of information directly corresponds to the transmission of multiple pieces of information in postmodern society and how that information makes its way through the individual's mind.

Antin, who trained both as a linguist and an engineer, also draws comparisons between computers and brains while trying to capture in his texts the movement of information through his mind. In what it means to be avant-garde, he reveals his long-standing interest in computers when he writes of an interview he had for an editing job early in his career. During the interview, he explained, "so far the main problem with computers was the mechanical nature of their memories and here was a chance to introduce a kind of organic randomness into the system which was maybe more like human memory afterall" (1993, 13). Yet again, we are seeing the awareness of the randomness prevalent in nature and in the biological processes of humans (i.e., memory), who are, in fact, of nature. Just as the postmodern art community addressed randomness in their works, the science and technology experts also incorporated it into the focus of their research when trying to advance the understanding of the brain and
improve the performance of computers by taking their model inspirations from the human brain. Antin, obviously current with developments in engineering, art, linguistics, and the sciences, applied the latest theories to his craft, thus producing his seemingly random selection and bombardment of fragments that he calls his autobiographies.

As with the narrative structure and content of the texts, the writing style of individual sentences and passages is also random, refusing to adhere to a pattern. The length, tone, and rhythm of sentences varies unpredictably from that of the long and fluid to the short and poignant, the drab, the poetic, the profound, the silly, the incomplete, or the sometimes baffling. For example, his texts include long, poetic observances of "The water was warm and calm as glass. The jellyfish were out and you could see them glitter when you'd dive. Everytime we splashed the surface there was a shower of sparks" (1967, 13) as well as brief quips such as "they brought their problems to him and he always decided that both sides were exactly half right" (1968, 40). He jumps from poignant recollections of "when he was a kid his father took him to the zoo and forgot him there. he spent the whole night locked in the lion house" (1968, 10) to incomplete messages or unexplained lists such as "Rinso/ Luxor/ Thebes" (1968, 43). The break from pattern or predictability and embracement of randomness reflects the ideas of postmodernism, as we saw in art, studies regarding human memory, and computer advancements. These ideas stem from culture, where attention spans, thought processes, and communication are very often interrupted--to be redirected either temporarily or permanently--by an onslaught of incoming stimuli all at once. The quiet
meditation allowing for the introspections that Augustine, Montaigne, Rousseau, and even Stein record no longer is available to individuals in postmodern society.

Interruption has become the norm, and it is the postmodern writer's job to illustrate how this constant interruption of thought affects one's ability to look at, define, and construct a self—if that is even possible at all.

"where are you": the role of the individual and relocation of the self in postmodern autobiography

In his 1993 book, *what it means to be avant-garde*, Antin discusses his past work as he responds to criticism that he had "suffered from a belief in the unitary self and had not enjoyed the benefit of French deconstruction which should have disabused [him] of this illusion" (93). To this comment, Antin replies:

> i have felt the French breath of deconstruction unimpressed with it as i am but i am still interested in the self though i never thought i believed in its unity in so flatfooted a way as all that i always thought the idea of the self was surrounded by questions [...] and one of the questions im interested in asking is what is the locus of the source or ground of the self (93)

He continues in his reply to explain that it was this interest in the ground of the self that led him to arrive at a discussion for one of his live talk pieces. Because he sees no point in asking questions for which he already has answers, he posed the ancient and yet unanswered question, "where are you," i.e., where is the self located? This questioning of the source, ground, or center of self is evident in the autobiographies, as no distinct voice pervades, or authority governs, the texts. Instead, his autobiography—*his life*
story—emerges from a collection of voices and ideas from people who surround and shape him, i.e., his "family" in a most collective, expanded definition. Antin's opening words, "it's a tradition in my family to write an autobiography," (1967, 3) indicate the approach to and direction of all his work. He is a writer who refuses to be limited by categorization. He says he follows tradition, and he does, but only on his unique terms. He redefines what constitutes family, what determines one's own story, and what is tradition. In doing so, he calls into question all notions of center and relocates the self among pieces whose locus is all of society and culture.

To demonstrate that one's life story can no longer assume a state wherein the traditional self is the absolute center or focus, Antin uses ambiguous pronouns in recounting stories both about himself and about others. Just as the first person "I" is not always Antin, it is unclear whether the second and third person pronouns that appear in some of the passages actually refer to other people or if they refer to Antin himself. For instance, in one passage an unidentified "he" and "she" discuss how unhappy he is with teaching and how he would like to return to school to study engineering (1967, 7-8). The male here may be Antin because he is, among many diverse things, an engineer. However in light of the rest of the text, I would assert only with reservation that this passage is absolutely about Antin. Antin's use of ambiguous pronouns ties with his view of the self and the absence of a single, authoritative voice or subject. By eliminating the authoritative voice and blurring the clarity of pronouns, Antin shatters the conventional notion of a centered self, dispersing it alongside numerous voices, each of which carries an indeterminable weight in shaping Antin's life. Every voice
contributes to the act that, according to Antin, is performed by "a number of actors whose interaction we could call the self" (1993, 94). This combination of multiple voices to provide various views of the self or even various selves goes beyond the modern texts that paint different perspectives of the self. Antin, like the avant-garde writers before him, is consumed with the idea of representing the self truthfully, and the conditions of his culture force him to show the individual as a mere sliver of the society that contributes to what he is at any given time, and that he, in turn, also affects. Antin's point and purpose is to show as much as he can of all that has contributed to the defining of his self so that he can approach as accurately as possible a description of who he is. Ultimately, however, he draws attention to the belief that complete truth or accuracy is not attainable. Because external readers cannot understand Antin's internal narrative, it is of no consequence whether he includes a detail typically expected in autobiography or an obscure list that seems meaningless. Both types of information are actually fully comprehensible only to Antin if they are only about him.

In presenting his succession of memorable quotes and stories from his family and the people with whom he associates closely, Antin captures the essence of an oral culture that defines itself by its stories and endures by passing them down. The difference here, however, is that Antin preserves his oral culture by committing voices and stories to paper. The stories of others are a part of Antin because he defines himself only (not also, as with Stein and to a lesser degree Nabokov) in terms of how he exists in relation to others. This emphasis on the individual as it relates to the whole ties in with developments both in social theory and in science and technology during the late
1960s. Whereas modernism stressed the attempt to maintain individuality, as we saw with Stein, postmodernism emphasizes the loss of the individual to, or its absorption into, society (Hassan 1987, 92). For Antin, the self is made by the internal narrative, which composes itself from factors more far-reaching and incidental in society than even the modernists, with their extended considerations of autobiography, acknowledged. Whereas Augustine limited the self to its definition in terms of the Christian community, Rousseau was affected by the people in direct contact with him. Later, Stein defined her life story in relation to people in her social circle, and Nabokov in terms of his family history. In the 1960s, Antin saw the self as shaped by cultural factors which may have been remote, yet affected him nonetheless, like a wave travelling through water. This is not to say the self has no boundaries; in order to have shape, boundaries are implied. Antin asserted strongly that the self must "survive the collision or union with other things and endure it has to somehow rebound and remain distinct otherwise it is everything and nothing which is not a self" (1993, 98). Unlike the modernists who portrayed the self as firmly defined, even among its influences, Antin saw the self as a narrative at core that maintains its essential composition but that is able to react with other factors. Likewise, during this time, research in science and technology focused on the possibility of multiple neurons and circuits working in conjunction rather than alone to accomplish designated tasks (Rose 1993, 83, 281). All of these developments indicated a simultaneous shift in various disciplines away from a single-unit and toward a multi-organism structure.
In *tuning*, published almost 20 years after the autobiographies, Antin writes that in the 1960s he was interested in interactive work because incorporating other people's experiences into his own work made his work more meaningful to everyone (1984, 252). Although he is referring here to an interactive exhibit he had created for a museum that responded to, and changed depending on, participant input, his philosophy applies to his autobiographies, which are highly interactive as printed texts go. My own reductive description of these books to someone who is unfamiliar with them is to imagine walking with a tape recorder through various-sized rooms containing people from different time periods telling personal stories. Because the room sizes are different, the amount of material recorded from each speaker also varies. Some rooms are empty, and it is in these rooms that you record some of your own stories. The hallways between rooms are silent, providing the gaps between story pieces. Once you have travelled through all of the rooms, the autobiography is ready for transcription onto paper. In a way the method is similar to Stein's in *Everybody's Autobiography* in which she provides stories about the people around her to show all that has contributed to her life. Stein, however, never allows her text to become interactive to the degree of relinquishing control of the narrative; her voice directs every word of the text. Antin, on the other hand, allows the other voices to speak for themselves in his attempt to maintain some form of the "truth" about the stories that have created the narrative inside of him. In maintaining what he considers to be an accurate representation of the individual in culture, he shows the self as a participant--not the controller or focus--in
the making of the life story. What has become the ground of the self is culture, wherein the self is shattered and dispersed.

Language in postmodern autobiography: representing the inside to the outside

*there is no such thing as a perfect medium thats why they call it a medium because its in the middle so to speak its between it mediates a transaction and deflects it (Antin 1984, 56)*

In the Postmodern period, theorists, linguists, and academics in general continued to debate at great length the nature of language, particularly its capacity to represent meaning. Common dialogues among the structuralist, semiotic, deconstruction, poststructuralist, and feminist camps focused on the changing roles of the signifier and the signified, death of the referent, and depoliticization of language. Underpinning all of these concerns, however, is the questioning of language's ability to possess, carry, or indicate meaning at all. The various theorists proposed that meaning was socially determined, examined the cultural conditions that allowed for meaning to arise in the first place, and reevaluated the appropriateness of that meaning in contemporary society. While the social understanding of language and meaning is undoubtedly of tremendous importance, the physical processing of language by an individual cannot be ignored.

Antin, who trained as a linguist, is an expert in structuralism and semiotics, as evidenced by his continued interest in conveying meaning and understanding the role of social frames in that process. In *what it means to be avant-garde* he even devotes an entire talk to the subject he calls "the structuralist." He also, however, sees the problem of conveying meaning as more specific than the generalized theories of social
constructs; he believes the difficulties or impossibilities begin at an even more basic level—that which is physical and chemical in the body. To illustrate this idea, he presents in definitions a metaphor of a beetle in a black box. The section reads:

> each one carries a black box around with him in which he has a beetle and since no one can look into any one else's box whenever anyone speaks of his beetle everyone looks into his own box and supposes all the other beetles are identical with his it is possible to imagine everyone having a different colored beetle in the box or some other kind of insect or even nothing at all which he nevertheless chooses to call a beetle (1967, 33).

Whereas literary theorists are debating what cultural conditions allow for a particular black box and its contents to prevail or carry meaning, Antin is arguing that the contents of the black boxes are possibly all different—or even empty; no one knows for sure because we cannot see inside each other's box, so we ineptly and immaturely assume what we have is the same as what someone else has. Already subject to this level of miscommunication, any true understanding of one another is not possible. We can only understand how someone else's situation/story would play out in our narrative, so meaning is presumptuous and, most likely, incorrectly.

Antin's primary interest as a trained linguist is with the limits of language. Regardless of what structural combination it is given, language is still composed of the same basic material that has yet to evoke the same meaning—and, therefore, translates no real meaning at all—in two separate entities across separate media (Antin 1993, 164). While in tuning (1984) he states stoically, or resignedly from experience, that language is an imperfect medium, his autobiographies from almost 20 years earlier show disillusionment with the shortcomings of language. For example, in the first
autobiography he includes a story about incurring for the first time the problems inherent in translating between two media. Of someone's, perhaps even his own, charming childhood reminiscence, he writes:

I learned to read at an early age and had a firm grasp of the color words before entering public school. Red Blue even Orange. When I got there one of the first things I had to do was draw a picture of my house. I lived in a two story red brick house with green coach lanterns on the porch so I drew a firm outline with a pencil and colored everything in with a red crayon but though the crayon was red and the bricks were red the color of the drawing was nothing like the house. I became suspicious and gave up art. (1967, 4)

The child here who carries in his head what he considers to be the accurate, true idea (color) of his house finds that any attempt to reconstruct or represent that idea by translating it into another medium (in this case a crayon drawing) produces an insufficient image and, therefore, the child becomes cynical about the power and possibilities of art. Likewise, Antin, in the vein of so many thinking writers, finds that the words we have to convey the interior does not match adequately at all. The translation between the internal and external, narrative and story, "character and external physiognomy" (Antin 1968, 45), emotion and language, image and paint, truth and representation will always be inept because, in crossing the middle, the essence of each is deflected; "both sides [look] different" (Antin 1968, 45).

Because Antin never assumes a role of authority in his autobiographies, he does not write directly--as Stein, Rousseau, or Augustine do--about the difficulties he has representing his internal narrative in a different form, i.e., in words. His later publications and talks do present his theories of language and meaning, however, and are helpful when considering the anecdotes found in the autobiographies as metaphors.
for his philosophy of language and representation. When Antin asserts that complete
truth or accuracy is not attainable when trying to define the self, he is, to a large degree,
addressing the problem of using language to represent one's internal narrative. As we
have seen in this study, writers since Augustine have wrestled with language--both as an
excellent translator and an inadequate tool for representing what has been termed
everything from emotions, to inner experiences, to the internal, to narrative. The
ineffectiveness of language to translate the internal experience to the external world has
been a thorn in the sides of all the autobiographers discussed here. Antin, like most
postmodern writers, on one level chooses to abandon the attempt in his early texts
because failure is inevitable every time. That is, he does not directly try to convey the
effect that events have had on his inner self. However, some of his anecdotes
intentionally serve as metaphors to allude to a philosophy shaped by the experience
described.

In the second autobiography, Antin relays a humorous account of being in an ice
cream shop. The story also reveals his thoughts on language as representation. The
section reads:

they asked if he wanted an ice cream and he said he'd like a creamsicle. But
they supposing dixie cups were healthier said they didn't have any. He pointed
to the overhead fans where bright green and orange images of creamsicles were
hanging from the switchstrings, reasoning they wouldn't advertise what they
didn't stock. They couldn't stop laughing--"those aren't creamsicles, they're just
pictures." (Antin 1968, 42)

Up to this point in time, writers were obsessed with conveying some meaning through
language, "reasoning they wouldn't advertise what they didn't stock." That is, although
they knew the translation would not work fully, they still tried, perpetuating the misguided notion that achieving adequate meaning was possible—the challenge was to find a way for the words or advertisement to correlate with the meaning or stock. Hoping to reconstruct complete meaning was as much a naive goal as contriving a complete self in text, although a definitive self certainly did not exist in reality. Antin, like his postmodern colleagues, reevaluates language and the self in respect to reality and concludes, "those aren't creamsicles, they're just pictures." Language is pictures, words, representations—not reality. The meaning that the writer intends never adequately coincides with the meaning that the reader expects or finds, so in a way no meaning is present at all. Therefore, the writer may as well cease the futile, fraudulent approach of making it appear that meaning exists but no one can convey it properly. Perhaps meaning, like the creamsicles, does not exist at all, but is merely a fiction like the single, cohesive self.

As the postmodern artists earlier in this chapter show, because meaning may not have been possible—as a result of the inability for two entities, media, or people to connect completely—they abandoned the attempt to represent meaning. Instead, they made objects (toilets, dust pans, and such) the subject and purpose of art. In response to the disorderly order of nature, they imposed human constructs of linear order (such as geometry) on the environment to elevate viewers' consciousness about order and reality. As with art, where the paint does not stand for anything—it is just paint—Antin tells us that words are just words and pictures are just pictures, not creamsicles, not inept representations of some stored away reality.
Because an interpretation of one's internal narrative, which defines the self, cannot be conveyed through a medium to an external entity, Antin says, "its time we got rid of this fantasy of understanding you have to go a fair way with someone to come to a common knowing or at least some way of knowing" (1984, 141). Any true understanding of another person's narrative or self is not possible; therefore, the details of one's life in an autobiography are merely inane and superficial. The reader does not leave the text with any knowledge of the subject's self; she leaves only with the subject's story, which then must be interpreted into her own schema, never to arrive at the writer's intended meaning. Undoubtedly inspired by Wittgenstein, Antin's metaphor of the beetle in the black box addresses the idea that because we each have individual experiences and a unique biological composition we are inherently limited in our ability to know or understand what exists inside of someone else. Using this metaphor, Antin challenges the structuralist argument that the reality or meaning of language exists in its intellectual—as opposed to physical—processes. While the meaning of language certainly depends upon the cultural frame, Antin asserts that, if the physical structure within each of us is unique, then what is signified in each of us by a common signifier is also unique and, therefore, cannot possibly be the same.

His theory regarding the inability to transfer meaning or signify the same thing is supported by developments in the scientific community in brain and memory research during the 1960s. At this time, scientists determined that each individual has a distinct chemical make-up that interacts with the cells and synapses of the nervous system; therefore, no two people can experience the exact same chemical reaction in their bodies.
(Rose 1993, 201). Because the brain and memory are now believed to function in terms of chemical interactions specific to the individual’s biological composition, it would seem impossible for language to evoke the same meaning or effect in two people when differences originate at such a basal level.

**Relocating the self in postmodern autobiography using memory and writing style to reflect cultural constructs**

In contrast to the lengthy introspections found in the autobiographies of Augustine, Rousseau, and Stein, only one passage of Antin’s autobiographies addresses the self and identity. In the first text he writes:

> looking into the dark oblong mirror into which a triangle of light had fallen through partially open doors as into a pool of water I somehow became convinced of my identity with that luminous figure. We were both completely empty, devoid of properties and totally lucid (1967, 4).

For Antin, the self, which is situated retrospectively and, therefore, through memory (1993, 107), takes its shape in glimpses, slivers of light falling through cracks in the door and colliding with, partially filling, the mirror. It is a collision, once again as we have seen in all of the previous cutting-edge autobiographies, of the external and the internal. However, unlike the previous autobiographers who combined the internal and external to create a whole self, Antin sees the two as interacting at that precise moment to create a very specific and ephemeral composition, which he considers to be only a glimpse or piece of the self because to pretend a whole picture is possible would perpetuate a false construction of reality. Like the light in the mirror, the self is intangible and always changing form in response to other factors, such as doors moving or objects travelling through its path. It hovers about, distributed among many different

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things--its presence known yet unrestrained. However, because it exists in space, it
does have a shape with specific boundaries at a given moment. While the basic
composition of light remains the same, what it illuminates in the mirror depends upon
the angle at which it lands and what else is reflected in the mirror, contained in the room
at that particular moment. We see many parts, pieces, fragments, yet they do not add up
to a whole. The whole is partially in the parts, but the parts do not contain the whole.

To put forth this idea of the self, Antin creates autobiographies that attempt to
capture a sliver of the self as it exists in space at a specific moment. In this way he can
portray what he considers to be an accurate representation because he tries to show both
that a glimpse of an entire self is not possible and that the self is not autonomous. To
show the self accurately, he provides a view of a piece of the self--like a single page or
two out of a diary--as it exists without the value assessed through retrospection. To
accomplish this he writes in present tense, eliminating any sense of time passing, and
includes the stories of other people with whom he has collided and reacted. These story
pieces are written in a fashion that reflects the culture that allowed them to arise and
come to Antin in the first place. His use of memory and writing style illustrates the fast
pace at which information bombards the individual; reinforces the futility of attempting
to transfer meaning from the internal to the external through language; and emphasizes
the postmodern constructs of process over product, the absorption of the individual into
society, and the acceptance of entropy over linear conventional order in nature.

Although the autobiographies provide a sliver of what composes David Antin at
a particular moment in time and, therefore, are random in the sense that any material
defining any moment could have been included in the books, this idea of seeming
disorder—what actually reflects reality—does not tend to agree with the human desire for
linear order. Antin's postmodern texts, and the works of other postmodern artists,
emphasize the reality of nonlinearity or what was, at the time, considered to be disorder
in nature. However, other artists of the period, as we saw earlier with the earthworks of
Robert Smithson, opted to portray the human desire for order as imposed on, and in
stark contrast to, nature. The desire for order remains, and despite the postmodern
embracement of entropy over order, a general trend toward a different, larger view of
order would emerge as developments in science and mathematics led to
interdisciplinary theories regarding concepts of order and patterns and how
consciousness functions in such systems. Unlike his early postmodern autobiographies,
Antin's later texts (which have yet to be given a convenient literary label) continue to be
on the fringe as they work toward some type of coherency, what he calls a "radical
coherency," that requires one to locate the self in a larger more tangentially and
disproportionately related system. This means that, in order to find continuity or
Antin's place in the historical pattern, all of Antin's work must be considered as a
system wherein pieces of Antin exist. Only by taking in his entire body of work can the
reader begin to achieve a sense of the pattern that refers to Antin. Yet because the self
is constantly evolving, a complete whole is still not possible: only more of the picture
pieces are.

Just as Antin's work evolves to reveal more of who he is, it also, in doing so,
brings to light the increasingly interdisciplinary nature of current culture. As the next
chapter will discuss, Antin, as a linguist, engineer, poet, art critic, and philosopher, addresses ideas in art, math, literary theory, science, philosophy, and sociology. These ideas concerning coherency, identity, and consciousness in an expanded system lend themselves well to discussion in terms of developments in neural networks, chaos theory, and quantum physics, which have affected the way in which the self is evaluated and defined. Antin believes that the self has a definite shape in space and, therefore, has boundaries. His later works will track his move away from the postmodern idea that the self can be both everywhere and nowhere simultaneously because, for him, that would make it nothing. Instead he continues to relocate the self as a dispersion of pieces (as he did in the early autobiographies), only now among a larger scale that has many levels. The dispersion of pieces is specific and nonlinear, reinforcing his claim that he is not a globalist (1984, 55) and supporting ideas of chaos. For Antin, this is a way in which he is able to locate a ground for the self and maintain some sense of distinctiveness in what otherwise appears to be an increasingly homogenized, global society.
CHAPTER 5. BEYOND POSTMODERNISM: FROM THE FRAGMENTS OF SHATTERED TRADITION EMERGES A NEW ORDER IN DAVID ANTIN'S AUTOBIOGRAPHICAL WORKS

Significant cultural developments between the late 1960s and 1990s

Finding that the constructs of postmodernism eliminated the possibility of a location where the self could exist, writers and scientists interested in determining just such a place began to explore new ideas and theories. Beginning in the 1970s, cultural developments leaned toward more global or expansive answers to age-old questions concerning order, nature, and consciousness. However, these ideas—while a return to pre-postmodern notions of pattern and order—were unique because the concept of order was radically different from the linear order of convention or even the linear geometric order used by postmodern artists to contrast with the nonlinear order of nature.

Emerging simultaneously at this time in the various disciplines was an understanding that much of what had been dismissed as disorder or randomness was actually part of a very precise nonlinear order or pattern inherent in nature and humans. For a lack of nonconventional and, therefore, geometric language with which to describe this concept, this new understanding of order exceeded our previous notions of scale, overlaying a grid beyond our universe and quantifiable mathematical formulas.

Coming together to explain concepts of order and pattern, while also satisfying the human desire for some type of order (which postmodernists dismantled and exposed for its superficiality in its conventional form), ground-breakers in science and technology as well as in art and literature proposed radical explanations which, if not completely accepted as absolute, are at least familiar terms in today's culture and are
plausible arguments in philosophical and theoretical dialogues. An emerging field made possible by cultural developments but also serving as a catalyst in philosophical and theoretical debates is the relatively new area of study known as chaos theory. This new field of chaos theory, which actually applies to numerous fields, including physics, computers, memory research, art, and literary theory, suggests concepts that, while they are distinct to particular areas and languages, share a general tendency to search for a new idea of order that makes organization and sense possible.

In his book *Modern Conditions, Postmodern Controversies*, Barry Smart discusses how recent technology has transformed culture by affecting the scale on and manner in which society interacts. He argues that the new electronic technologies decentralize communication of information, changing the "scale, structure, and pattern of human activities and relationships" (Smart 1992, 116) to that which is global, nonlinear, and highly interdependent. These changes have proven to be problematic for Western cultures because, as Smart points out, we tend to view anything that is not linear or continuous as irrational (Smart 1992, 116), and our new technology allows for exactly those "irrational" conditions to reveal themselves as typical rather than as exceptional in nature and culture.

To build upon what Smart presents, it is critical to note that the seeming irrationality is actually necessary for us to allow for a new type of order to emerge, one which is nonlinear. The traditional view of the world has been dismantled during the postmodern period, forcing us to rebuild our understanding of nature and order as something significantly different from what is conventional and comfortable. Because
these ideas and theories resulting from chaos theory and continuing developments in quantum physics, are such a radical break from conventional knowledge and perspective, they appear irrational or senseless upon introduction. However, as history has shown repeatedly, as science and technology advance, more evidence supporting these theories surfaces to answer questions and to provide understanding of just what patterns and order exist in nature and how the human consciousness or view of the self fits into that pattern or order.

**Developments in science, mathematics, and technology**

As Western culture immersed itself in the electronic age, computers emerged as the standard technology. In the 1970s and 1980s, computers became more widespread and sophisticated, providing scientists and mathematicians the means for in-depth study of concepts such as complex dynamics, quantum theory, chaos theory, and neural networks, which were previously beyond the scope and capability of the available technology (Briggs and Peat 1990, 23-24; Hayles 1990, 2). Since scientists in the late 1800s began to acknowledge nonlinear order in nature and mathematicians then in turn began to develop nonlinear equations for studying such phenomena as explosions and winds, nonlinearity has increasingly become recognized as the rule rather than as the exception in nature (Hayles 1990, 144). This wide acceptance by the scientific community is relatively recent and directly correlates to improved technology which has allowed for more advanced mathematical interpretations through applications of complex dynamic equations, including those used by physicists and chaos theorists. Mathematician Roger Penrose points out that the development of quantum theory was
used by scientists and mathematicians to explain properties and phenomena that classical physics could not answer, such as "the very existence of solid bodies, the nature of chemistry, the colours of substances, the phenomena of freezing and boiling, [and] the reliability of inheritance" (Penrose 1989, 226). Penrose argues that, while classical physics does explain much of our complex universe, the very precise descriptions of quantum theory are necessary to explain other still unanswered questions, particularly those regarding the physics that underlie our thought processes or consciousness (Penrose 1989, 226). This argument seems reasonable because if we are, in fact, of the universe, it would follow that we, too, should follow the same laws of nature or the universe. To view the human being as something separate from the universe seems either naive or arrogant. The science of quantum theory, then, could in part provide a fuller understanding and new perspective of the world, much as scientific developments in the past clarified many of the mysteries which at their time were attributed to God or viewed as beyond the scope of human comprehension.

Quantum theory, much like other recent theories and fields of study in the sciences, is a return to find some order in nature, a concept that we saw dismantled in the postmodern period. The search for pattern, to place ourselves in the structure of a larger cosmos, however, did not merely appear with the sudden emergence of quantum theory, fuzzy logic, or chaos theory. The early twentieth century works of Albert Einstein regarding relativity and curved space as an alternative to Euclidean geometry, Werner Heisenberg's uncertainty principle addressing a particle's momentum and position, and Kurt Gödel's responding proof all paved the way for contemporary
scientific thought outside the realm of linear order and geometry (Hassan 1987, 56-59). Establishing the matrix for all of these contemporary ideas is Kurt Gödel's 1930 proof which proposed that even mathematical structures have limits of completeness and that, while no structure can ever be complete, it is nonetheless part of an even larger or stronger--yet still incomplete--structure (Hassan 1987, 59; Briggs and Peat 1990, 75).

In other words, while a pattern may be incomplete, therefore seeming to be random or lacking order because its linear continuity is broken or absent, the pattern is, in actuality, present; it is merely difficult to see within the scale of its present system. If the scale is increased, the pattern can be seen to exist as part of a larger system or structure. This concept of order or pattern across multiple systems on global scales is what scientists, mathematicians, and other theorists who were left unsatisfied with the constructs of postmodernism built upon in the 1970s when technology advanced enough to perpetuate the search for mathematical theories that might explain how the universe works.

In his text, *Fuzzy Thinking: The New Science of Fuzzy Logic*, Bart Kosko--who has degrees in mathematics, electrical engineering, philosophy, and economics--argues from the stance that all things are not, as we have been taught to categorize, either true or false (1993, xv). Instead, all things are a matter of degree, i.e., fuzzy, vague, or inexact. From this fundamental assumption, Kosko develops ideas regarding fuzzy sets that reside in our brains, allowing us to group things loosely according to these sets and to look for connections (Kosko 1993, 123). He extends the use of fuzzy sets to the development of computer systems known as neural networks that supposedly function...
more like the human brain than regular computers do and which will be discussed in more detail later in this chapter. What is important to note at this point is that the advances in technology in current culture have allowed various branches of science to further their investigation of theories that were previously impossible to explore. Fuzzy logic, quantum theory, and chaos theory all support general tendencies to establish patterns in larger systems that are not linear and were previously limited by computational capabilities.

Perhaps one of the most popular and culturally influential developments in science since the 1970s is that of chaos theory, which has seeped into our cultural subconscious as evidenced by its presence in discourses involving science, philosophy, economics, politics, and the arts. At one time, the term chaos evoked only thoughts of randomness, chance, confusion, or general disorder. However, this view began to change when, in the late 1800s, French philosopher, mathematician, and physicist Henri Poincaré drew attention to problems in the attempt to explain all natural phenomena in terms of closed Newtonian systems (Briggs and Peat 1990, 26-29). That is, the tendency to focus on individual units and to follow these units through time with the assumption that all the individual actions will add up to the system's collective behavior proved to be inadequate when open systems were in question. These problems, which scientists, including Einstein, Heisenberg, and Gödel, addressed with theories on nonlinearity in the early twentieth century, inspired the beginnings of what is now considered to be chaos theory.
Modern-day chaos theory provides an alternative view of order—one that is not based on linear, Euclidean geometry where everything is plottable on the traditional x-y axes relative to time and that forces us to view the world from a new perspective. Much like quantum theory which, Ihab Hassan suggests, requires that we view the universe "not as a collection of physical objects, but rather as a complicated web of relations between the various parts of a unified whole" (Hassan 1987, 61), chaos theory also supports the belief that the universe is a very interconnected structure. Strongly demonstrating this proposed interconnectedness is the aspect of chaos theory known as turbulence. Turbulence, which traditionally has been viewed as proof of fragmentation or disorder, actually exists because the pieces of the system are related; movement of any one piece causes movement of the others (Briggs and Peat 1990, 52). Turbulence is not plottable using Euclidean geometry, but, instead, is represented by fractal geometry in the form of self-perpetuating feedback that exists in the dimensions intermittently somewhere between that of a point (one dimensional) and a line (two dimensional) (Briggs and Peat 1990, 105). In fact, Briggs and Peat argue that the breakup of order into turbulence is actually "a sign of the system's infinitely deep interconnectedness...of its wholeness" (1990, 52). The notions of interconnectedness and a unified whole contrast sharply with the constructs of fragmentation and decentralization put forth by postmodernism and provide the possibility of determining a locus or ground for the self that accommodates a culture in which meaning seems tangential and ephemeral at best.

The view of chaos changed more radically because of scientific developments in physics and cultural changes discussed in the previous chapters. During the 1960s,
postmodernists and deconstruction theorists were breaking apart conventional ideas of order and hierarchy. In the midst of postmodernism, critics and scientists began to reevaluate chaos now that the world was being understood as dynamic and nonlinear. Because this was a time during which the definition or perception of chaos was changing to accommodate new views of the world, different disciplines used the principles of chaos for dramatically different emphases. As Hayles points out:

Literary theorists value chaos primarily because they are preoccupied with exposing the ideological underpinnings of traditional ideas of order. They like chaos because they see it as opposed to order. Chaos theorists, by contrast, value chaos as the engine that drives a system toward a more complex kind of order. They like chaos because it makes order possible. (1990, 22-23)

As we move away from the unrelated fragments of postmodernism in search of a new order, chaos provides a theory whereby order, and perhaps wholeness, is possible. The current movement in science is to see life and order as possible because of, not in spite of, entropy (Hayles 1990, 100). Scientists are now using the laws of chaos to explain and understand for the first time the working processes of nonlinear systems, including the human heartbeat and thoughts, the aging process, storms, the structure of galaxies, and perhaps even the origins of life (Briggs and Peat 1990, 14, 71). These chaotic systems are considered to be "locally unpredictable but globally stable" (Briggs and Peat 1990, 74) because, while they are constantly undergoing change—as with weather and the total recycling of proteins and cells in the human body every seven years—overall, the system remains essentially the same (Briggs and Peat 1990, 68, 74). By studying such chaotic systems, we can see how even minute events affect the dynamics and change the shape of the whole system, contributing to the maintenance of the
system's overall stability. If chaos can provide answers about human thoughts and the evolution of life itself, then perhaps it, as well as quantum theory, may also lead to insight regarding ideas of the self and where consciousness is located.

Because chaotic systems are so sensitive to even the smallest changes, they urge us to view the world qualitatively as opposed to quantitatively, a concept that proponents of linear equations, Euclidean geometry and space, and clear-cut cause/effect relationships may find difficult to embrace. The attempt to interpret chaotic systems quantitatively produces what is considered to be noise or randomness because the fluctuations of chaotic systems are sporadic and do not lend themselves to conventional linear explanation. Instead, they require a different set of rules, so to speak, in order to be interpreted. Demonstrating the different approaches to thinking with quantitative and qualitative mathematics, Briggs and Peat explain:

In the old quantitative mathematics the measurement of a system focuses on plotting how the quantity of one part of the system affects the quantities of the other parts. By contrast, in qualitative measurement, plots show the shape of the system's movement as a whole. In a qualitative mode, scientists don't ask, How much of this part affects that part? Instead, they ask, What does the whole look like as it moves and changes? How does one whole system compare to another? (1990, 83)

The implications of qualitative mathematics are far reaching. In terms of viewing autobiography, we no longer feel required to determine or trace the path of how every incident in a person's life caused or eventually led to another incident. The writers who are examined in this dissertation and who preceded Antin thought in predominantly quantitative ways. First Augustine saw every occurrence as the natural unfolding of events on the path to God. Then Rousseau felt he must recount the direct connection of
incidents to his behavior to the public's misperception of his true self. Next Stein wanted to show how her actions (such as telling Picasso to give up writing and return to painting) directly affected other people and improved society.

Breaking from quantitative thought in search of something that at the time had not taken shape are Antin's two early postmodern autobiographies, which do not define relationships between events but which do exhibit the beginnings of the "locally unpredictable but globally stable" (Briggs and Peat 1990, 74) thought behind chaos theory. It is important to clarify here, however, that this does not mean Antin is a globalist; he would very much object to that categorization (Antin 1984, 55). Rather, Antin illustrates the idea that the self as a system, while constantly colliding with forces, maintains its overall basic essence. The shards we see in Antin's early autobiographies may be random and unpredictable; however, the core material of the self overall remains the same, survives the collision--as Antin refers to it--with these random events. The shape of the system--in this case, the self--while pliable, remains essentially recognizable. The quest for Antin at this time, though, was to determine just what the core of that system looked like and where its boundaries lie.

Thinkers like Antin who were not satisfied with the unanswered question of postmodernism--if the self exists, then where--searched new territory necessary to map out for the self a possible location at a time when such a location had become unchartable using the available tools of society. Antin reinforces with the closing poem of his 1968 text, code of flag behavior:
there must be a sense
in this madness
only
he was not in a position
to discover it (65)

The order of logic, of coherency, for understanding the world and his place in it is not attainable using the strategies currently available; he must leave his current position or way of thinking and seeing in order to find where sense or coherency is possible.

Discussions in chaos theory focusing on open systems, or "autopoietic structures," echo the later writings of Antin (particularly what it means to be avant-garde 1993, 98), wherein he speaks of the self as interacting with society while also maintaining its boundaries, its definition. Autopoietic structures are paradoxical because they are simultaneously autonomous and interwoven within a larger environment (Briggs and Peat 1990, 154).

Antin's idea that the self has definitive boundaries that hover about as it collides and interacts with factors in society reads like the description of autopoietic or self-organizing and self-renewing structures, which Briggs and Peat point out include Jupiter's Red Spot, whirlpools, and even ourselves (1990, 154). Each open system has an internal organization that continuously adjusts to the environment. As they explain, "Each autopoietic structure has a unique history, but its history is tied to the larger environment...autopoietic structures have definite boundaries, such as semipermeable membrane, but the boundaries are open and connect the system with almost unimaginable complexity to the world around it" (1990, 154). Using this explanation of open systems that chaos theory provides, we can begin to understand
how an individual may be able to maintain a sense of self while also actively participating in our very complex society. The self, as an open autopoietic system, hovers, expands, and collides with other elements, continually undergoing change while maintaining its individual sense of definition through self-renewal and self-organization of a pattern of individual pieces, not necessarily the individual pieces themselves, which are interchangeable (Penrose 1989, 25).

Many aspects of chaos theory are also found in the principles of neural networks, a technological field that operates on the concepts of feedback and self-organization. The development of neural networks began in the 1950s when computers in general were developing, and the aim was both to understand better how the brain works and to emulate it (Fausett 1994, 1). Unlike regular serial- or parallel-processing computers that both operate on linear circuits, however, a neural network is an entire system of neurons and weights communicating across numerous layers, much more like the human brain than parallel or serial computers ever could emulate. In the same way that chaos theory stresses the interconnectedness of structures and quantum theory emphasizes patterns throughout increasingly encompassing systems, neural networks consist of multiple layers of neurons that communicate with each other to complete patterns of information through the system of neurons with unique associated weights (Fausett 1994, 3).

Neural networks were originally modelled after the human brain and, therefore, are capable of mathematically mimicking many of the same characteristics. However, it is important to note that while all neural networks are not constructed for the purpose of
studying human cognition, the attempt to model biology may lead to better mechanical computational capabilities (Fausett 1994, 7). Furthermore, mathematical models that have been developed to explain neural dynamics and pattern generation of the brain have radically affected how scientists view the way our brains work. Particularly, Skarda and Freeman point out, as a result of neural network technology, biologists now view the brain as a physiochemical system that is highly self-organizing as opposed to being purely reactionary to outside stimuli (ed. McGaugh et al. 1990, 377). In this approach, we see the mutual influence that these two disciplines have had on each other and which will also emerge in the dialogue of current experimental autobiography writing.

In her introduction to neural networks, Laurene Fausett describes these networks in simple terms as a system of layers which house a large number of processing elements referred to as neurons, units, cells, or nodes (1994, 3). She goes on to explain that "[e]ach neuron is connected to other neurons by means of directed communication links, each with an associated weight. The weights represent information being used by the net to solve a problem" (Fausett 1994, 3). As the system gains experience and the neurons send signals to other neurons in the system, the strength of the neuron's associated weight—or synapse between it and another neuron—strengthens. In keeping with biological models, it is within these weights or synapses, not the actual neurons, that long-term memory resides (Fausett 1994, 5-6). The existence of a working long-term memory is what makes it possible for neural networks to store, classify, group, and recall patterns (Fausett 1994, 3). This advanced ability to recognize patterns connects
the system's individual neuronal layers, allowing the system to function as just that—a system, a connected whole. Furthermore, because the system is so advanced, as weights or synapses gain experience, they, like their biological models, become better able to recognize patterns and can also teach themselves to group more efficiently, even when the information provided to the system is noisy or incomplete (Kosko 1993, 39). The system uses its patterning skills to complete or at least approximate what the total information would look like (Subramanya 1994, 9). The echo here with Gödel's proof of incomplete structures within other incomplete structures and with chaos theory in which pattern generation as a system feeds into itself results directly from cultural undercurrents in various disciplines, all searching for a way to establish order in a very fragmented culture.

Because the network's interconnectedness and design to search for patterns make the entire system sensitive to changes in any layer, the network also needs to possess fault tolerance similar to biological neural networks in order to be useful or reliable (Fausett 1994, 7). It must avoid the inefficient crashes or slowdowns associated with serial or parallel computers that encounter system damage or excessive data input. Describing this fault tolerance common to both biological and artificial neural networks, Fausett points out:

In spite of our continuous loss of neurons, we continue to learn. Even in cases of traumatic neural loss, other neurons can sometimes be trained to take over the functions of damaged cells. In a similar manner, artificial neural networks can be designed to be insensitive to small damage to the network, and the network can be retrained in cases of significant damage (e.g., loss of data and some connections). (1994, 7)
The comparison of biological and artificial networks that Fausett describes is supported by other scientific research, such as that found in Stephen Rose's text, *The Making of Memory: From Molecules to Mind*, wherein Rose recounts the results of work with trained chicks that compensated for brain damage by either rerouting information or reconstructing incomplete data patterns by relying on memory of the information or patterns (1993, 278). Unlike regular computers that can perform only tasks that they are programmed to do and that cannot self-renew or survive system damage and, therefore, crash, neural networks demonstrate more human survival or repairing capabilities. This is not to say, by any means, that they are of human quality or any near substitute beyond computational and mechanical machinery.

Although many of the mysteries of how the human brain and memory work remain in question, many scientists and computer enthusiasts believe that understanding more about how artificial neural networks behave may, indeed, provide insight regarding biological neural networks (ed. McGaugh et al., 1990, 350). Following up on this approach, scientists in the 1980s began to experiment directly on real neural networks in the brain, whereas models of neural networks have been around since the 1950s (ed. McGaugh 1990, 377). The hope is that advances in this technological field will guide researchers who are interested in the learning and memory processes. Work in both of these fields has affected the approaches that some writers take and particularly the way in which they try to represent the construction of the self in current society.
Developments in memory research

As advances occurred in science, math, and technology, and as new information about the brain arose, theories regarding how memory works also shifted to reflect these developments. Members of the memory research community representing different research areas proposed various ideas—often conflicting—of how we remember and where the seat of memory and consciousness exists. Regardless of the area of study, however, theories generally resembled ideas prevalent in other disciplines, again reinforcing the trends seen throughout history for cultural ideas to develop synchronously across multiple disciplines.

As stated in the previous chapter, memory research during the 1960s and 1970s struggled as a result of numerous failed experiments. What did emerge from these failures, though, was the rejection of any belief in the physical transfer of memory, despite the residual and misleading use of this idea by the science fiction publishing and movie making industries. The beginning of theories that viewed memory as a property affected by chemical changes to the whole body—its brain, cells, and synapses—became the new focus for scientists and researchers. Improvements in technology have allowed scientists to image and record chemical fluctuations in the brain as it is stimulated. However, it is important to keep in mind that technology may not automatically answer all questions about the brain and memory. As Rose warns, "Showing that a brain region is active when a person is learning or remembering is not the same as showing that the memory 'resides' in that part of the brain" (1993, 133). Quite contrary, most scientific research has, if anything, discredited the notion that memory can be assigned to any one
part of the brain. Instead, even though the hippocampus has been determined to play a vital role in transferring short-term memory to long-term or permanent memory, this region is not where the memories are stored (Penrose 1989, 379-380). Penrose believes that they are actually stored simultaneously in many places within the cerebral cortex. This vague explanation and assignment of where memory resides is about as clear as our understanding currently gets.

Since the 1980s, some memory research has been performed, none of which has produced concrete answers. Some studies include a return to classical conditioning of simple reflexes, such as eye blinking in rabbits, where neural circuitry is then mapped; a biochemical focus to determine which proteins may affect memory; and work with molluscs to see how neurons and the nervous system work (Rose 1993, 214-215). All three of these areas share an interest in observing changes to the neuronal structure in the brain and how this, in turn, affects memory. Rose presents studies of memory (including the experimentation by Ken Lukowiak in 1988 and by Mary Chen and Craig Bailey in 1990) that support work with neuron circuitry and distribution of memory across many neurons and cells as opposed to any single identifiable cell or neuron or synapse (1993, 226). Similarly, Kosko believes that "learning and memory lie in the great tangled webs of synapses" (1993, 206) in our brains; and, as we learn, the synapses change, allowing us to store the patterns we distinguish with our brain's fuzzy sets in whole fields of neurons and synapses.

Also supporting the ideas of the brain and memory as being nonlinear sets or webs, of neurons and synapses are chaos theory proponents Briggs and Peat. They
support Ilya Prigogine's argument that the brain, as part of a nonlinear world, needs to be irregular in order to function properly (Briggs and Peat 1990, 166). Furthermore, the brain as irregular or nonlinear contains fluid patterns of neurons within a network, and it is within these patterns of the network that memory, such as for making a finger move, resides (1990, 171). This web of memory, as opposed to any localization, explains how a hand can relearn to function even after severe damage to certain cells or neurons or even after the loss of an appendage. They argue that "[a] memory, like a sensation, is not an isolated bit; it is a pattern of relationships" (1990, 173). In terms of studying autobiography, this theory can be applied to assert that our own life story or construction of self is not a series of isolated incidents merely linked together, but is a general pattern that emerges over time within our individual fuzzy sets or webs, raising the question of what is necessary to see the self—one book, one genre, one body of work?

The focus of note here is that memory research currently follows the prevailing trends in culture, just as it has in the past. Theories that attempt to pinpoint specific cells or neurons responsible for specific memories have given way to new theories that support systems or webs of neurons, across which memory is spread. This shift reflects the disillusionment or rejection of postmodernism's fragmentation as the answer to how the world works. Instead, theories now promote interconnectedness of our memory structure, and, in doing so, suggest some type of wholeness is attainable, even if that wholeness is not definable or tangible. When Penrose discusses consciousness and individuality, he points out that because electrons are all exactly the same, regardless of
whether that electron is in a brain or in a brick, "What distinguishes the person from his house is the pattern of how his constituents are arranged, not the individuality of the constituents themselves" (1989, 25). Determining a pattern that identifies an individual is what has interested academics in various disciplines studying the self and has inspired a shift away from postmodernism. Likewise, the pattern that distinguishes an individual from his house also distinguishes him from other people, making autobiography and the assertion of the self as unique possible once again. As humans, Kosko argues, "our brains are full of fuzzy sets" (1993, 123) that we manipulate into loose groups where we can look for connections. These connections are the same as patterns, giving meaning and forging some type of order out of the noise of information that we encounter. Although we may all experience both unique as well as similar events in our lives, the way we can communicate how those experiences have helped forge an individual in an increasingly homogeneous society is by determining the pattern or shape of that person's system known as consciousness or self.

The network approach to memory, in addition to reflecting developments in other disciplines, has led to a new set of metaphors for explaining how memory may actually work. While these metaphors may not appear in the denoted autobiographies of writers exploring their mental memory and writing processes as we saw in the past with Augustine, Rousseau, and Stein here, the metaphors do provide a new frame on which to view autobiography and the self as more diffuse and independently organizing than previously considered.
As a reflection of the culture, current metaphors for explaining memory come out of the technological fields of computers and neural networks. The comparison that began in the 1940s with the advent of computers and developed through various stages of serial computing and then parallel computing is now evolving further with neural networks, even though it is now generally understood by scientists and technology experts that "the conscious mind cannot work like a computer, even though much of what is actually involved in mental activity might do so" (Penrose 1989, 448). The metaphor during the 1970s and 1980s of memory working like a parallel-distribution computer proved to be insufficient, because while parallel computers increased the speed or efficiency of processing in computers by distributing several bits of information at once, this does not reflect the human brain (Penrose 1989, 398). Although we may be bombarded by a variety of information simultaneously, we are still only capable of processing and of remembering one piece of that information at a time. If it is possible to process or learn more than one piece at a time, we have yet to teach ourselves how to do so. In Daniel Dennett's succinct comparison "conscious human minds are more-or-less serial virtual machines implemented--inefficiently--on the parallel hardware that evolution has provided for us" (1991, 218). Proponents of Artificial Intelligence (AI), who are very much in opposition to proponents of neural networks, provide metaphors in line with Dennett's explanation of how the mind works. AI developers see the mind as a type of processor that works with symbols much in the same way that conventional computers operate with strings of 0s and 1s--a very traditional linear movement of cause and effect throughout a system (Kosko 1993, 287).
In the 1980s, the AI community believed that the human brain with its parallel hardware could, however, carry out numerous operations at the same time (Rose 1993, 83). The problem with this theory is that, just as Dennett points out, we cannot carry out more than one conscious thought at any one time. Sure, we can perform numerous separate actions such as counting, walking, and snapping our fingers simultaneously, but these acts are not the same as trying to remember consciously more than one thing at a time. For the most part, in order for simultaneous actions to occur, these actions are learned and then become sub- or unconscious actions.

Despite our frenetic society, we are still limited, or perhaps preserved, by our ability to possess only one thought at any instant, even if it is a very brief instant. Despite the schizophrenic pace of postmodernism, the human consciousness, as part of the cosmos, aspires to attain wholeness, and this is reinforced with metaphors of neural networks. As with all metaphors used to describe the brain and memory, neural networks must be seen as just that, a metaphor, not an actual accurate model of the complex human being, whose intricate workings to some degree continue to escape the understanding of scientists. Even with their extraordinary capabilities to learn, neural nets are a very long way from being able, if ever, to serve as a realistic model of the human brain (Penrose 1989, 397-398).

When Rose conducted his experiments on chick brains in the late 1980s, he found that if he trained the chicks, tracked the path of learning, and then damaged that normal path, the chick's brain would redirect information to circumvent the damaged area and complete the flow of information (Rose 1993, 282). He and his colleagues
determined that "the brain doesn't function as a set of simply connected little boxes but as a richly interacting, functional system" (Rose 1993, 282). Rose asserts that brain functioning includes nerve cell activity, which is electrical and which flows through the brain "in patterns as simultaneously regular and varied as the waves of the sea" (Rose 1993, 131). While Rose's discovery does not acknowledge how brain functioning might relate either to neural networks or to chaos theory, the similarity of findings and shared language cannot be disregarded. He may choose to avoid these metaphors in explaining his findings, but others interested in understanding consciousness and the brain (Penrose, Pribram, Skarda and Freeman, Briggs and Peat, and Kosko) embrace them.

Other than Rose's theory of rerouting, another possible explanation for the brain's capacity to recall information even after it has incurred damage has been proposed by neurophysiologist Karl Pribram. Pribram, like many scientists, argues that memory is "delocalized" across the entire brain (Briggs and Peat 1990, 170). However, he also believes that memory is stored this way because it converts information to waveforms that he says:

create interference patterns which can be stored either at nerve cell synapses or in 'phase space' all over the brain...similar to the way information in a hologram is stored by the interference pattern formed when laser waves are brought together on the holographic plate. (Briggs and Peat 1990, 171)

To retrieve the image, the viewer shines a laser having the same wavelength either through the plate for a clear replication or through part of the plate for a fuzzier version; regardless of the method, the entire image is conjured. Pribram uses the hologram metaphor to describe how the brain can also recall information even after large sections
of the cortex (as with Rose's experiments) have been removed. The only requirement is that a waveform similar to the desired memory's waveform must pass through the brain. Although neuroscientists have not been able to confirm Pribram's theory, it nonetheless serves as an accessible metaphor for understanding the holistic nature of the brain and has inspired further research in this area (Briggs and Peat 1990, 171).

Other scientists who also argue for some type of holistic model of memory are Walter Freeman and Christine Skarda. Their work with the olfactory bulb of rabbits revealed results similar to Pribram's claim, i.e., "the limit cycle 'memory' for a particular smell may be stored [holographically] in the whole bulb's low-level chaos or fractal pattern...because each local region of the bulb contains the whole limit cycle encoded in each of the local region's oscillations" (Briggs and Peat 1990, 171). The patterns of memory for the rabbit's olfactory bulb, as well as for all memory that Freeman and Skarda investigate, are self-organized within the brain and require the "prior existence of unpatterned energy distributions which appear to be noise, but which in reality are chaos" (ed. McGaugh et al. 1990, 377). According to Freeman and Skarda, the patterns that identify memories are continually feeding back into themselves, collapsing back into chaos, and then emerging as a new form of order each time (ed. McGaugh et al. 1990, 377). Their explanation also complements the neural network model of memory currently favored by scientists, in which "memories must arise as relationships within the whole neural network--a sort of phase space of memories" (Briggs and Peat 1990, 171).
These metaphors for understanding memory lend themselves well to defining the self and interpreting autobiography. The self can be seen as possessing a base of unpatterned energy which continuously reorganizes, allowing for the individual to collide with many objects, thus changing shape—sometimes radically—but at the same time remaining stable in composition. The patterns that emerge as one interacts with the environment, not necessarily the underlying energies that are common to everyone, are what identifies the individual as unique. Likewise, autobiography can reflect this change in energy, with new orders of patterns emerging each time, but at the same time acknowledging that, while a particular autobiography may present a picture of a particular order or pattern which contains what composes that individual, another order—in the form of another text or genre—is also a legitimate or "truthful" picture of that individual. Like the hologram metaphor, any particular text or genre may be a fuzzy replication of that person, but it is, nonetheless, that person. Perhaps the only way to approach a clearer, continuous picture of that person is to consider that person's entire body of work—regardless of when its discrete pieces are written, its genre, or its purpose.

By accounting for a writer's entire body of work, we obviously get a greater scope of the writer's development and emerging order or sense through time, which is limited in a single text or view. However, even a complete body of work does not translate into a complete reconstruction of the self. A major source of the problem with conventional ideas of order when viewing autobiography is that many people, according to Foucault, confuse measurement and order (1970, 53). Foucault explains that
measurement and order are the only two forms of comparison. Measurement presupposes that a whole at one time existed and has been broken into parts, which many people tend to want to collect together with the aim of reconstructing or totalling the whole once again. Order, however, does not depend on an external reference that is necessary to fulfill for successful completion. The difficulty arises when people mistake their inability to measure or total up a whole version of the self for the inability to order the self. Measurement, tied to the Newtonian paradigm, focuses on individual particles or units with the assumption that if these particles or units are tracked as they correspond to one another, a picture of the whole system will emerge (Hayles 1990, 169-170). It is not difficult to see how this theory would be a convenient way to present an individual in an autobiography. However, as previously discussed, we now know that Newtonian paradigms do not accurately describe most of what occurs in our nonlinear world.

**Developments in art**

Recently I attended a Pop Art exhibit at the Contemporary Arts Center in New Orleans which, although small, was representative. The show, however, was highly criticized by a local art critic because of his bias toward more traditional/classical conceptions of art. The writer, who seemingly had a strong background in studio painting, understood how to talk about painting--its composition, balance, and so forth. Oddly, though, for an art critic, he did not seem to command a knowledge of art history, and, therefore, did not provide a clear interpretation to the newspaper's readership of the period's intended mechanistic and technological purposes. The critic, while dismissing the works of
Warhol, Lichtenstein, and Rosenquist (whose piece, among other things, incorporated the gallery's wall as the view from a painted car's window and was my personal favorite in this show), touted the sculptures of currently producing artists because these works did more than elevate everyday objects to art status; they, like painting, again, had qualities of balance, line, composition. In frustration, I crumpled up the review.

What the critic did bring to light, even if only incidentally, is the shift in the last 25 years away from the depersonalized works of the 1960s and toward pieces that demonstrate the interconnectedness of the individual and the world—be it family, community, politics, or environment. In the 1970s, the art world experienced a period of increased funding for extending art beyond the boundaries of the museum and gallery walls out to public places (Sandler 1996, 186). The work that had previously been initiated by earthworks artists such as Robert Smithson and that aimed to contrast the linear order of geometry against the nonlinear order of nature continued to bring art to people who may have otherwise never considered viewing art. Now, with cuts in government financial support for the arts, museums are making efforts to be more self-supporting by attracting more first-time visitors. This trend continued as many museums, including the recently unveiled Getty Museum in Los Angeles, made strides to attract new visitors by making the museum less formal and more interactive, with gardens, restaurants, gift shops, and hands-on learning centers. These spaces have altered the traditional museum atmosphere to attract people who might otherwise not visit, and, in doing so, have done much to change people's attitudes toward experiencing art. In the 1980s, however, the earthworks gave way to environmental works, such as
Elyn Zimmerman's architectural sculptures that incorporated the natural environment into the artwork itself, with the purpose, as Sandler points out, "to change people's relationships to their immediate surroundings in order to foster their interest in larger environmental issues (1996, 180). Works that emphasized the individual's interconnectedness with and responsibility to the surrounding world were not limited to outside environmental pieces; gallery installations and live performances also stressed political and social interdependency. Reflecting trends in other disciplines, art promoted ideas that showed us as part of the cultural pattern and inherently connected—an abrupt turn from the shunning of history and continuity in early postmodern works.

As art moved beyond the depersonalized, mechanical work that reflected the culture and technology of the postmodern period, painting that was obviously painting—i.e., meant to look like painting—once again gained credibility in the art community. Painters who were leading the way now were using the canvas to show relationships of people across many generations and situations. Describing the 1970s paintings of Philip Guston, Sandler writes:

Many of his images appear to refer not only to his own life—his memories of his father's death or that of his brother from gangrene after an automobile accident in which his leg was crushed—but to world events—the Holocaust. Piles of severed emaciated limbs, shoes, and decapitated heads are reminders both of his brother's legs and of the remains of Nazi death camps. (1996, 197)

Works such as Guston's, which he considers to be highly autobiographical, show the connection between ourselves and our world while also expanding the definition of what is considered to be the boundaries of the autobiographical or self-referential.
Other conventional art pieces (and by this I mean works intended for show in galleries and museums) during the 1980s and 1990s continued to blur the line between the autobiographical and cultural. Jonathan Borofsky's extensive installations aim, as Guston's painting did, to cross the personal and the public. He considers each installation to be a complete work that can be broken into many pieces--each a work in itself--and then sold randomly or stored away (Sandler 1996, 211-212). Borofsky's emphasis on the art work as a complete whole that can be split into parts is not the interesting factor here. What is, instead, is that once this work is sold off in parts or its remaining pieces stowed away or exhibited elsewhere, the original whole is no longer the piece and may never return to its original shape again. So, while pieces of the original installation may come together again at any given time, they are, indeed, the art work, and the place where the missing pieces originally existed holds the memory of those missing pieces. However, the new art work, while appearing to be a different work, is actually only in a different phase of existence; its matter or spirit remains constant regardless of which of its pieces are together or absent at any given time. What Borofsky originally viewed in terms of measurement--or a divided whole--ultimately works more in terms of order--or making some type of sense without "adding up" to a previous established value or composition. This installation as a representation of the personal or self undulates with the global or environment, changes shape and appearance, but remains constant in matter and underlying energy, much like the way Antin describes the self and its boundaries.
Whereas technology inspired mechanical reproduction during the early
postmodern period, widespread use of computer and video technology shaped, and was
used, in art during the 1980s and 1990s. Strengthening the comparison of the brain and
the computer, some artists used computers as a new way to show process and mental
activity—much the same approach that Cézanne took to capture movement or process in
his art. Sandler writes of Jenny Holzer's incorporation of technology into art with her
late 1980s installation of LED signs in Times Square which flashed "truisms" she had
collected from herself and the American unconscious (1996, 398). I do not believe that
those two entities actually can be distinguished from one another. Her truisms, which
included statements, such as, "Protect me from what I want " and "Money creates taste,"
flashed and paused rhythmically to reflect a voice, making the exhibit seem like "a big
brain displaying insights" (Sandler 1996, 398). Not only was the definition and
placement of art being challenged, but so was the line between personal and cultural
thought as well as human and machine. Was the point here just to demonstrate the
advances in technology, or was it also to emphasize how removed the individual had
become from her own sense of personal thought? Had we all become computers
spouting cultural clichés without thinking for ourselves? If so, what would now
constitute autobiography? How do we see the individual in such a global-thinking
society? Do we become completely insignificant?

As technology allowed for installations such as Holzer's to bring art directly to
the general American public, it also opened new avenues for artistic expression.
Probably the one form of art that is most accessible to popular culture and, therefore,
characterized the 1980s and 1990s is video, specifically music video (ed. Gitlin 1986, 112). Music video is a commodity that combines the functions of being a creative work while also promoting itself and the music it represents for sale. As an art form, music videos are created for show on television, which is arguably the most accessible forum for gaining information or viewing art in American culture. Some music videos are legitimate artistic expressions in that they, like more conventional tactile forms discussed, reflect the current culture and the struggle of the artist or individual to establish identity in that culture. Pat Aufderheide argues that in today's fast-paced and splintered society which is "dotted with shopping malls but with few community centers...music videos play to the adolescent's search for identity in an improvised community" (quoted in Gitlin 1986, 118). In a society that is not only secular but also global, that we have seen over the centuries move away from any semblance of distinct center or focus for personal identity within that society, this art form reflects the individual's sense of confusion and lack of coherency or even cohesion as the videos tend to present a montage of information and images that are loosely (if at all) tied to the song's lyrics (ed. Gitlin 1986, 113).

As in other areas in culture, video pioneers are now also turning away from the decentered, seemingly random, barrage of images and information of the postmodern and are searching for new forms of order and coherency in their work to reflect their expression and culture. Just as we have heard the partial patterns of an underlying rhythmic energy emerge from the trademark noise and feedback loops of the Jesus and Mary Chain on tracks appropriately named "Never Understand" and "The Living End"
in the late 1980s, we have seen some artists visually pull together a new type of order, as well. In his 1997 extended video format called *Destination Anywhere*, Jon Bon Jovi does more than make a 30-minute film with a soundtrack, does more than visually retell an album. Both the film and the music are integral to making sense of each other. The songs that overlay the action do not merely enhance or accompany the visual experience presented on the screen (and this video was made specifically for television). They provide the understanding, meaning, or sense for that part of the film. What Bon Jovi has done in this video is erase the boundaries between genres of film and music to create a space wherein a complete story of a young couple's struggle to recover from the accidental death of their daughter is revealed through music and dialogue, visual loops and flashbacks, moving video and still shots, and glimpses into the personal psyche and public perception of events. The combined media works better than a single form in its attempt to communicate a view of the self as affected by external and internal forces. Combining media, blurring genres as Bon Jovi does with the technology available to him, is possible because of the work done by earlier performance artists such as Laurie Anderson and Patti Smith. Anderson and Smith challenged the boundaries assigned to their art forms by mixing autobiography and public issues in their performances which included poetry, music, and physical movement.

More closely identified with the literary world in the early 1970s—after he had written his first two autobiographies—David Antin moved into a new phase in which he is credited for creating the "talk poem" (ed. Hoover 1994, xxxvii). According to Paul Hoover, poet and editor of *Postmodern American Poetry: A Norton Anthology*, Antin's
performances "returned poetry to its communal roots [and]...implicitly challenged the preciousness of the page and the concept of a poem as a closed system" (1994, xxxviii).

By emphasizing that poetry—a highly autobiographical form—is an open system, Antin allows for the exploration of the self, its boundaries, and its definition to interact and change with the surrounding environment while it is being formed during performance and again later when it is translated and transformed on the page for publication. Antin and other performance artists show the self as having core ideas or truths that act on an audience but that are also modified by the audience, as he demonstrates in his 1976 text, *talking at the boundaries*: "i consider myself a poet but im not reading poetry as you see i bring no books with me though i've written books i have a funny relationship to the idea of reading if you can't hear i would appreciate it if you'd come closer" (211). His interacting with his audience determines the length and content of his talks, as he measures events in terms of "energy" (1976, 191) and, therefore, shifts topics or closes performances according to energy surges, lapses, or exits. From reading the transcriptions of his performances, I suspect Antin's live explorations of the self, philosophy, politics, and culture are captivating. However, even working with only the texts of these performances provides a sense—albeit limited—of the atmosphere created by Antin and his audience in this construction of a self. The melding of various art forms and literary genres in current culture furthers the argument for the existence of underlying connected structures of patterned energy in nature and culture supported in the discussions of chaos theory, quantum theory, and neural networks.
The search for a new order in literary analysis

The early autobiographies of David Antin are very much in the postmodern mode, which is to say they are, as previously discussed, collections of seemingly unrelated fragments that can neither be attributed to any positively identifiable voice nor construct a definitive person or subject of the texts. Antin's avant-garde texts of the late 1960s not only follow the cultural pattern of the period as determined by an atmosphere of politics in upheaval accompanied by an onslaught of information technology, but they also perpetuate that cultural pattern by presenting the shape or structure of individuality or self possible in such a climate. As chapter three discusses, during the 1960s and 1970s, there was a cultural shift "toward local, fractured systems and modes of analysis" (Hayles 1990, 2).

In the midst of postmodernism, literary theorists addressed the difficulty of autobiography in the 1960s. Spengemann and Lundquist, like many theorists and philosophers, held the view that a writer must "identify the 'I' which writes all his past experiences. If he does not, his life will seem to him fragmented and incoherent, and its story will appear to us pointless and confused" (1965, 515). This inability to identify a single "I" that directs all of our past experiences is, of course, the very point that avant-garde writers such as Antin make by presenting fragmented texts. The single view of the self has long been discarded by cutting-edge writers, who have adopted numerous experimental writing styles with which to try to locate and represent the self. However, as Spengemann and Lundquist ask, because any attempt to define the self is a convention that emerges from the culture, what does a writer do when "none of the
conventions satisfies an autobiographer's need to order the details of his life?" (1965, 515). What does the experimental autobiographer, like Antin, do when the fragmented nature of postmodernism leaves him searching for a better way to understand his possible place in the world and to make sense of how it fits in with history, therefore attaining a type of coherency? He searches for a new order, a new way of understanding the events and pieces that in conventional perspective appear senseless or without order.

The understanding that current hierarchies and organizational structures did not adequately satisfy either cultural needs or physiological phenomena often became the focus of academic debate. At this time, deconstruction theory emerged, questioning social and intellectual hierarchies, among other things. This seems logical, for the cultural climate at the time was one of international turmoil with actual and cold wars, as well as political movements of minority groups (specifically African Americans and women), which produced a society constituted increasingly of isolated pockets. These pockets of society, particularly those involved in political movements in the United States, demanded rightfully that their position in the social and political hierarchy be questioned and that their own historical pattern be tracked. Because to live as a postmodernist is, as Hayles describes, "to live as schizophrenics are said to do, in a world of disconnected moments that jostle one another but never form a continuous (much less logical) progression...to have no sense of history" (1990, 282), some intellectuals sought out a theory that would provide an alternative to living without history, to living like a "schizophrenic." Deconstruction was intended to break the
boundaries established by conventional structures and thinking; and, in doing this, in producing fragments, it opened systems that had been arbitrarily closed for centuries by the men with power (Hayles 1990, 176). This opening of systems extends anywhere from gender roles to political ideology to literary genres. While deconstruction theorists questioned the prioritization of ideals based on traditional hierarchies and rejected the possibility of a conventionally cohesive whole being achieved, this measure seems very necessary; for as we know now, there is no one definitive view or story or history. Deconstruction theorists wanted to break from truths that were validated only by historical longevity; so, to initiate this break, they fragmented currently established structures. Likewise, proponents of nonlinear dynamics and chaos theory also broke from the arbitrary boundaries of classical systems. However, these fields, unlike deconstruction, emphasized continuity—i.e., history (Hayles 1990, 176). For those who found living within the constructs of postmodernism and deconstruction unsuitable for their need to situate themselves in a cohesive historical continuum and, therefore, to establish some type of order, chaos theory provided just that—a radical break from all conventional orders, yet an order nonetheless. Briggs and Peat argue that "[o]n a philosophical level, chaos theory may hold comfort for anyone who feels his or her place in the cosmos is inconsequential. Inconsequential things can have a huge effect in a nonlinear universe" (1990, 75). This attitude is different from that prevalent in postmodern thought where the individual really has no significance in an increasingly technological world—one in which machines can practically replace anyone, including the artist.
Drawing upon the previous discussion of measurement and order, it is easier to see that the fragmentation associated with postmodern culture does not preclude order. Certainly the fact that these are fragments implies they are of something necessarily larger that no longer exists in that it can no longer be reassembled or returned to its original shape. However, just because the system's one-time shape cannot be reached again does not mean that the system also lacks order. An underlying pattern of what can be called energy or behavior or attraction continues to interact with external stimuli or information to generate new shapes of patterns, all of which are composed of the system's same basic material. So, any particular text may present one or more perspectives of the self at the time of writing, but the view of the self in that text can never be complete; it may possess order, but it will not "add up" to a definitive, complete picture of the writer regardless of how many perspectives are included. As Gödel's proof explains, the system can approach but never attain completion; there will always be some information in the structure's pattern that is different or missing at any given time. As Kosko points out, with systems such as the self, "the parts do not add up to the whole. That is nonlinearity...You can study arms and legs and other parts and still not know how a human behaves" (1993, 108). Likewise, you can see a piece of someone in an autobiography and still not have a complete picture of who that person is. What you see is merely a dot in the larger pattern of that person's self, or the conflation of time to one moment. You must see all of that person's work throughout various periods of his life to see how, together, they present an overall shape--which is not to be confused with an overall complete or definitive view--of that person.
Following this theory, the more views of a particular writer that we have over a
greater period of time, the more we can see the writer's patterns (of tendencies,
concerns, and so forth) change shape, providing more layers of the writer's structure, the
self. Tracing those layers, we have a larger view of the system which--while it can
never be complete because of the nature of measurement--more accurately presents a
way of looking at that writer and determining how his or her shape (or self) changed
with various experiences. A core pattern begins to emerge that we can only see from
outside as observers over the course of time and an ever-expanding scope.

Because a writer's self changes shape and ultimately is defined through multiple
texts and over time, many academics argue that no one text or genre can be considered
the definitive autobiography of a writer. This seems logical in light of relatively recent
understanding of open systems. If the self is, indeed, an open system, then it makes
sense that any attempt to represent the self must also be open. For example, we may not
see in one text that a writer's brief mention of attending a rally for communism may
actually be a defining event for that person's life or place in history. However, this
seemingly inconsequential incident may lead to a fuller understanding of that writer
once other books are considered in which we can then see a relationship of events, such
as the connection between his family being uprooted from their Russian home and the
resulting disruption of order, i.e., of continuity or situation in history. In chaos theory,
retrodiction verifies causalities even though prediction is impossible. Situating the self
in one's historical pattern is easier to do externally, as opposed to internally, from within
the self. This is why academics, as opposed to the autobiographer herself, are in the
position to examine the developments of a writer through her entire body of work and
determine the relation of pieces to one another in shaping the self. This is also why
more academics (for example, Olney 1997) now believe that constructing the self
requires looking at all works by an artist, regardless of labeled genre or point in time
when written.

Examining David Antin's later autobiographical works as indicators of cultural
shifts in order and coherency

Since the publication of the officially titled autobiographies in the late 1960s, Antin has
continued to produce highly autobiographical works, although they are not titled as
such. These texts address his views on art, academia, culture, politics, coherency, and
the self. As his work continues, it reveals cultural shifts in ideas of order and coherency
through immediately observable features, such as book titles and biographical sketches,
as well as through more contextual aspects, such as narrative structure, writing style,
and the discussion of these very ideas—i.e., order, coherency, history—in relation to the
self. His work, if anything, shows a constant concern with coherency and order and
with defining one's self, which for Antin requires that it be situated historically.

Trying to find some way in which to begin writing about Antin's work, I jotted
down a chronological list of his titles. (I chose chronology because I am, for better or
worse, compelled to follow my human instinct to see things develop in time.) The list
of his books as well as the essay that first introduced me to Antin's work, reads as
follows: Autobiography (1967); Definitions (1967); Code of Flag Behavior, which
includes "Autobiography 2" (1968); Meditations (1971); Talking (1972); After The
War (A Long Novel With Few Words) (1973); talking at the boundaries (1976); whos listening out there (1979); tuning (1984); "Radical Coherency" (1987); Selected Poems: 1963-1973 (1991); what it means to be avant-garde (1993). The titles themselves indicate a concern with order, with organizing principles that track Antin's search for a way in which to define and situate himself, as represented through his autobiographical works. His initial autobiography, which, as discussed in the previous chapter, presents numerous unidentified voices and story pieces, is a quintessential postmodern text. What holds these seemingly random fragments together? According to Antin, these were images and bits of information or conversations that he did not want to forget (1991, 15). The reader is at a loss to comprehend order or meaning in the text as she sees the random barrage of information in postmodern society reflected on the pages in front of her.

As society and Antin found the lack of order and conventional historical continuity prevalent in postmodern thought more than difficult to live with and maintain sanity, his work explored new types of order to replace those that had been proven inadequate. Talking implies just that--a move away from preprinted text and toward spontaneous performance, although this text is a mixture of both art forms. In talking at the boundaries and tuning, Antin leaves behind the pre-scripted text to embrace performance, in which he interacts or collides with his audience as he attempts to find or fine-tune the boundaries that define the self. The 1987 essay, "Radical Coherency," presents a completely new way of viewing one's idea of order and personal narrative, which for Antin is that which traces the path of events or story inside of one's mind and,
therefore, imbues that story with sense and meaning. Breaking from conventional ideas of order in search of a new order corresponds with developments in other disciplines at the time, specifically chaos and quantum theory. Antin's most recent books, Selected Poems: 1963-1973 and what it means to be avant-garde, imply that Antin has distanced himself from his past work so that he may situate himself historically by placing his selected poems in a specific time frame and by defining who he is at one point in time—which he says requires retrospection—once he is no longer a part of the system that he calls the avant-garde (1993). One cannot write effectively about what it means to be anything—either an eight-year-old girl growing up in a small house with a big family or an avant-garde artist—until time and distance permit that person to have a less subjective and single perspective of the situation.

Over the more than 25 years that Antin has been publishing, his work has increasingly challenged established categories of art genres. As pointed out in the previous chapter, in what it means to be avant-garde, Antin refers to what he calls a problem because publishers want to categorize his work as poetry, but readers buy it, find no verse, and return it thinking they have not found poetry (1993, 125). Antin's poetry no more resembles traditional poetry than his autobiographies resemble conventional autobiographies. In much the same way that his poetry and autobiographies defy those very established literary genres, his entire body of work—writings and performances—blurs the traditional boundaries of what is labeled performance, art, fiction, philosophy, and autobiography. In his appropriately titled book, talking at the boundaries (1976), Antin uses higher-level mathematics, physics,
philosophy, and history to explore the definition or boundaries of the self. He writes that "as soon as you take a position very forcefully you're immediately at the boundary of that position which lets you look directly over the boundary to the other side" (215). Pushing at the boundaries of the self--how it is defined and where it is located (and, therefore, it certainly exists)--in his written accounts of impromptu talk performances breaks from all ideas of conventional genres. This blurring of categories reflects, and is possible because of, the culture in which technology has invaded every aspect of daily life, connecting and combining areas that were once distinct, such as the art work and the art viewer or the legal proceedings of a court trial and the theatrical performance of a television program. No longer is the individual shaped only by her interaction with the immediate environment but, thanks to satellites, televisions, and computers, also by her exposure to, perhaps even interaction with, global and universal phenomena.

In keeping with his continual challenge of boundaries and genres, Antin also turns the biographical sketch inside out and back again. However, as Antin progressively explores new ideas of coherency and order by disrupting and melding conventional art and literary genres, the biographical sketches that accompany his texts become increasingly traditional, perhaps as a sign that he has abandoned the attempt to convince publishers of the futility of such sketches and has allowed someone else to construct them. As discussed earlier, Antin's first autobiography includes the baffling biographical sketch at the end of the book that leaves the reader as confused as the fragments that comprise the main text do. His comments, "Said 'suppositories' before he was two...Wrote his first poem at age 9...In after years had his apartment painted and
is now considering moving" (1967, 14) show irreverence for these publishing
requirements which are generic boilerplates and, therefore, meaningless because they
present facts that could describe anyone.

He continues to demonstrate his disregard for the required sketch in his 1971
text Meditations, in which he provides a photograph of himself with his arms
outstretched as if to embrace the reader but with his head turned away in his usual
fashion of contradiction. This time he includes more historical information such as
when he was born, where he was living when the United States entered WWII, and the
exact street location where he was standing the day the smog began in 1948. His
sketch, while being very different from what one expects in a biographical information
paragraph, is humorous, poignant, irreverent, but also historical in the sense that it does
provide very specific details of Antin's development—or at least placement—in a
historical context. While this sketch is far from being traditional, it does possess more
conventional traits than its predecessor in that it strives to give a glimpse of the author
in a historical context, thus helping to construct a view of the self that has meaning for
the reader.

Turning abruptly from the sardonic early sketches that Antin obviously penned
himself, the biographical information sections of his recent books, Selected Poems
(1991) and what it means to be avant-garde (1993), are very conventional and most
likely written by someone other than Antin. These sketches describe the different
phases of Antin's art, the areas in which he has worked professionally, his previous book
title, and where he and his wife are currently residing and working. Interestingly, Antin

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is a professor of art, not English, at the University of California, San Diego (1991), again reinforcing his breaking of boundaries, genres, categorization, and expectations. Antin's expertise in multiple disciplines—art, poetry, linguistics, engineering—itself reflects a shift in culture away from the single career for life toward various interests and numerous career changes prevalent today. Furthermore, Antin's teaching position in the art department of a university reflects a shift after the postmodern period during which influential artists and writers were thought always to work outside of the academy—on the fringe. Now, it is commonplace, even expected, that an artist, but especially a writer, train and work within the university system.

The concepts that Antin has investigated as a result of his multiple interests permeate his works, particularly his later pieces that derive from his talks. The texts reflect and perpetuate shifts in ideas of coherency and order as reinforced by the narrative structure and writing style. In his 1967 book, *Definitions*, he presents an exhaustive list of fragments and extended passages defining particular concepts, in this case, those of pain and loss. As with his first autobiography and second one which was to follow the next year, the relationship between blocks of text is often a mystery to the reader. However, something very interesting that *Definitions* provides, in addition to many insightful and poignant glimpses into Antin's psyche, is a section that raises some of the same issues as chaos theory. Section four, "the roads," is a series of stanzas that attempts to look at a hypothetical situation involving a man travelling in straight lines:

he walks in a straight line in any direction
he turns through any angle whatsoever and walks
the same distance also in a straight line and keeps
on repeating this process what is the likelihood that he will arrive at some point some distance from his starting point or he rides in a straight line any distance turns through any angle rides the same distance also in a straight line and repeats this process any number of times what are the odds that he will arrive at some place some distance from his starting point or

[...]
suppose he encounters a wall (1967, 36-37).

Antin's reiteration of language and ideas in this piece at first seems reminiscent of T.S. Eliot's *Four Quartets* in which Eliot stops and starts over, saying, "That was a way of putting it—not very satisfactory," ("East Coker," II, 18) referring to his discontent with the inability of language to convey intention. Even though "the roads" is a poem and, therefore, very concerned with precise language and meaning, the way in which the poem turns into itself structurally to mirror the content's concern with the man travelling and turning in angles is what lends it to study in terms of ideas in chaos. An object—either a man or a poem or a mathematical equation—that continues to feed back into itself quickly changes form and does not arrive back at the point of origin. When that object encounters something foreign to its system, such as an audience or a wall or a new point, the object must readjust in order to continue.

Much like Antin's fragmented texts that seem random and without order or structure but actually resemble the poetic form of the ghazal, this piece, in addition to presenting ideas that will surface in chaos theory, also possesses the feel of another poetic form—the sestina. The sestina originated in the 16th century and is a highly structured form containing six end words that rotate positions, creating a scheme as
follows: 123456, 615243, 364125, 532614, 451362, 246531, 12/34/56. The last end word of a stanza becomes the first end word of the next stanza, and the other end words are intricately woven back into the poem following the very rigid structure. This process of reiteration in the sestina is much like the concept of feedback loops or functional iteration in chaos theory, in which a plot of a point on the x-y axis is reiterated by having the y variable become the x variable of the next point (Gleick 1987, 61). A trace of the original point always remains, although its presence becomes more residual as reiterations occur. Returning to the original point is not possible, but approaching that original point, like the man travelling in angles but always ending some distance from his starting point, is. In the last stanza of a sestina, the end words return to their original order; however, the stanza has only three lines, each of which contains two of the end words, preventing it from taking the shape of the first stanza. This is the co-existence of measurement and order that Foucault asserts that people often confuse. The reiteration over time will show itself as an order or pattern. However, measurement will never reach absolute recurrence of the original whole; it will only approach the original point because measurement always allows for a smaller, more precise increment, which, in turn, precludes a return to completeness. The sestina, much like chaos, presents a rigid determined form that allows for freedom within the structure. Because of its demands, the form almost forces the writer to produce a wild narrative within in the attempt to meet the constraints of the end lines. What emerges, usually, is an uncontrolled wandering of the writer's psychological connections to a very
controlled, constrained order of specific words. Sestinas tend to be entertaining, taking
the reader on a journey that often seems like the rantings of a lunatic.

With all of his scripted texts—those that did not originate as live performances—
Antin uses collage in varying degrees to structure his work. He does this to point out
the lack of cohesion in postmodern American culture (Antin 1991, 18). However, quite
different from most postmodern writers, he has never denied that he structures his texts
very meticulously to reinforce their purposes—whether it is to remember people and
In Code of Flag Behavior, which is one of his last solely written texts, he again presents
a collage of fragments, mainly found pieces from various sources. Even among the
fragments of his arbitrary culture, he searches for a structure, an order, a history, as he
writes, "In this house nothing was ever thrown away. They'd found a mass of doctors
prescriptions pinned together in separate sheafs, some from twenty years before. The
familys medical history could have been pieced together with the help of these scraps"
(1967, 29). Antin's interest in history, in coherency, is evident even in this early work.
Much as he believes the familys medical history can be assembled with the help of
random, seemingly unrelated scraps, the history of his culture and the self can also be
constructed with the help of the seemingly unrelated fragments he has collected in his
books. When he writes later in the same book, "There must be sense/ in this madness/
only/ he was not in a position/ to discover it," (1967, 65) he insinuates that eventually he
will be in a position to see the sense. That is, as the principle of scale in chaos theory
proposes, once enough time has passed, Antin will be able to have the perspective and
retrospection necessary to situate and construct a self imbued with meaning. He will be in a position that allows him to step back, to see a larger scale or section of the system wherein a pattern emerges of which David Antin is a part.

In the 1970s, Antin continued his search for a coherency that represented the American mind, and in doing so, moved more and more toward live performance as opposed to reading a text written in isolation. In *Talking* (1972), he combines scripted and spontaneously added text. Physically on the page, the text combines regular, italicized, and bold print spaced irregularly to indicate changes in speakers as well as time elapsed between comments. Antin effectively creates a text that closely replicates the rhythm, duration, and energy of the actual radio performance. By beginning with a script that he and his wife Eleanor performed extemporaneously on the radio and incorporating the new material into the transcription for publication, Antin injects an element of disorder into a pre-existing order. However, he does not create noise or chaos or disorder but, instead, a new order or structure reflecting the relationship of Eleanor, himself, the text, and the context of the radio station on that particular day. The text that Antin and Eleanor develop addresses concerns ranging from the war in Vietnam to the discussion of artists who claim to have no interest in history or one's place in history. Antin reveals the contradiction of attempting to live in the world while rejecting history when he discusses postmodern artists who claim that they are not interested in historical vaults known as museums. Antin believes these artists are not convincing anyone that they reject history or museums because they make oversized paintings that can only fit and be supported by walls in museums. Therefore, the artists'
goal, stated or not, is to get into a museum, into the historical continuum (1972, 158-159).

While *Talking* illustrates, as well as print media can, the mental processes of Antin and Eleanor interacting with each other and the text, Antin truly captures the sense of the present, of the processes of the brain at work, in his oral, or talk, pieces. Once he abandons text for performance, a new coherency emerges—one that has meaning because it arises out of a very particular context and interaction with that environment. Because one of the most difficult things to do is understand someone else's narrative (internalization of a story or event), trying to duplicate the context and interaction of the situation that produced the narrative is the closest we can get to translating that experience and, hopefully, conveying its significance. The human consciousness or narrative creates a radical coherency (Antin 1984, 197-198), and Antin tries to convey this coherency in his performances.

A marked departure from the fragmented early books, the talk pieces progress smoothly all the way through without interruption by formal punctuation. His structure mimics the movement of the mind as it travels along, collides with factors (such as people moving in the audience), changes direction, and finally arrives at its end—which means all the energy is expended. An interest in the present, in process—which we have seen in previous chapters with Stein and with Antin's earlier work—is characteristic of modern and postmodern writers. Antin's ability to capture the feeling of the present unfolding as the reader scans the page is impeccable. He defends his preference for the immediacy of performance over script when he (ironically) writes:
talking for me is the closest i can come
as a poet to thinking and i had wanted for a long
time a kind of poetry of thinking not a poetry of thought
but a poetry of thinking since getting so close to the
process of thinking was what i thought the poem was (1993, "the
river"123).

and:

im much less
interested in revision and polishing than in the difference
between print and performance
now both are available and
interesting for the representation of experience
performance is attractive for its immediacy and power
print for its continuing availability which is a
convenience though sometimes delusory because it seems to
promise so much clarity and duration and i have an
attraction to clarity though not so much to duration but
i have a much greater attraction to performance to the

Antin's interest in the present, as he intimates, is in understanding the narrative that
arises within a particular context. His decision to omit formal punctuation and to use,
instead, spacing as an indicator of the performance's time, rhythm, and energy makes
the reader an active participant, not just an observer, on the ride through the experience
and ideas presented on the page where both the subject and reader arrive at a place, an
understanding, a narrative coherency together. Antin's technique and purpose are
different from that of modern texts, such as James Joyce's Ulysses, in which the
spectacular concluding section tracks the mind of Molly Bloom in a style so fluid and
lucid that even without any punctuation it is arguably the easiest part of the book to
follow. Both Joyce's and Stein's texts aim to mimic the mind as it works in the moment.
Their writing, however, does not take the subject and the reader on a blind journey; the
authors always remain in control, directing the text and leading the reader. Antin's texts are neither fictional nor meticulously scripted; they are extemporaneous explorations (very lightly edited for print (Antin 1993, 124)) of self-definition, politics, family, philosophy, and science, among other things, that reinforce the current developments in neural networks, as well as in chaos and quantum theory.

Very different from his early fragmented texts, Antin's talk pieces possess a physical and contextual cohesion that is similar to current technological models in neural networks. Where his early texts reflected the emerging technology of the day, conveying the feeling of someone clicking the remote control through numerous television channels ("channel surfing"), so, too, does his most recent work reflect contemporary technology--with key words such as "webs" and "nets." The concept of our world becoming increasingly interconnected through the technology of the internet and world wide web, which individuals can access from their own homes, is certainly more than an intriguing convenience. However, the area of computer technology that is of interest here because of its tie to biology and mental processes is neural networks. As discussed earlier in this chapter, neural networks are a system of layers composed of neurons, units, cells, and nodes that communicate with each other across layers by way of links called weights or synapses (Fausett 1994, 3). It is believed that the system's long-term memory resides in these weights or synapses, which change and adjust as the system gains experience. Therefore, the synapses connecting the system's layers of neurons allow for meaning within and give the system cohesion.
The role of the scenarios that Antin includes in his later books resembles the synapses in neural networks because the scenarios function both to situate the piece that follows and to bridge all of the talks so that the reader knows exactly who is speaking, when, where, and what it means. In providing the story of what happened after one performance, consequently leading the reader into the next performance, Antin achieves a clarity and cohesion in his most recent work that his early texts eschew. He gives both story (the telling of events) and narrative (the internal experience of those events), and the story helps the reader get to the narrative. This is not to say that neural networks are the model for Antin's writing. In actuality, they vary significantly in that, with the neural network, meaning is in the connection links between information. Conversely, Antin's texts provide the meaning in the talks and the information in the links that connect the transcriptions of experiences or narrative. Nonetheless, the basic concepts behind the technology indicate a cultural shift toward an interconnectedness that is evident in *talking at the boundaries, tuning, "Radical Coherency,"* and *what it means to be avant-garde.*

Aside from the physical presentation and narrative structure, Antin's later works demonstrate an awareness of cultural shifts with the topics of talks often addressing ideas of coherency and order, as well as of locating the self, which will be explored later in this chapter. One of the strongest illustrations of Antin's (and contemporary society's) move toward a new type of order is found in the essay "Radical Coherency" (1987). Although this piece is (as far as can be determined) an essay written for a magazine and not a transcription of a performance, it still possesses the feel of process,
if not of the present. The reader still gets the impression that Antin is speaking into a tape recorder or writing as ideas enter, develop, and then exit his mind, giving way to yet some other topic, but that he has uncharacteristically started thinking through his original question before he turned on the recorder. The essay grows out of magazine editor Don Wellman's question regarding Antin's move from collage to talk pieces, to which Antin sets up the rest of the essay with:

but i wanted to think about what i was doing and what i used to do in the light of the notion of coherency which i specifically wanted to think about the idea of what we consider coherent why we consider it coherent and the different ways of thinking things are coherent that are based on different organizing principles (1987, 183).

Different organizing principles, or ideas of order and coherency, drive the different stages of Antin's work and correspond with changing cultural ideas of order. That he wants to view these organizing principles in the way that they connect his past and current work further supports his move away from the random or arbitrary fragmentation of postmodern ideas and toward the interconnected nature of chaos.

Antin began his work in the 1960s with collage in an attempt to make interesting the "usually continuous things you would consider coherent" (1987, 183) by taking pieces from these many different and varied continuous discourses and putting them next to each other to see what new text emerged. He typically pulled from sources such as aeronautics manuals, Jehovah's witness magazines, travel guides, and philosophical reflections. While this proved to be entertaining for awhile, Antin says that eventually when he heard the fragments coming in his readings he would recognize the original
continuous discourses from which he had taken them. Because this was of no interest to him, he decided to move on from collage. An aspect of collage that he did like, however, was that he realized his audience was probably unfamiliar with some of the sources he used in his work because he did use texts from such a wide range of disciplines. For Antin, imagining what organizing principles his readers used to make sense of the poems was fascinating, and he equates the way in which his audience probably views his collage with the way readers approach language poetry or the way his mother approaches going to a shopping center.

What ensues with this shift in Antin's narrative is an extensive retelling of his journey with his 76-year-old mother through Sears, which, like the entire shopping center, is organized around the system of collage. The juxtaposition of unrelated sections in Sears is like the arbitrary collection of shops in the mall, each of which is separated by boundaries, such as the terrazzo flooring, which are often unnoticeable or which quickly disintegrate into other sections. Each section has its own system of organization; if that familiar system of order breaks down—for example, when shoes are tangled together in piles instead of arranged on shelves—then it becomes difficult to make sense of what is there. For Antin's mother, this means "she couldn't see any shoes" (1987, 187) even though there are probably hundreds in front of her. Because the pile in front of her does not possess an order with which she is familiar, she cannot comprehend or "see" it, much like linear or classical views of order cannot see order in the barrage of stimuli in postmodern society. Antin recognizes this as a problem not with the pace of society but with society's view of coherency, as he says, "i keep
thinking/ shes going to figure this out" (1987, 191). Crossing the boundaries of the store into a new section which has its own completely different idea of order, however, is "a tough voyage" (1987, 192) for his mother who is afraid and who does not figure it out and who retreats into the safety of familiarity with, "cant we just go home?" (1987, 192) even if it does mean that she will leave the store without getting what she needs. Her apprehension toward new systems of order in the Sears store certainly is not merely Antin's commentary on the disarray or daunting structure of a department store; he is commenting on the same apprehension that many scholars have toward approaching new ideas of order that he terms radical coherency.

Before he moves into his explanation of radical coherency, he addresses a coherency he found interesting in the department store. He refers to a "fully articulated/ system of hosiery" (1987, 193) that has been established but that "whatever the system contained at this/ particular moment all that is left of the system/ is whats left on the shelves" (193-194). Antin's point is that there is a definite system of order in place, and at any given time different parts of the system are missing, which may seem like disorder, but the order is, in fact, there. The reader can see the hosiery system, which itself is incomplete, as part of a larger incomplete system (Sears), which is also part of a still larger incomplete system (the shopping center). How disordered the system appears at any given time depends on the scale at which the system is being viewed: the smaller the increment of scale, the more difficult it is to see the recursive pattern and the more likely the system will seem random or unrelated. This, as Foucault has shown, is a problem with measurement and not with order--increase the measurement and the
order will emerge. Antin's understanding of an incomplete system nevertheless containing coherency echoes Gödel's proof; likewise the levels of systems within the shopping center incites ideas of scale and fractals in chaos theory. While these areas of study are currently topical, Antin is interested in ideas that account for more than either restoring the missing parts of a system or juxtaposing unrelated fragments (1987, 195), which he sees as "threatening to assemble itself into a fairly dull familiar thing" (1987, 195). For Antin, there are other types of organization that he finds interesting--specifically the movement from and toward coherency (1987, 196).

Again, as it has always been with Antin, the fascination is with process (the movement) and not product (the arrival at order). He writes of a professor who at one time is part of a conventional coherency but who begins to become less coherent to observers as he acquires bizarre articles of clothing piece by piece (1987, 196). However, as time passes and the professor acquires additional clothing, he again becomes more coherent to observers who make sense of his new attire. He approaches a new type of coherency; then he acquires a walking stick and disappears. The movement away from and toward different types of coherency is like the reiteration of an image in chaos theory; the professor once had a certain shape which fed back into itself, producing image after image that did not resemble the original form and was, therefore, incoherent. Eventually, and suddenly, a reiteration approaches something recognizable as the professor, yet not exactly what he was originally, and then disappears just as quickly.
Making sense of this professor's actions is difficult because trying, as Antin says, "to formulate a kind of sense out of someone's most conventional narrative just to try to make sense of it appears to produce a radical coherency that I had never anticipated" (1987, 197-198). He illustrates this with the story of his grandmother's death. During her final days, her words were incomprehensible ramblings to her family because they could not follow her narrative and, therefore, could not make sense of what she was saying. Antin writes of trying to reconstruct her narrative so that he could follow the order of her thoughts, allowing him to see the sense and coherency in her yells of, "give him some money," "put it in the can" and "there's not enough room go away" (1987, 198). He thinks that the way the mind actually organizes things is far more interesting and radical than any mechanical attempt (such as cutting up text or making collage) to model the randomness in nature (1987, 197). Because he is fascinated with the way the human mind creates such intricate narratives, he is surprised to learn how very little scientists actually know about the working mind (1987, 197). Because the human mind is so much more complex than any machine built to model it, any comparison is not only reductive but naive. The preference for the natural complexity of the mind over any randomness constructed by a machine or technique is the reason Antin shifts his focus strictly to tracking the human narrative (1987).

Trying to understand someone's narrative is almost impossible if you are unable to account for the introduction of elements that send the narrative spinning in an unexpected direction. In the way that chaos theory allows us to understand that a butterfly flapping its wings in Japan may ultimately be related to a rainstorm in South
Carolina, it also allows us to see how "there's not enough room" is related to an orthodox Jew collecting money who will not get out of the bed and, subsequently, Antin's grandmother's death. There is a clarity in this seeming nonsense of a narrative that presents a radical coherency and illustrates interconnectedness as a very complex web that is not linear but is definitely logical and, therefore, possesses order.

In his work that follows "Radical Coherency," Antin continues to explore the interconnectedness of the narrative he identifies with the self. In Selected Poems and what it means to be avant-garde, he looks back on his work, reflects, and situates it historically with the distance and perspective to see it on a different scale, one in which patterns emerge and which "will show somewhat more loosely and truly the body of work that I did then and its clear connection to the apparently very different work I am doing now" (1993, 13). His most recent work considered along with his past work unveils a development of Antin's understanding of how and where the self can be constructed. Only in viewing all of his work can the reader see the connections that wind through Antin's texts, ultimately revealing a clearer, though still incomplete, view of his narrative or self.

Constructing and locating the self in a world of webs

In his most recent talk pieces, Antin may not use metaphors borrowed from current technology to explore his thinking or writing processes the way that Augustine, Rousseau, Stein, and even he to some degree in his early written texts do. However, he does use extended metaphors when discussing the construction and location of the self. These metaphors reflect his experience in disciplines such as engineering and linguistics.
as evidenced by his knowledge of advanced mathematics, literary theory, and sociology regarding language. In trying to define and address questions regarding the self, he situates himself as a leader in the now current trend to look to other disciplines, specifically mathematics (which takes in chaos and quantum theory and nonlinear dynamics) for an understanding of the self.

Although 26 years elapsed between Antin's first autobiography and *what it means to be avant-garde*, his ideas of the self in the eleven books written during those years do not change significantly. In all of his writings, he portrays the self in terms of family, history, boundaries, and, most emphatically, narrative. As we have seen, the form he uses to present these concerns changes radically from the fragmented early texts to the fluid talk pieces. Nonetheless, his belief in the self remains constant despite criticism from deconstruction and structuralist academics. As chaos theory has entered academic dialogue, Antin's now 30-year-old ideas about the self reflect the current cultural shift in thinking toward our interconnectedness on not only a global, but a universal scale.

**Talking his way out of explaining:** Antin's move to performance as an alternative to trying and failing to represent the internal experience

"and like spiders we poets are all beneficiaries and victims of our language there are limits to what we can do with it as we move around in it" (Antin 1994, 164)

Like every autobiographer discussed in this study, Antin is consumed with the idea of translating the meaning of his internal experience to an external audience. In trying to convey that experience, we have seen the writers try both to mimic and to explain the
process of thinking, the experience of moving through the mind and acquiring meaning for the individual. Time and time again, writers have tried and have to some degree failed in frustration. As an alternative to representing the internal experience inadequately by attempting to re-create events and describe their effects on or significance to the writer, Antin chooses to make the event and the meaning the same by moving to talk pieces because he sees talking as the closest he can get to thinking and the process of thinking (1993, 123).

Antin's claim of talking as thinking makes the talk and, therefore, the thinking, the primary experience within a very particular context, i.e., the room where and audience to whom he is speaking. Because the event is the creation of the meaning and is unfolding at the very moment that Antin verbalizes his thoughts, there is no need later to attempt to translate the internal experience of that event; the meaning or experience is the event right there, almost verbatim in real time with spaces to indicate speech pauses. Antin successfully (and ironically) preserves his talks, which he says he never works on in advance (1993, 124), in print by tape recording them and then making a version in writing. The text is not exactly the same at the talk, as he explains:

of course it sometimes changes as it goes onto paper  
because whatever winds up on paper is never exactly like  
whats in the air  although what i want to do is bring an  
image of talking out of the air and onto the page  to make  
the claim of speech to make the claim of thinking  within  
Antin's method for showing thinking in the text is not perfect; he is still the beneficiary and victim of language, but he is, like all cutting-edge writers, trying to find a new way to move within it and spin a new web.

His strong preference for performance over traditional writing, however, coincides with his disillusionment with structuralists who he sees as externalists interested more in story as a social production than in narrative. He believes that, in trying to understand meaning, structuralists produce plots that fail, as he says:

because they begin from texts instead of tellings and even if they come out of tellings they come out of more or less ritualized occasions that tend to obliterate the narrative centers that arise from human social experience but stories that arise from ordinary social occasions are always narrative because they arise out of a circumstance in which you are talking and trying and failing to make some kind of sense (1993, 110-111).

Antin recognizes that any medium for creating or translating meaning is doomed to some degree of failure. However, he does see that starting with the narrative, the talk, he can create and capture the journey of the mind, which is necessary for any amount of knowing or understanding.

Tracking someone's narrative is the only way to come to some understanding of a self. A complete understanding is never possible, both because all systems of nature are incomplete, and because the self is constantly changing shape. Although the self is never fully recognizable as either the same or complete, a degree of understanding at a particular moment in a particular context can be attained by creating the narrative, the meaning, showing the self at that point. Antin sees this approach in talk as the most
effective way to use language to convey meaning and create a view of the self. In light of our limited scientific knowledge concerning how the mind works and our different physiochemical compositions, his talks, his presentations of narrative, are the closest a reader can come to making the mental journey through its twists and jumps with the autobiographer.

**How is the self constructed and where is it located?**

Antin's use of the talk as a frame wherein he can create a shared meaning with the audience provides a narrative in progress, and for Antin, narrative, while it is not the same thing as the self, is at the core of the self's structure (1993, 92). That is, narrative defines the shape and composition of the self. This shape, as previously discussed, hovers and is constantly changing in response to external stimuli, such as the audience, which has the ability to change the direction of Antin's talk as he says, "what poem there is here will be built around whatever happens" (1976, 214). The audience certainly contributes to the shape of the talk (the narrative), in the same way that all of our collisions with the environment affect who we are. However, it is important to keep in mind that for Antin, in order for a self to endure, it must survive these collisions and unions by rebounding and remaining distinct (1993, 98). The self has definite boundaries wherein lies its basic essence or composition: when foreign elements are introduced, the self either recognizes and assimilates that element as part of its narrative or it does not (it collides and repels), allowing the self to remain distinct. Whether or not the self assimilates an experience into its narrative is determined retrospectively (1993, 107) when the autobiographer looks, or loops, back on his life to determine
which elements contribute to the pattern he recognizes as the development of his self.

In this sense, the self is clearly a construction that can only occur with retrospection (which is a feeding back into one's self), making history and memory absolutely necessary to the existence of any view of the self—an idea rejected in postmodern thought.

In talking at the boundaries, Antin uses extended mathematical metaphors to write about the development of narrative in the construction of the self. His metaphors equate life events to numbers, which are all contained in boxes. Because numbers are infinite, so, too, are the number of events in someone's life depending upon how one chooses to measure and look at an event. He can pull from the boxes any possible order; the numbers do not have to be consecutive. So, although the events are determined, the combinations and, therefore, forms that emerge are not. The appearance or shape of the self can change, but the basic composition remains unique to that person, distinct. What is in his boxes is his and no one else's. Furthermore, as he makes different combinations, he still recognizes himself in those combinations because the same experiences or prime numbers from formative years will continue to be a part of higher numbers as he gains experience in life. As Antin explains:

a prime number is a number that is divisible only by itself and one thats an irreducible whole and you can imagine that beginning a life all events are prime because you have no past into which to reconstitute it that is it wouldnt be divisible into other recognizable integral factors...

... six? not prime you can remember three you have nostalgic memories of three and two (1976, 254).
Using this metaphor, Antin shows how our past and remembering our past contribute to our development and how we construct the self. Whatever he associates with his number three or five will continue to be a part of his later events because these numbers or experiences are at the core of what distinguishes him from someone else who has different associations for three and five.

While Antin may have extensive ideas regarding how a self is constructed and defined, he continues to have questions about where the self may be located or grounded. The autobiographers covered in this study have looked inward in the search for the locus of the self, only to find that it was not possible either to find one, linear, distinct self or to determine where the multiple selves could be centered. In response to this tendency to continue looking inward, as people commonly say, "Look inside of yourself," Antin asks what does that mean? Are we really looking inside? For him, again, talking is the best way to arrive at some notion of narrative, meaning, and self. He writes:

> its a funny idea i mean the idea that the self is inside is itself a funny notion what's inside and inside of what i mean i'm not even inside of myself...

> ... what do i see as my self the part that comes out i can't get out of saying out (1976, 241).

His mocking of his own inability to avoid referring to the self in terms of "in" and "out" of the body does actually make the point that, until there is narrative, an understanding of meaning, the self cannot be recognized. Also, a shift away from centuries of looking inward to try (and fail) to locate the self is now being pursued in quantum physics and
chaos theory. So, even though Antin and many theorists are now trying to locate the self and consciousness somewhere outside of the body, this is still an area in need of tremendous study—meaning a very dark place in desperate need of light.

**Is a cohesive, continuous self possible?**

When I first began working on this manuscript years ago, a colleague asked me if I believed in the idea of a continuous selfhood. At the time, I was heavily entrenched in postmodern reading and thought that a belief in continuous selfhood certainly was outdated in light of the fragmented nature of our society and the perception of multiple selves that it produced. However, the more I was exposed to ideas and chaos and quantum theory and the more I read Antin's work, I began to see that a cohesive, continuous self was, indeed, possible—i.e., as long as cohesion and continuous were not necessarily synonymous with linearity.

Antin's talk pieces are fluid narrative that are also filled with pauses as he grapples for his thought and with interruptions from the audience. These gaps and interruptions, however, are not seen as breaks in the narrative. As pointed out earlier, Antin acknowledges the other stimuli in the room and their ability to change the direction or shape of what is taking place because everything in the room, not just Antin, is part of what will make the poem being created at that moment in that context. The gaps and interruptions are not seen as breaks in selfhood but as contributing influences to its shape, direction, and development. Even though what we might recognize as the self does not exist in those gaps or interruptions because they lie somewhere outside of our familiar conception of linear development and do not contain
a part of what we view as ours, they still relate to and in some way affect the overall
development and shape of the self.

To illustrate how many very different selves can actually possess cohesion and
be continuous—although not linear—Antin again uses a mathematical metaphor, this
time comparing the ratio of prime numbers to that of our various selves. The language
of his metaphor bears similarity to ideas that develop more fully in chaos theory
regarding fractal dimensions as a way to determine the level of irregularity of something
that does not fit into our straight-forward dimensions of zero (a point or set of points),
one (a line or curve or edge), two (a wall, tabletop, or piece of paper), and three (space)
(Briggs and Peat 1990, 94). In talking at the boundaries, Antin addresses his
"confidence in the coherency" (1976, 252) of his life, which he sees as connected to a
past and unfolding in time. At this point, however, he introduces the idea of different
kinds of temporal consistency, which is where he argues that perhaps the self does not
necessarily unroll like a rug, i.e., linearly, but instead like a sequence of numbers pulled
from boxes of rational, irrational, imaginary, and (on occasion) transcendental numbers.
This is the point at which he presents his ideas on how the self may be constructed,
which is discussed in the previous section here. As he moves on to illustrate how the
self may, in fact, possess a coherency without being linear, he compares prime numbers
to life experiences, assigning each number to an experience. He uses this comparison as
a spring board to the more complex concept of ratio as a way to understand how two
very distinct views of his self can actually be viewed as continuous. He explains that,
when someone compares two events (prime numbers) in his life, he expresses this
comparison as a ratio, and with ratios, one number is divided into the other. In other words, the memory of one experience is compared with the other experience, which is why the memory of formative experiences or prime numbers influence later experiences; they are factors of those larger, later numbers.

Antin informs the audience that after the first two prime numbers—one and two—the ratios of successive experiences will bounce around but never be as small as one or as high as two, and he says, "whatever kind of oscillation there's going to be in this life of successive primes is going to bounce between two and one and never reach either again" (1976, 256). The experiences can approach the original state of wholeness or irreducibility but never reach it, much like the numerous references in this chapter to systems and the self approaching, but never reaching, completeness or wholeness. Furthermore, he uses the ratio metaphor to show how he could hold in his mind and compare two very different versions of his self—one when he ran a scientific publishing company and another when he was adventurous and collecting unemployment insurance. He can hold the two in his mind, compare them, and see their relation to each other in terms of how the ratio oscillates between one and two.

This irregular, though not discontinuous, development of the self as described by Antin resembles Briggs and Peats' explanation of fractal dimensions in chaos theory (1990, 95). Fractal dimensions, which always fall between 1 and 2, are used to determine the degree or irregularity for things, such as a coastline or a ball of string, that do not fit into our definitions of conventional (0, 1, 2, 3) dimensions. The closer a fractal dimension is to one, the smoother its surface is because it is closer to a line; the
closer it is to two, the more irregular or chaotic it is because tracing its points requires more twists that produces what looks more like a plane than a line. Briggs and Peat provide an example involving rice grains to illustrate this concept:

Imagine scattering grains of rice uniformly across a map. There may be, say, 10,000 grains and this collection could be said to characterize the two dimensionality of the map. A straight line drawn across the page passes through only 200 grains, so only 2 percent of the grains lie on the line. The vast majority lie in other regions of the plane. But suppose now the line twists and curves so that it passes through more and more grains of rice, reaching not only the grains of rice but even the individual points in the plane. As more and more of these points are crossed it becomes clear that the dimension of the line lies closer to that of a plane (two) than a line (one). In fact, twisting fractal lines have dimensions that are fractional, such as 1.2618, 1.1291, 1.3652, and so on. The coastline of Britain has a fractional dimension of 1.26 (1990, 95).

Like determining the fractal dimension of rice grains or a coastline or a ball of string, trying to see cohesion in a linearly disjointed self could be said to produce a fractal dimension closer to two than to one because the self is irregular and chaotic in smaller scales or increments of its existence. It is impossible to capture any significant portion of a dynamic self—which cannot be described in terms of conventional dimensions—on a straight line with the intention of determining the cause and effect of linear, chronologically arranged events.

**Antin's ideas of the self as reflective of cultural shifts in autobiography**

Antin's ideas regarding the construction and cohesion of the self indicate that a fast-paced, seemingly disjointed society may actually possess a cohesion and order. In light of developments in technology and science that indicate the mutual influence of apparently remote and disconnected elements, events, cultures, and ideas, the fragments of postmodern culture are now being viewed as interrelated. Antin's use of
mathematical metaphors to explain the construction of the self reflects his experience in engineering and indicates a general shift in current studies to explore the self and consciousness using math and physics. Likewise, his comparison of prime numbers or experiences as a ratio further puts the discussion of the self in the mathematical realm.

In terms of autobiography studies, although it intimates that two versions of the self or two autobiographies that may appear very different can, and should, be compared. For example, when Antin's first autobiography is compared with his more recent books, the books appear to have been written by two different people. However, there is a relation between these works, a connection between his early texts and where he is now. Antin asserts that "no art that elapses in time can be looked at all at once unless it is terribly short" (1976, 187). Likewise, no life or self, which develops in time, can be looked at all at once in one book from one perspective of writing. His proposal that views of the self be compared and an entire body of work be evaluated in order to see as much of that changing, incomplete system known as the self as possible is the current trend in academia, which is calling for life studies instead of autobiography. To see how each work fits into the pattern and affects the shape of the self calls for the work to be seen as interconnected (not necessarily a serial cause/effect relationship) and contributing to the shape of the autobiographer.

With a move toward viewing all of a writer's work in order to grasp some notion of the self, the question is how to pull all of those different perspectives together and find a locus that can be called the self. This question remains unanswered, but studies now are looking toward math and physics to determine where the self and
consciousness lie, with the logic that since we are part of nature we, too, must be part of a collective, cosmic world. How scholars will continue to investigate this very plausible theory is yet to be seen. However, Antin certainly provides support for looking outward to determine the ground of the self, as he illustrates with a story about a woman with multiple personalities, each of which is able to form a coherency in relation to its memory of the psychiatrist treating her (1976, 230). What is interesting here is that coherency can only be maintained in relation to something external; the self is not centered in any one of the woman's personalities but instead hovers somewhere outside of her. Likewise, the various works that cover an autobiographer's life present numerous shapes of the self as determined by a particular set of circumstances. Hovering somewhere outside of these works is what is recognizable as the self that gives cohesion to and shows a relation between these otherwise discontinuous perspectives of what is considered the autobiographer's self.
Since the invention of autobiography as a literary genre 1600 years ago, writers have searched for ways to define the self using memory to represent the internal experiences that give meaning to that self. As culture has evolved, so, too, has the role of the individual in society changed. This study has shown that shifts in culture and the self both are mutually reflective and are influenced by developments in science and technology, art, and literary theory. The self, which as we have seen indicates culture, has undergone numerous constructions, ranging from its synonymous identification with the Church during antiquity to its current multifacetedness in a secular society.

Beginning with St. Augustine's *The Confessions* (401), generally recognized as the first autobiography, we saw the self as a microcosm of society, which during antiquity in Europe was aligned solely with the Church. The purpose of life was to proceed along the providential or "correct" path, which began at birth and continued straight forward to death, where one would be reunited with God. Because completion of the Christian life included a return to God, memory was vital to fulfilling the purpose of life, for that was how someone recognized God after death. The science of the time was the philosophy that nature, providence, and memory all progressed linearly. As a result of the single purpose and identity in life, the individual in autobiography was strictly limited to showing oneself as an example for the rest of the Christian community. By incorporating the popular form of the rhetorical argument, which unfolds in strict serial fashion and which defers to a higher authority (in this case the
ultimate authority—God) for validation, Augustine's text reinforces the linear order of providence accepted as the only correct order in his society.

As secularism began to take hold and the Church lost its position as the sole institution of power in society, the individual began to be held accountable primarily to society and secondly—if at all—to God. *The Confessions* of Jean-Jacques Rousseau, completed in 1770, show a man distressed over his inability to represent accurately to his audience the good man he really is inside. He worries continually that people will read his words and misjudge him as a rogue. Attempting to influence his readers/judges, he creates a textual audience that sits in judgement of him; he reasons that if the audience of the text can see his true nature as good then his actual readers and neighbors may be swayed to do the same. Underlying his concern for being misinterpreted, however, is his struggle and failure to come to terms with and unite the numerous sides of Jean-Jacques. To his credit, his recognition of the difficulty in reckoning with the multiple views of the self situates his text as a precursor of modernism, which, among other things, is grounded in this very idea.

As society looked outside of the Church for answers to life's mysteries, developments in science and technology—specifically the introduction of invasive experimental methodology regarding the study of the brain and the invention of the telegraph as a communication tool—influenced how one looked at memory and the evolution of the self. Rousseau's society saw memory as necessary in tracking the development of the self. However, the linear movement of memory and growth of the self that was linked to the belief in providence during antiquity was now attributed to
the belief that, because we live in time, which is linear, we also develop
cronologically. Circumscribing one's development, then, in what was considered the
natural and correct order and presenting it in such a fashion so as to show one's
achievements and to make one's individual mark in society was the purpose of
autobiography. Memory, therefore, was a necessary tool for reconstructing one's life
from beginning to end on the page and for arriving at a complete, definitive view of the
writer. What Rousseau's text so clearly shows is that these goals are unattainable, not
through any fault of Rousseau, but because they are born out of the desire for linear
order and not out of the reality that the world is actually highly nonlinear. His text reads
like a picaresque novel, with adventure after adventure presented chronologically, not
necessarily focusing on how specific events may have developed or defined the self.

What Rousseau introduced regarding the self in autobiography, Gertrude Stein
explored in great detail in *The Autobiography of Alice B. Toklas* (1933) and *Everybody's
Autobiography* (1937). Taking Rousseau's approach even further, Stein not only delved
into how the self is constructed through memory, but how one actually remembers the
self while she is writing. Her writing style in the autobiographies (what literary critics
have come to call stream-of-consciousness) captures movement—that of the mind, the
self, and society. Moving in jumps, tangents, and loops as opposed to strict linear
chronology, her writing attempts to mimic the actual movement of the mind and
development of the self. Her style reflects both work in contemporary science, which
was performing invasive experiments with electrodes on the brain and which had
recently derived equations to represent the nonlinear systems in nature, as well as
advances in technology, which included high-speed transportation and electrical communication.

As the speed at which society functioned increased, the self was perceived as more multidimensional and decentered than ever, as subsequently represented by the work of Cubist artists. Stein and other modern writers aimed to show the mutual influence of changes in cultural truths that challenged traditional hierarchies and views of the self by presenting the numerous perspectives of the self in a single autobiography which—all of the pieces together—would construct an amalgamation of the person. Furthermore, the self was defined in relation to a larger portion of society due to the access to the world that technological advances created. Now, the self was not only constructed in terms of the Church and the immediate community, but with an extended community and readership that was reachable by way of automobile, airplane, or telephone. No longer was autobiography intended either to be an example of how to live correctly or to justify one's actions, but to show oneself in relation to the many groups with which one identifies, in the attempt to unite these various sides of the self. The modernists, as Stein's texts reinforce, were knowingly caught in the middle ground between understanding that the world actually possessed a nonlinear order and the desire, nonetheless, to represent the self as a once whole entity that was now in pieces but which was capable of being reconstructed following linear, Newtonian principles into its original form.

After the modernists were dissatisfied with their attempts to recreate the self as a whole again in text, the postmodernists embraced the idea that humans are too divided
by culture ever to become cohesive wholes again. Like previous autobiographies, David Antin's *Autobiography* (1967) and "Autobiography 2" (1968) show a collision between the internal understanding and external perception of the self. His work, however, is not an expansion of traditional autobiography; it is a break from conventional ideas of the genre and of order in reaction to a completely new culture after the modern period. The second half of the twentieth century ushered in technological advances and scientific developments that further changed the speed at which society functioned. To meet the needs of a faster-moving society, information was also transmitted faster, producing a barrage of stimuli that the individual needed to process and that postmodern artists and writers represented as fragmentation and collage in their work.

Reflecting the increasing complexity and interconnectedness of society, Antin's early work brings together numerous aspects—such as unidentified voices, clips from advertisements, and news items—that had never before been considered appropriate for autobiography. As communication technology, such as televisions, satellites, and computers, allowed for even greater access to remote parts of the world, many combinations of influences with which one could identify were possible, making it more difficult for individuals to identify and communicate similar experiences with each other. Responding to the ironic breakdown in the ability to translate experience while communication technology improved, the art community abandoned expressionism and adopted mechanical reproductions and geometric forms that emphasized the stark contrast in conventional ideas of order and reality.
With conventional ideas of order, center, and hierarchies dismantled, the notion of an individual possessing the ability or authority to create a view of the self at all was questioned by postmodernists. Antin responded to the paradox of postmodern autobiography by creating a text in which the self hovers outside of the text and is hinted at in terms of how it is defined by surrounding objects—which initially may seem similar to what Stein achieves in her autobiographies. However, Antin goes beyond Stein to relinquish his control as orchestrator of the text. His autobiographies shift person and voice to reveal shards of other people's stories. His emphasis on fragmentation and his lack of an obvious center to his text reflect his postmodern culture. His texts emphasize the postmodern constructs of process over product, the absorption of the individual into society, and the acceptance of entropy over linear conventional order in nature. We see many parts, pieces, fragments, yet they do not add up to the whole.

As this study has demonstrated, human nature desires order and is willing to consider new ideas of order when conventional ones no longer work or exist. Karl Lashley's 1950s theory of memory (Rose 1993) proclaiming that we simultaneously process information everywhere and nowhere in the brain is similar to the postmodern notion of a fragmented self which is not centered but is dispersed throughout society. If the self can only be defined or constructed through memory, then it seems plausible that if memory is dispersed and not centralized, so, too, is the self. In embracing the idea that there was no unified, continuous self, postmodern writers were still searching for an understanding of the self, a way to put one's life in order. This attempt to order one's
life has corresponded with developments in culture and technology as the various periods have shown. Now that technology has allowed us to explore areas in greater depth (specifically the advances computers have brought to the fields of physics and mathematics) researchers interested in memory and the self are looking outside of the human body for answers regarding the self and its location in nature, which is now generally accepted as chaotic and nonlinear. Mathematician Roger Penrose (1989) believes that the answer to understanding the self lies in quantum theory and in locating the individual in terms of the cosmos. Likewise, the currently popular fields of chaos theory and neural networks require one to consider the relationship of individual elements to an entire system as the system changes shape, allowing new orders to emerge in an overall pattern that may at times appear to be in disorder. While this sounds like a return to the past ideas of Heraclitus, scientists believe that with available technology and new understanding of nature, some principles of the ancient philosophers may once again become viable theory in our culture.

David Antin's later works indicate a cultural shift towards the emergence of chaos theory, a new order or type of coherency, which is not linear but is, instead, based on recursions and fractal geometry in which patterns develop across multiple layers and scales of systems that approach different degrees of completeness (or what we recognize as the system in order) and disorderly order. For patterns to emerge, then, consideration of one's place in history (debunked by postmodernism) is necessary; otherwise, the isolated fragments of the patterns remain incoherent in relation to each other and the system wherein they fall. In order to see how the various perspectives that constitute
the self fit together and affect the overall shape of the self, memory, history, and retrospection are all necessary in order to get a sense of that self or system changing throughout time. Is this self continuous then? Yes. Is it stable or unchanging and, therefore, always immediately recognizable? No. As chaos theory and nonlinear dynamics support, the self is reflective of nature—of which humans are a part; it continuously approaches new orders and then quickly turns back into itself and moves toward a different version of order.

Because this understanding of the self is one that proposes that the self does not evolve linearly or ever completely (and, therefore, never definitively), the study of autobiography, to be more accurate, must cease perpetuating the delusion that one text—regardless of how many perspectives are included—written at one point in time can possibly be considered definitive. The self by nature as an incomplete system defies absolute definition. At this point, the best we can hope for is to consider the entire body of work across the life span of an autobiographer. Across these layers or scales of the writer's life, we can see various stages of development and versions of the self "hovering" and how these stages and versions relate to one another to change the overall shape of the self, not necessarily the linear concept of cause and effect, or how one station in life led to the next. This shift away from the idea that one complete, definitive version of the self is possible reflects cultural changes supported by developments in science and the arts that now allow society to see the world as highly interrelated and interdependent both with other societies and the environment.
With nonlinear systems, such as the self, the parts do not add up to the whole. As Bart Kosko points out, "You can study arms and legs and other parts and still not know how a human behaves" (1993, 108). Likewise, you can see a piece of someone in an autobiography and still not have a complete picture of who that person is. What you see is merely a dot in the larger pattern of that person's self, and you must see all of that person's work throughout various periods of his or her life in order to see how they together present an overall shape—which is not to be confused with an overall complete or definitive view—of that person. So, ultimately, perhaps the writing of an autobiography while one is still living and developing perpetuates the misguided notion that the true version of the self is attainable. Perhaps it is necessary for us to change our expectations of what autobiography can and should aspire to achieve. Instead, the study of the self may actually be the task of the outsider who can view the subject as a dynamic being possessing unique patterns that emerge and which we can attribute to that person only after examining her or his entire life and shape of self.
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VITA

Jessica Faust was born 1 November 1965 in New Orleans, Louisiana, and was shortly after taken home to grow up the youngest of eight children in a small house. Entering this world on All Saints’ Day in the year of the snake, this Scorpio woman was destined to endure many trials and tribulations--the least of which has not been the writing of her dissertation.

She received a Bachelor of Science in English Education in 1988 and a Master of Fine Arts in Creative Writing (poetry) in 1990 from Louisiana State University. For the last ten years, she has taught in numerous capacities and areas, published poetry in obscure magazines, and presented academic papers at conferences for the sciences and for English.

Her dreams have always included teaching English to eager, appreciative students, writing poetry, painting, traveling, and performing interpretive dance (audience optional). Upon completion of her degree of Doctor of Philosophy, she hopes to continue living her dreams in an apartment where the roof does not leak and the music is loud enough for her just to rock out.
DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Jessica Lynn Faust

Major Field: English

Title of Dissertation: Autobiography from St. Augustine to David Antin: Examining the Construction of the Self as Mutually Reflective of Cultural Developments in Science and Technology, Art, and Literary Theory

Approved:

[Signatures]

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

[Signatures]

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28 August 1998