

14 | Why Are There Styles?

If you wish to succeed as a jester, you'll need
To consider each person's auricular:
What is all right for B would quite scandalize C
(For C is so very particular);
And D may be dull, and E's very thick skull
Is as empty of brains as a ladle

--Gilbert and Sullivan, The Yeomen of the Guard, Act I

I suppose that, before we ask why, we need to ask what. What is a style? In 1753, Georges-Louis Leclerc, comte de Buffon, the naturalist and polymath, announced to the French Academy in his celebrated "Discours sur le style" the classic answer to that question. Le style c'est l'homme même. We usually translate it, The style is the man himself (or, nowadays, the person). But we should really read Buffon as saying, The style is the very person, the essential, fundamental, deep nature of that human being. Someone's style expresses that person's essence.

Or should we prefer contemporary theorists? They like to suggest that style is all cultural, imposed through society's control of language. Certainly culture plays a role in style: there is an

eighteenth-century style of writing, a Romantic style, a modernist style, and so on. But how does culture play a role? And what is the relation between the role of culture and the role of the individual?

Buffon's more individualistic statement gets support from the twentieth-century's leading linguist, Noam Chomsky. He defines language as "an individual phenomenon, a system represented in the mind/brain of a particular individual. If we could investigate in sufficient detail, we would find that no two individuals share exactly the same language in this sense, even identical twins who grow up in the same social environment"¹.

From Buffon's point of view or from Chomsky's, each of us speaks an idiolect. That is, we each speak an individual version of a dialect of a language. I speak my particular version of Northeastern American English. Most of you reading this essay speak some version of a dialect of English. To quote Chomsky again, "Two individuals can communicate to the extent that their languages are sufficiently similar." That seems straightforward enough.

Since you and I share the general language English, if your dialect is close enough to my Northeastern American dialect, we can talk back and forth. Even so, we each have a different pitch and tone of voice. We each have a slightly different choice of words. We each make different syntactic choices. We each use different idioms and figures of speech. In short, we each have different dictions--that is, we make different choices among the many possibilities that English offers us. Nevertheless, we can and do communicate, because we can talk back and forth until we straighten out the confusions from our different idiolects.

What, then, is the relation between your idiolect and my idiolect? If we believe Buffon, our essential selves determine our styles. Each is a function of its owner's essence or, less philosophically, his or her personality. With some writers, Hemingway, say, or Faulkner, you only have to read a few sentences to be able to say, That's Hemingway, or, That's Faulkner. We use this sense of recognition when we parody a writer, as in the well-known Ernest Hemingway contest held every year in Key

¹ Chomsky 1988, 36.

West: Who can write the best bad Hemingway sentence? We recognize styles in other arts as well. I can recognize a Roy Lichtenstein or a Chuck Close from a block away. Mozart or Beethoven or the Beatles--a few bars of "Mr. Mozart's "too many notes," and you know who you're listening to even if you don't know the particular piece of music. And we demonstrate styles even in the most abstract of human pursuits. Chessplayers can recognize one another's styles of play. Mathematicians can distinguish different styles of proof.

Styles in people

It is not just writers and other creators who manifest styles. When we read, we re-create literary works in our individual styles. As I've shown in more than one book and many an article, readers read and interpret and answer even grammatical questions in characteristic and different ways². My Hamlet differs from your Hamlet, my Casablanca differs from yours, my Madame Bovary is not your Madame Bovary, and so on and on. One would expect porn to elicit standard responses. After all, it is designed and created with a certain response in mind. But people respond even to porn in quite different ways.³

In everyday life, we read other people in terms of styles. We say things like, "Oh, that's just like Jane." Or, "John isn't himself today." Such statements imply two things. One, we can see a recurring pattern in the way someone writes or talks or walks or makes love. Two, we see new behaviors against the previous pattern that we have recognized as either fulfilling the pattern or violating it.

Evolutionarily, we would have to have some such ability to get along in our hominid troupes. If we couldn't predict, at least to some extent, how our fellow primates would react, how would we know how to act in the group?

These individual styles persist. The writer Bernard Malamud once said to me, "Every novelist only writes one novel." Commenting on an exhibit of Willem de Kooning's late works, painted when de Kooning's mind was deteriorating, neurologist Oliver Sacks wrote: "Style is the deepest part of

² Holland 1973; 1975; 1988.

³ Holland 1992, part 1.

one's being, and may be preserved, almost to the last, in a dementia." "Style, in short, is the deepest thing in one's being"⁴ .

Sacks makes an important point here: style persists. The key thing about a style is that it repeats over and over, again and again. It is habitual. And it is "style" in that repetitive sense that I wish to explore here, because, as a literary critic, I am acutely aware of styles, styles of writers, styles of readers, all of them habitual and repetitive. Sacks' comment suggests that they must exist somehow in the brain at a fairly deep level. But before we explore the brain, we can go to the other side of the Alp. We can consider the mind of the writer or the reader.

Yet it is equally clear that part of de Kooning' style derived from his environment, the Abstract Expressionist movement in New York in the 1940s and that became a dominant style throughout the West during the 1950s. We need to confront several fundamental questions. Why are there styles at all? Evidently because both humans and their environments vary. What then is the relation between the individual's contribution to a style and the environment's? We can start with individuals.

Style in the mind

Style is habitual or repetitious, and psychoanalysts have long focused on their patients' repetitions. The concept of repetition permeates psychoanalytic thought from the very beginning. In The Interpretation of Dreams, Freud defined a wish as the wish to re-create and re-experience a previous perception of satisfaction⁵ . (In dreams we hallucinate that perception of satisfaction; in reality, we work to re-create it physically.)

Later, when he recognized the "compulsion to repeat," Freud understood our tendency to do the same thing over and over again as a more pervasive "again-ness." Having once found a solution to the competing demands of reality and our inner demands, we will try that solution again before seeking a new one. We therefore repeat⁶ . Finally, Freud generalized this human tendency to repeat into a general biological principle, the "death instinct," the tendency of all living matter to return to its

⁴ Sacks 1990; 1974, 239n.

⁵ Freud, 1900a, 565-66.

⁶ Freud 1920g, chs. ii-iii.

previously unliving state.⁷ And this, he said, was the deepest source of human motivation, the desire to return all one's drives and instincts to quiescence.

Metapsychology aside, repetition became central to the clinical idea of "character." Among the early psychoanalysts, Sándor Ferenczi linked Freud's repetition-compulsion to character. He thought of character as habits and he noted that these habits generally occurred outside of consciousness. Therefore, he said, "Psycho-analysis can be regarded as a long-draw-out fight against thought-habits."⁸ Fenichel wrote of the "[neurotic] fixation to certain defense mechanisms" which we noted in connection with our own defenses' interaction with literary forms, as "a special case of . . . the relative constancy of character traits in general" . In his classic definition, "Character [is] the habitual mode of bringing into harmony the tasks presented by internal demands and by the external world."⁹ Wilhelm Reich also considered character. In analysis, he thought, "The form of expression is far more important than the ideational content Not the ideational content but the form of expression is what leads us to the biological reactions which form the basis of the psychic manifestations"¹⁰ . "Character" in the psyche, in this psychoanalytic sense of the term, must be one of the things that leads to the repeated "character" of Mozart's music, Hemingway's writing, or Roy Lichtenstein's paintings.

The identity principle

From a psychoanalytic point of view, Heinz Lichtenstein has, I believe, provided the strongest way of approaching these habitual, repetitive patterns of character (stronger, I think, than Freud's frankly speculative "death instinct.") Lichtenstein said that we should think of a person's character or identity (or, in our literary context, "style") as a pattern with variations on that pattern, like a theme and variations in music. You can--and we do--understand a person by formulating such a theme or themes, although rarely do we do it explicitly. We sense a pattern and then look at variations on it. As in music, one theme can have an infinite number of variations, but one will always be able to

⁷ Freud 1920g, ch. vii .

⁸ Ferenczi 1925, 393.

⁹ Fenichel 1945, 523, 467.

¹⁰ Reich 1949, 45n.

discern the theme underneath the variations. Unlike music, however, to understand human identities, one has to use words to formulate an identity theme¹¹ .

I am using "identity" in a special sense here. I intend identity-from-outside, that is, a persistent personal style that we infer in order to make sense of the people around us (an important evolutionary advantage). Neuroscientists tend not to distinguish clearly between my fluctuating sense of my own identity, identity sensed from inside, and my stable identity as others think of me. Identity-from-inside refers to my own inferences about myself, and, of course, I see myself as constantly changing. Identity-from-inside thus shades into what the neuroscientists call "the hard problem," consciousness. How does my state of mind arise from the state of my brain?

But identity-from-outside does not entail this problem. We see persistences in others (and sometimes, with psychoanalytic insight, in ourselves). I might observe, say, Ronald Reagan change from being a labor-oriented Democrat to a plutocratic Republican, and I am sure it seemed quite a change to Ronald Reagan. But I would point to his persistent appeals to a hierarchy of strength and merit that appeared in both these opposite positions. Seen from the outside, one could read Reagan as the same man, no matter how different he seemed to himself, inside¹² .

"Character" is an older term for this identity-from-outside, and it is observable and measurable by various tests for "personality" (the psychologists' term). The psychologists, however, tend to fractionate character or personality into a series of discrete, measurable traits. I prefer to think of character holistically as involving a central theme (Reagan's hierarchies, for example) and constantly changing variations on that theme.

We humans can vary our themes infinitely. We can play variations that are positive and negative, healthy and unhealthy, creative and ritualistic, liberal and conservative, hostile and loving-- all the varieties of human life. But, if Lichtenstein is right, an observer, a biographer, say, should be able to trace a sameness, a characteristic style, an identity theme, within all those changes.

¹¹ Lichtenstein 1961; 1977.

¹³ Holland 1989.

Instead of a "death instinct," then, one can explain the deep repetitive tendency of living things by an "identity principle." The organism, as its deepest motivation, seeks to maintain its own identity--indeed, must maintain it, or die¹⁴ .

Identity, character, autopoiesis, homeostasis, conatus

The well-known Chilean biologists, Umberto Maturana and Francisco Varela, concur¹⁵ . They advance a principle of autopoiesis or self-making. As with Lichtenstein, the principle says that an organism's deepest motivation, the one that underlies all others, is the necessity of maintaining its own inner nature. Thus, an organism's quests for food, air, water, sex, and information all serve to perpetuate the persistent nature of that organism. Varela puts autopoiesis this way: "Living systems . . . transform matter into themselves in a manner such that the product of their operation is their own organization"¹⁶ .

Maturana and Varela adduce a great deal of reasoning and evidence from biology to show that autopoiesis states a fundamental law. It extends evolutionarily from the simplest one-celled animals to the complexities of the individual human being and even to large social groups of humans. An amoeba accepts into itself stuff that will make more amoeba, and it does not accept stuff that will not. It ignores what it cannot fit into its identity and moves on. So with an octopus or a dog or a cat--or a human being. Each of us eats, drinks, relates to other human beings, breeds, heeds language, and all the rest, so as to satisfy our psychological goals. Those in turn express our inner mental and physical nature, an identity of which we are largely unconscious. We commonly see corporations hiring only executives who will fit into that corporate culture, and the corporate culture thereby re-creates itself again and again. A given university will hire and promote those professors who will contribute to the proclaimed aims and self-esteem of that university. Nations get leaders and act in such a way as to fulfill the imagined character of the nation. "A society, therefore, operates as a homeostatic system that stabilizes the relations that define it as a social system of a particular kind"¹⁷ . A culture brings up

¹⁴ Lichtenstein 1961, 252.

¹⁵ Varela, 1979. Maturana & Varela, 1980.

¹⁶ Varela, 1979, 17.

¹⁷ Maturana and Varela, 1980, xxvii, xxv.

its children so that they can live in that culture.

In his 2003 book, Antonio Damasio also points to basic biological principles:

All living organisms from the humble amoeba to the human are born with devices designed to solve automatically, no proper reasoning required, the basic problems of life. those problems are: finding sources of energy; incorporating and transforming energy; maintaining a chemical balance of the interior compatible with the life process; maintaining the organism's structure by repairing its wear and tear; and fending off external agents of disease and physical injury.¹⁸

Damasio identifies these biological devices as homeostasis, a concept first discovered by the great French physiologist, Claude Bernard (1813-1878), and generalized by the American, Walter Cannon in the 1930s. This is homeostasis, a physiological concept which profoundly influenced psychological thinking, including Freud's and now Damasio's.

Homeostasis sums up the ways the body acts (particularly through negative feedback) to maintain a stable internal environment in spite of environmental variations and disturbance . The classic example is the human body's control of its temperature in the midst of changing external conditions like exercise, exposure, or disease that could lead to temperatures excessively high or low relative to the normal temperature, 98.6° F (or 37 C). The range between high and low body temperature levels constitutes the homeostatic plateau—the “normal” range that sustains life. As either of the two extremes is approached, the body takes corrective action. Feedback about body temperature is carried through the bloodstream to the brain and results in compensatory adjustments in, say, the breathing rate, the level of blood sugar, and the metabolic rate. Thus, in cold weather, in order to conserve heat by reducing the amount of blood circulating near the body surface, the blood vessels of the skin constrict; in hot weather they expand to dissipate excess heat. This "negative" feedback returns the system to the normal range. Damasio offers Steven Rose's more apt term, homeodynamics, because the body is constantly doing things to ensure its solutions to the problems of maintaining life.

¹⁸ Damasio 2003, 30.

Damasio also cites Spinoza's concept of conatus, (or striving plus endeavor plus tendency), the relentless endeavour of each being to preserve itself: "The striving by which each thing strives to persevere in its being is nothing but the actual essence of the thing." "In spite of the transformations the body must undergo as it develops, renews its constituent parts, and ages, the conatus continues to form the same individual and respect the same structural design."¹⁹ This sounds to me very like Varela's autopoiesis or Lichtenstein's identity principle, particularly in the light of one of Damasio's theses in the book as a whole. He argues, or, I would say, demonstrates, that emotions and feelings bias the executive system (at least partly in the ventromedial regions of the frontal lobes) toward decisions that will support conatus, homeodynamics, or identity. That is, we act in infinitely various ways, but we can understand all those various actions as aimed at maintaining a core identity, an essence. I have mentioned biological and neuroscientific support for this idea and studies of infancy concur.

Identity in the brain

Lichtenstein suggested that each of us acquires this "identity theme" in the early relationship between infant and mother (or "primary caregiver"). As Lichtenstein saw identity, the infant achieves an identity by learning to be the child for this particular mother. The infant responds by adapting to those traits, and, in so doing, shapes its own identity theme. "The infant is imprinted," summarizes psychoanalyst Arnold Modell, "with the mother's theory of being and relating"²⁰. From then on, the growing child plays variations on that theme, modifying it somewhat, but less and less as time goes on.²¹

Where and how in the brain might this "constancy" or "habitual" be embodied? That it must be in a distributed brain system, I think, cannot be denied, given what we know about the growth and ungrowth of the human brain in infancy and childhood.

Hebb's work in the 1940s established our understanding of the way experience gets written into

¹⁹ Spinoza, Ethics, propositions 6, 7, and 8. Damasio 2003, 36.

²⁰ Modell, 1993, p. 153.

²¹ Lichtenstein 1970; 1977.

the brain²². Neurons that fire together wire together; neurons that don't synch don't link. Most of these strengthened connections must be formed in childhood, because the newborn brain has only a small fraction of the synapses it will ultimately have. Myelination and connections grow rapidly both in genetic development and with Hebbian learning to the point of creating a supercharged brain in latency. Then in early adolescence the excess dies off.

It is experience that separates the assemblies that die from those that will survive into adulthood. Terrence Deacon states the process: "In the context of the developing brain, where the numbers of connections are significantly in excess of what will be maintained to maturity, [Hebbian learning] determines which connections will 'win' in a biological variant of the children's game 'musical chairs,' where the numbers of viable targets decrease over time"²³.

From my point of view, experience (building on genetics, to be sure) will shape the growing personality toward a constancy, an essence, an identity. Overall, the child develops some brain connections and drops others, forming a personal brain, and hence a personal style or identity, we can begin to imagine personal style as a system in the brain. Jim Grigsby and David Stevens make the interesting suggestion that one can think of character (or personality or identity) as habits procedurally learned²⁴.

We looked at procedural memory in connection with our expectations about literature (in ch. 9). It is a separate memory system. It is non-declarative, that is, non-verbal and separate from semantic and episodic memories that can be spoken. It embodies motor skills, in particular, but Grigsby and Stevens also include perceptual abilities, cognitive skills (like reading or understanding music), and social and relational processes. In the brain, procedural memory may reside in connections between the cortex and the basal ganglia, specifically, from motor regions to putamen and caudate (inhibiting) and on to the globus pallidus (motor outputs), and the circuit may include the cerebellum. If many systems are involved, then one cannot have rapid changes in the strengths of synaptic connections. Hence procedural memory involves slow learning and long retention. There is a kind of "inertial

²² Hebb, 1949.

²³ Deacon, 1997, p. 202–3.

²⁴ See also Grigsby and Hartlaub 1994.

quality" to procedural memory and hence to personality. Personality remains stable over time, even in the face of crises or various other significant events. Also, the prefrontal cortex is slow to myelinate. Therefore memory in the first few years of life (as Solms and Turnbull also say) consists of procedural memory and memory traces. Personality or character is thus more influenced by procedural learning than semantic or even episodic.²⁵

- . "Character," Grigsby and Stevens define, much as I define identity, as those habitual behaviors that give people their own distinctive styles of being in the world. The foundations of character are acquired early in life but undergo change over time in association with experience and neurocognitive development. Nonetheless, certain predispositions (e.g., arrogance or obsequiousness) tend to remain fairly stable despite changes in the precise details of how they may be manifested across development.

"The automatic, unconscious, repeated performance of routine behaviors is the essence of character."²⁶ They therefore argue that character "results from the activation of neural networks that have been assembled as a consequence of procedural learning within the context of a specific temperament."²⁷ Infants acquire character as an array of procedural memories (or habits) through their relations with caregivers. These relationships establish, they say, basic neurophysiological regulation, and later in life, the individual uses these same procedurally learned processes to regulate behavior and so manifest character or, I would say, identity. "The genesis of character remains obscure not because of repression but because it is in the nature of procedural memories that they are unconscious, have no content, and are completely dissociable from declarative memory."²⁸ We cannot say how we came to be the people we are.²⁹

²⁵ Grigsby and Stevens 2000, 91-95.

²⁶ Grigsby and Stevens 2000, 310.

²⁷ Grigsby and Stevens 2000, 311.

²⁸ Grigsby and Stevens 2000, 321.

²⁹ Grigsby and Stevens suggest the science of chaos for a theory of our characteristic defenses. According to chaos theory, one can describe a chaotic system (like the weather or our everyday behaviors) as a myriad of energy states, some requiring high energy, some low. Graphed on a plane, they give rise to a surface with high points, hills, and low points, valleys between the hills. The system will tend to gravitate to the valleys (hence they are called "attractors" and sometimes "strange attractors"). We can think of our character, including our defenses, as such an attractor. That is, we will tend to respond to the ever-changing and random demands of reality (chaos) in ways that involve the least expenditure of energy. We will, therefore, tend to repeat the valley patterns of behavior. (Notice that this theory has much in common with Freud's concept of a repetition compulsion.) Grigsby and Stevens 2000, 317.

In another account of what I call identity, Jaak Panksepp speculates about the origin and physiology of a SELF, which he defines as "a Simple Ego-type Life Form."³⁰ Based on evidence that split-brain human patients and decorticated animals mostly function normally, he concludes that "the essential 'core of being' is subcortical. In my estimation, it was first elaborated in brain evolution within central motor-type regions of the midbrain in periventricular and surrounding areas of the midbrain diencephalon that are richly connected with higher limbic and paleocortical zones" . "Although this is not a very skilled and intelligent self, its pervasive influence may often seem preconscious (especially when higher forms of consciousness have matured during ontogenetic development), it ultimately allows animals to develop into the intentional, volitional, cognitively selective creatures that they are" .Panksepp is describing a system that biases more volitional, planning and decision-making systems in certain directions--an identity theme, if you will. "The elaboration of conscious abilities in the brain germinates and sprouts from a primal neural field that intrinsically represents a basic body image within the brain stem. This mechanism is shared by all mammals"³¹ .

Panksepp suggests (in his neurological vocabulary) that such a SELF arises from "a coherently organized motor process in the midbrain, even though it surely comes to be represented in widely distributed ways through higher regions of the brain as a function of neural and psychological maturation."³² He then goes on to offer as a speculation, self structures in distributed networks in the midbrain and brainstem, in crucial interactions of superior colliculi, various pontine and midbrain motor regions, and periaqueductal gray. "The deep layers of the colliculi and underlying circuits of the periaqueductal gray (PAG) are the neuroanatomical focus of the intrinsic motor SELF."³³

Panksepp continues in technical terms: "The interaction of these neurodynamics with the sensory analyzers of the thalamus and cortex and the motor systems they regulate allows organisms the possibility of various species-typical modes of emotional SELF-expression and SELF-regulation. . . .

³⁰ Panksepp 1998, 308-14.

³¹ Panksepp 1998, 308.

³² Panksepp 1998, 309 .

³³ Panksepp 1998, 312 .

Organisms aspire to maximize certain states of the system and to minimize others"³⁴ . The "mesencephalic roots of the SELF" connect to higher brain areas, leading to the emergence of "higher forms of self-consciousness"³⁵ . These higher areas (which he states simply as "frontal cortex") generate plans, intentions, and behavioral priorities in time, and perhaps personality.

Such connections to and from the brain stem, I think, form the basis for a pattern of behaviors conforming to an identity theme as described by Lichtenstein. Panksepp does not clearly distinguish subjective sense of identity from an observer's theme-and-variations identity, identity-from-within and identity-from-without. Nevertheless, he does provide at least a reasonable hypothesis about where and how such an identity might arise in the brain--and, with it, literary styles of reading or writing.

Alan N. Schore, a psychiatrist and psychoanalyst, has written a monumental book on "affect regulation" as the core of the "self." In effect he asserts a neurophysiological basis for an identity theme, by applying the growing and un-growing of neurons to personality. Schore has scoured the neuroscientific literature to support his thesis; the references in his book occupy 150 pages³⁶ .From the neuroscientific literature he has established that, in his words,

the vitally important attachment experiences of infancy are stored in the early maturing right hemisphere, and that for the rest of the lifespan unconscious working models of the attachment relationship encode strategies of affect regulation for coping with stress, especially interpersonal stress. These internal representations are accessed as guides for future interactions, and the term working refers to the individual's unconscious use of them to interpret and act on new experiences.³⁷

Schore is saying in brain terms a familiar psychoanalytic axiom (the genetic or developmental metapsychological principle). That heavy term simply means that early attachment experiences with a primary caregiver lay down patterns of "affect regulation" for the individual's lifetime.

To me, however, this sounds very like a Lichtensteinian identity, an individual's persistent way of relating to the world as someone outside that individual would formulate it. This is identity as, for example, a psychoanalyst behind the couch might infer it. Schore finds a neural base for such

³⁴ Panksepp 1998, 309.

³⁵ Panksepp 1998, 312.

³⁶ Schore, 1994.

³⁷ Schore, 1999, p. 51 .

patterns of affect regulation in the right orbitofrontal cortex, more specifically, the descending pathway to the limbic system.

From the outset, maternal interactions regulate emotions as the baby-watchers, notably Colwyn Trevarthen³⁸, have long pointed out. Specifically, the mother serves as an external regulator of the neurochemicals in the infant's developing brain. According to Schore, there are two critical developments in that brain.

There is a first critical period. Maternal stimulation colors the end of the first year of life, particularly through gaze and experiences of joy and reunion as the child (as described by Margaret Mahler or Wilfred Bion) walks away and comes back. These experiences activate the sympathetic nervous system, producing neuroendocrine changes, specifically, the innervation of orbitofrontal areas, particularly in the early maturing visuospatial right hemisphere. In technical terms, these positive "attachment" experiences create dopamine-releasing axons in the orbitofrontal cortex and the maturation of the ventral tegmental forebrain-midbrain circuit. These are ascending subcortical axons of a neurochemical circuit of the limbic system, particularly the sympathetic ventral tegmental limbic circuit. The infant develops the capacity to form an interactive representational model that underlies an early functional system of affect regulation. Mother's face and the positive feelings associated with her face become inscribed in the right hemisphere system for facial recognition³⁹.

Schore finds a second critical period. In the second year, say at 14-16 months, we see the onset of socialization procedures. "Don't throw your food on the floor." "Don't stick your fingers in the wall socket." The child has experiences of shame: you've done something wrong. "Thou shalt not." This stage gives rise to a different pattern of psychoneuroendocrine alterations, the expansion of the second limbic circuit in Schore's picture, the parasympathetic lateral tegmental limbic circuit that stops action. This circuit also becomes wired into the orbitofrontal cortex, creating an inhibitory system⁴⁰.

³⁸ Trevarthen, 1979; 1993.

³⁹ Schore, 1994, 69-196.

⁴⁰ Schore, 1994, p. 197-282.

What Schore says these developments have created is a pattern of affect regulation. His ideas fit psychoanalysis in that his two stages correspond approximately to oral and anal stages. I would go a step further, however. Affect regulation, it seems to me, is what regulates virtually all other brain processes. The feeling you get after you look at something or hear something or read something determines what you will do next. Feelings are what tell you a feedback has or has not succeeded. Damasio, Luria, and many others have written about the guiding role of feelings.

In charting the development of a pattern of regulating feelings, Schore has proposed a neurological basis for precisely what I have been calling style or identity. I should acknowledge, though, that Schore's ideas have been criticized on both neurological and psychoanalytic grounds⁴¹. Whether or not his ideas survive, though, I have to believe that there is a neural foundation for the idea of a theme-and-variations pattern of human personality. After all, we do observe persistent theme-and-variations identities. Where else could they come from, if not the brain?

At that purely psychological level, Another theorist, Arnold Modell, a psychoanalyst, states as a firm principle: "The need to maintain the continuity and coherence of the self is a vital urge of no less importance than sexual desire or the need for attachment to others"⁴². I hear identity principle and autopoiesis. He goes on, "I propose that the continuity and coherence of the self is such a psychobiological homeostat"⁴³.

Modell identifies this principle with Kurt Goldstein's psychological principle of one central motive, to actualize oneself. More neurologically, however, Modell relies on Gerald Edelman, the Nobelist neuroscientist with whom Modell has worked. Modell derives his concept of self from Edelman's carefully developed distinction between two portions of the nervous system. One Edelman calls "nonself," and this system (cerebral cortex, thalamus, and cerebellum) operates through sensory interactions with the outer world, through experience and behavior. This system develops learned perceptual categories. What is food, a tool, a human being? The other system, the "self," exists to assure the persistent dominance of adaptive homeostasis within. Biologically, it operates

⁴¹ Nahum, 1999.

⁴² Modell, 1993, p. 201.

⁴³ Modell, 1993, 201–202.

through hypothalamus, pituitary, parts of the brain stem, amygdala, hippocampus and limbic system, all parts of the brain evolutionarily older than what is presumably involved in one's fluctuating sense of identity, frontal and temporal cortices. Genetics constrains the operation of this system to a large extent; it exists to assure homeostatic regulation in each individual.

These two systems, one an internal homeostatic system, the other a system to act on the world, combine. Both systems need to coordinate diverse sensory inputs, and the means for doing this, Edelman calls "reentry." The evolutionary constraints of the first system, Edelman terms "value." Value acts as a bias on reentry. That is, through reentry connections in the brain, the organism selects perceptions and behaviors that elicit favorable values. Thus, values contribute to the fitness of the organism for reproduction and survival.⁴⁴

Previous experiences in the sensorimotor system have inscribed values matched to perceptual categories. Chocolate is good. Castor oil is bad. These value-categories connect to current perceptual categories, so that the individual now will characteristically avoid castor oil and seek chocolate.

The bulk of Edelman's 1989 book explains the neural circuitry for such a memory of value, the categorization of perceptions, and the reentry of the value categories into current perceptions and motor actions. He draws a complicated picture, but he does show that one can picture the structures and connections between the two systems such that past experiences (like mother-infant interactions) lay down the values for future perceptions and motor actions.

These remembered value-categories and the systems for imposing them on current experience correspond to autopoiesis or identity, a basis for the evolutionary persistence of species and individuals. But identity or autopoiesis also seems to me very simply to be what people are talking about when they say, "Oh, that's so Norm." "Henry was acting out of character at that moment." "Anna is the kind of person who . . ." "Eleanor was just not herself yesterday."

⁴⁴ Edelman, 1989, 94 .

Lichtenstein instances his theory with several case histories (all reported in his 1977 book). I have added still more: Ronald Reagan ; five subjects of an experiment in reading ; Robert Frost ; F. Scott Fitzgerald; George Bernard Shaw; and Freud's case history of Little Hans, where one can trace an identity from the five-year-old boy to the adult director of operas . Some of those cases show how identity-from-outside persists even through the changes wrought by a psychoanalysis or, in this example, the torture of brainwashing.⁴⁵

Dr. Vincent

"Dr. Vincent" had emigrated from France to China long before the Communist takeover.⁴⁶ Of his childhood, he said, my father "didn't succeed to have my inside." "I am the master of myself, and do what I want to myself," he said in explanation of his shooting himself in the shoulder at nineteen to make a distantly admired girl fall in love with him. Once in China, he had chosen an isolated life, practicing in a remote rural area and hunting in the wild, where he did not have to confide in anyone. "I was not interested in people around me, you understand--just looking only my way--just wanting to be out because I thought that way I could be more independent--to put a distance between persons who might still influence my goings on." Robert Jay Lifton, who originally reported his case, read his character much as I read his identity theme. To need is to give up one's insides, a prospect Dr. Vincent abhorred and avoided by his isolated style of life.

Arrested and brainwashed by the Chinese into confession, he flipped inside out. He became a compulsive confessor, eagerly complying with the brainwashers and insisting on "giving up his insides." Even after his release, he would pour out his thoughts and feelings to anyone who would listen. It was as though a glove had been turned inside out: it went from left to right but remained a glove. That is, Vincent's centering theme, giving up his insides, persisted, but he flipped from not giving out to the opposite. His style reversed. Then, once he was released, he gradually returned to his old, isolated self.

⁴⁵ Holland 1975, 67-112; 1982, 143-171; 1989.

⁴⁶ His case was reported by Lifton 1961, 33-59, and my interpretation of it appears in Holland 1985, 67-73.

My point (with this and other examples) is that one's identity will persist through the most extreme psychic changes. Lichtenstein assumed that such an identity theme was somehow instilled in the brain through the early mother-child relationship. Writing in the 1960s and '70s, however, he lacked either neurological or psychological backing. I believe that Damasio, Panksepp, Schore, Modell, and still others not mentioned have provided the neurological and psychological evidence. But they give us only part of an answer to the question we are asking. Why are there styles of writing and reading? Partly because we are different individuals. But partly too because we live in different eras, different countries, different language regions, and different sub-cultures within those languages and countries. How can we think of the cultural part of style? And how can we relate it to the individual strain?

Group styles

In my own mind, I combine my belief in a persistent identity theme with another strain of neuroscientific thought, the social brain that reacts in common with all other humans. We have already considered it in relation to our predictable emotional responses to typical human scenes of joy or loss or danger (ch. 7). In effect, then, the neuroscientists are providing the humanists with the science for explaining one of the most puzzling aspects of the literary process: We respond to an artistic or literary work to some extent as others do but to a considerable extent in an individual way. How can we sort those two parts out? How are they related?

The neuroscientists offer, I hesitantly suggest, differing, but not contradictory, mechanisms for these two kinds of response. One would be the amygdaloid circuits Leslie Brothers and Joseph Ledoux associate with the social brain (that we saw in ch. 7)⁴⁷. The other would be the forebrain-midbrain circuits Allan Schore associates with the individual's pattern of affect regulation.

But what does all this have to do with styles of writing or reading literature? What can it tell us about the relation between an individual identity, character, or style of writing or reading and the

⁴⁷ Brothers 1995, 199. Ledoux 1998.

social environment for that style? A great deal, as we shall see if we introduce one of the cardinal principles of neuropsychology, the hierarchy or nesting of neural functions.

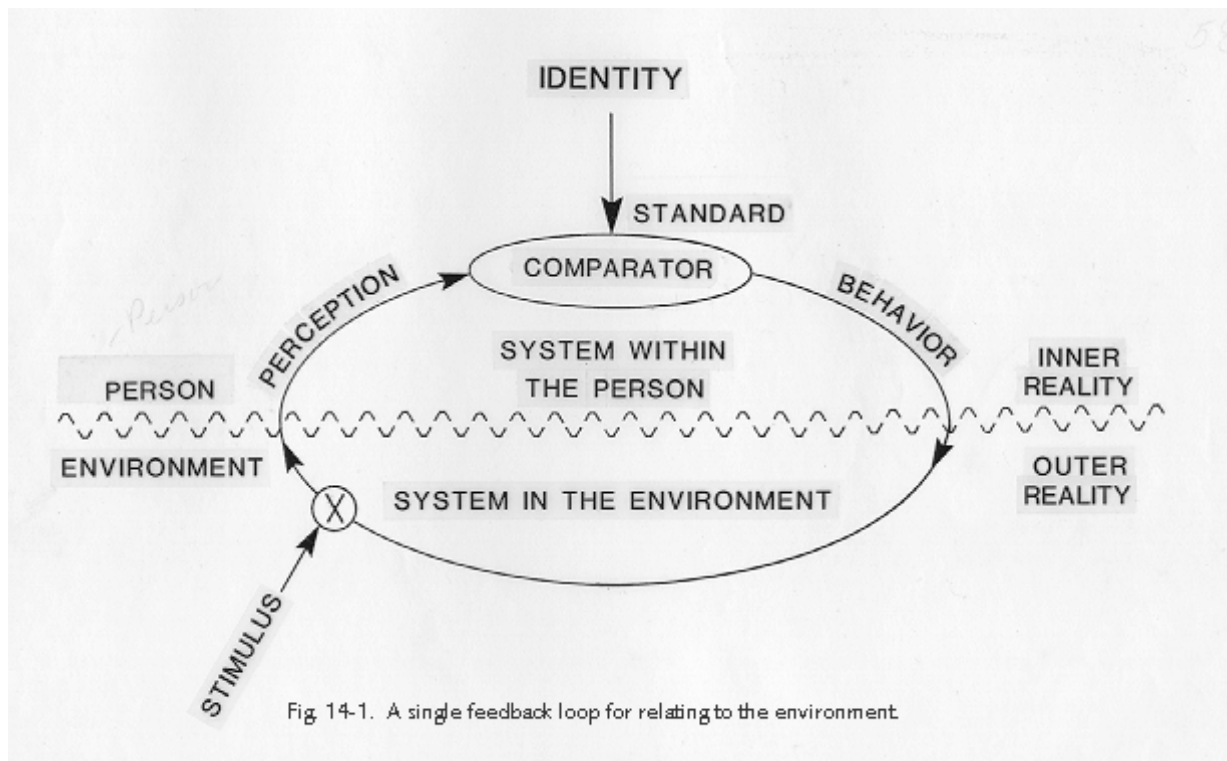
The idea began with John Hughlings Jackson in the nineteenth century, the "father of British neurology."⁴⁸ He was following Herbert Spencer's argument that evolution consisted of gradual change from homogeneity to heterogeneity, unity to differentiation, and rigidity to flexibility. Because he was a practicing neurologist working with patients, Hughlings Jackson considered the reverse process, pathological mental dissolution.

He concluded that the brain worked by a hierarchy of three levels. The lower levels feed information to higher functions, but also are governed by those higher functions, more associated with the limbic system and the frontal cortex. At the lowest level, the base of the hierarchy, the brain stem, which we have been calling the reptilian and lower mammalian part of the brain, contains automatic mechanisms for regulating breathing, temperature, the circulation of the blood and fixed actions like walking. Evolution added higher levels of control. The midbrain begins the processing of sensory information. The forebrain is the seat of conscious awareness, planning, choice, decisions about motion. If the control by higher brain centers was removed (through disease, injury, exhaustion, or temporary inhibition), the next lower centers, normally under the control of the higher centers, take over, leading to overactivity of those lower centers and hence more automaticity.

Freud was much taken with Hughlings Jackson's thinking. This idea of hierarchy became part of his psychoanalytic model of the mind. Secondary, reality-oriented processes ordinarily govern primary, wish-fulfilling processes. But, if the higher control is lost, as in dreaming or literary writing, wish-fulfillment takes over.

Aleksandr Luria, the great Russian neurologist, extended Hughlings Jackson's principle into neuropsychology, giving the three stages of the hierarchy more generality. We can most easily see them in the way our senses work. At the "lowest" level, our eyes and ears and skeletal nerves "transduce" information from the outer world in the form of light or sound waves or weight and

⁴⁸ Hughlings Jackson, John, Croonian Lectures on Evolution and Dissolution of the Nervous System, 1881-87.



temperature and odorants into neural voltages. These begin the process of vision, hearing, touch, or smell. At the next level, "association" cortices process the separate aspects of this sensory information. For sight they would be lines, edges, color, or motion. For hearing they would be pitch, volume, or direction. Then, at the highest level, "transmodal" (or "multimodal" or "polymodal") systems combine the information from the separate sensory modalities into one three-dimensional picture of the environment at that moment that unites sight, sound, touch, and smell.

Naturally, when we are talking about the creation or re-creation of literature, we are talking almost entirely about functions at quite "high" (frontal) levels. Even so, we can use Hughlings Jackson's principle of hierarchy to think about how individual style and cultural givens interact.

Pause, listen, count

I'll begin with a personal example, my fondness for those lines from of Whitman's "I Sing the Body Electric" (in ch. 7), particularly the last three words of the last line: "I "Swim with the swimmers, wrestle with wrestlers, march in line with the firemen, and pause, listen, count." How do I read this passage?

At the simplest level, I recognize the letters S, w, i, m, and so on. To do that, I match, say, S with a template in my memory for what that particular letter looks like. (Actually, reading is far more complicated: my perception of the whole word "swim" enters into my perception of its letters. Indeed, as a rapid reader, I may never even perceived the letters as such.) Does this match my template for S? Does the word match my template for "swim"?

In other words, one poses a question or a hypothesis to what one is perceiving and gets an answer. One compares the answer to the hypothesis. Sometimes the answer fits the hypothesis and is satisfying, sometimes not. If not, one repeats the process, changing the hypothesis or what one is perceiving, until the comparison says OK. ("Swim" is fine, "Swem" would cause me to rethink.) Technically, this process is a feedback loop, although some call it TOTE or Test-Operate-Text-Exit, following a famous psychological book⁴⁹.

I perform this loop at the most basic level of perception. At a slightly higher level, I make sense of the line. I get its "meaning" by interacting with lexicons in my brain, that must be a form of procedural memory. These are cultural in nature: the language I learned, the vocabulary, my mental images and associations to "swimmers" and "wrestlers" and "firemen." All physically normal people would share my perception of the arcs and straight lines that made up the letters. Most people in my North American culture will share my interpretations of the words and would have images and associations like mine for "swimmers" and "wrestlers" and "firemen." (Firemen wear red suspenders, for example.) But my associations will be specific to my culture at this time and place. I and probably every other American will have associations to "firemen" after the tragedy of September 11, 2001 that Whitman could not have had nor, for that matter, I before that tragic day.

Then I have some readings / interpretations of the line that I bring as a professor and critic of literature. I will think of the phrases I learned in graduate school to associate with Whitman, the "barbaric yawp," and the contrast between American literature's "palefaces and redskins," palefaces like Emerson or T. S. Eliot, redskins like Whitman or Twain or Allen Ginsberg. These are hypotheses

⁴⁹ Galanter, Miller and Pribram 1960.

(or feedback loops) that I derive from my "interpretive community," critics and professors who think as I do. I try them out on the passage and get a satisfying or unsatisfying match. Other critics might speak of Whitman's identification with working class people or the homoerotic quality of the passage. Still other critics might claim that his word "performances" turns the realities of daily life into a mere theatrical show. In other words there is a level of reading that not all members of my American culture would share, but all members of my interpretive community would.

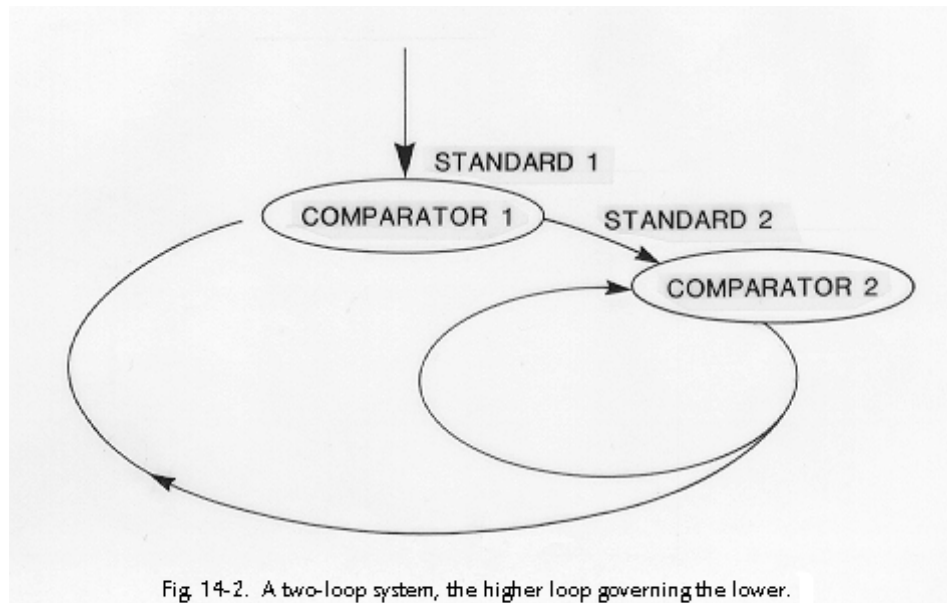
Finally, I have my individual experience of the passage. Ever since I first heard Walter Jackson Bate explain it, I have been fascinated with the idea of "negative capability," the poetic capacity to be able to feel oneself inside another being. Thus, Keats "affirmed that he can conceive of a billiard Ball that it may have a sense of delight from its own roundness, smoothness volubility & the rapidity of its motion"⁵⁰. Here, Whitman (and I his reader) "pause, listen, count" the bells signaling the location of a fire. I feel my mind inside the fireman's.

And I have purely personal non-professional associations. When I was living in Buffalo, there was a fire station near our house that blew deafening foghorn signals to tell volunteer firefighters scattered over the community where the fire was that they should rush to. I can visualize one of those firemen, pausing his work, standing erect, listening, and counting, and indeed I have often listened that way, though uncomprehending, myself. I think that is why I so admire those last three words, and I don't know that there is anyone in the world who would have this special combination of associations (from Walter Jackson Bate to a firehouse in a Buffalo suburb). Those associations plus 9/11 are probably why I like the line so much.

We can distinguish then four kinds levels of response: a physiological level, pretty much the same for all human beings; a cultural level pretty much the same for all of us in a given culture; an interpretive community level, pretty much the same for all of us in a given interpretive community; ultimately a personal level, unique to each one of us. Only these last two will demonstrate a style.

⁵⁰ Bate 1963, ch. x, 261.

And it is the last one that governs all the others. I use all the rest, what I learned in school



and what I

share with my fellow-critics, to serve my personal goals and wishes, my identity.

How does one system govern another? It provides a standard or hypothesis for the second, lower system to process, as in Fig. 14-2.

With this device, we can systematize all these levels of experiencing literature as a hierarchy (in the manner of Hughlings Jackson and Luria), a stacking of feedback loops, each providing the rule or standard or hypothesis for the loop below it:

at the highest level, an identity interpreted as a theme and variations;

at intermediate levels, loops internalized from culture, of two kinds:

 canon-loops: rules followed an interpretive community; rules about which people regularly differ;

 code-loops: rules followed by an entire culture; "No member of this culture would normally believe the rule is otherwise."

at the lowest level, a loop of physical-physiological perception.

All these levels except the lowest (sight, hearing, and other senses) are learned (and even they involve learning). Hence they are forms of procedural memory. Since they are verbal, they presumably involve the left temporal and frontal lobes. Ultimately, I would suggest, the identity that governs them all represents the circuitry defined by Allan Schore, Jaak Panksepp, and the others mentioned above. They describe the me-ness of me, my "self," the theme I re-create over and over as represented by projections from the brainstem (specifically the periaqueductal grey) up through the limbic system into the lower and midline regions (ventromedial) of the frontal cortex.

Culture and style

As the saying goes, to someone who has only a hammer, the whole world looks like a nail. We can perceive the world only by means of the hypotheses we have, and those we can get only from our experience and therefore from our culture (in the broadest sense). To be sure, we can change the community of belief to which we belong. My very conservative parents ended up with a son on the extreme left. But my fundamental way of seeing space and time and other people, my deepest codes, those I got from them, and they are well-nigh impossible to change. My "style"--that I can hardly change. My identity, was instilled in my very brain in childhood. I am who I am.

A recent paper (that we considered in relation to literary form) offers confirmation for this hierarchical model for the literary process. The Israeli experimenters found that the brain activity of their five subjects showed remarkable similarity as they watched thirty minutes of the Clint Eastwood classic, The Good, the Bad, and the Ugly. The subjects showed the same degree of interest in certain key things within the film frame, faces, hands, and spaces one could move in. But the similarities occurred in the regions of the brain for basic visual and auditory processing. These regions were all in the primary and secondary visual and auditory areas and in the association cortices. In other words, as our table says, at the lower levels we will all respond much the same. And what did not correlate in these movie viewers' brains were the supramarginal and angular gyri and prefrontal areas⁵¹ .

In other words, although the viewers' basic perceptions were the same, their pictures of the world created in the film differed, and their interpretations and experiences differed. The experimenters concluded: "The `collective' coherence effect naturally divides the cortex into a system of areas that manifest an across-subject, stereotypical response to external world stimuli versus regions that are linked to unique, individual variations" .⁵² In the table above, this divide would occur in the middle, between feedback loops shared by all members of a culture and loops shared by only a few. At the higher levels we will differ. At the lower levels, our abilities to read or to understand images and spoken language, as in a Clint Eastwood movie, are procedural memories.

As we saw in ch. 10, our immediate relation to a literary work comes from form. Psychologically, form combines the text's manipulation and our own defenses' management of attention and perception. Grigsby and Stevens argue convincingly that those defense mechanisms are procedural memories just like our ability to understand spoken or written language⁵³ . Procedural memory and declarative memory (semantic plus episodic) consist of different systems in our brains (as we saw in chs. 2 and 9). That difference points to the same divide in the hierarchy as the fMRI subjects' watching Clint Eastwood. Below the middle, the line that would separate canons from codes, we are dealing with procedural memories. Above it we are dealing with chosen rules (canons),

⁵¹ Hasson et al. 2004.

⁵² Hasson 2004, 1638.

⁵³ Grigsby and Stevens 2000, ch. 15; 2002.

hence involving semantic knowledge and memory. Above that we are dealing with identity, involving episodic memories but, at the deepest level, memory traces and procedural memories from earliest childhood. In this way, we can find in our brains the basis for our curious and sometimes maddening combination and interaction of shared and unique responses to literature.

These early procedural memories that become modes of perception, these our culture has provided us with. These are our means to understand the time and space of the world, hypotheses learned in early infancy and stored as semantic or procedural memories. But we deploy those hypotheses in individual ways. Style is not simply literary style. I interpret the world differently from, say, a French intellectual or a Chinese scholar. To be sure, at the level of space and time we will probably see the world the same way. But as soon as we get more complicated than that lowest level, the codes of our different cultures come into play, and then canons which can be a matter of either individual or culture. Each individual acquires a certain style by using the shared skills of a certain culture to create, to re-create, and to understand the world (including books, plays, and movies). Thus when you and I see a movie we (and just about everybody else) will agree about some things and we will differ about others.

I've written at length about a style we often don't think about, our personal styles of reading. Most people, though, when they use the term think of "style" as a writer's style. One thinks of Conrad writing about the sea and Africa or southeast Asia. One thinks of Hemingway's masculine testing and his laconic language. One thinks of Congreve's wits and fops. One thinks of Henry James' or Proust's intricate sentences or Dr. Johnson's balanced clauses. One thinks of Shakespeare's paired characters and parallel plotting and at the sentence level, his use of hendiadys, a trope (as one of his contemporaries described it) "when ye will seeme to make two of one . . . which therefore we call the figure of Twynnes," as in "the gross and scope of mine opinion." (One thinks of the twins in Comedy of Errors or Twelfth Night.) Interestingly, Shakespeare used the trope frequently, his contemporaries almost never. A writer's style involves many things: subject matter, favored plot devices (if a storyteller), recurring structures, ways of relating to readers (asides, omniscient narrator,

style indirect libre, and the like), and manner of language (of which there can be many features, like sentence length, figures of speech, and countable things like noun-verb ratios and the like.)

Yet much of the time, of course, a writer is a reader. Writers read over what they have written, guessing at how it will work in their readers' minds. In that respect, they do not differ from other readers. They deploy lower-level systems for the bare fact of reading, and they understand what they have written and its possible effect by means of higher-level hypotheses. These will be cultural and personal. Reading uses the hierarchy in a mix of bottom-up and top-down processing. Immersed in a book, we are probably functioning more bottom-up than top-down.

The act of writing, though, uses the same hierarchy in a decisively top-down way. Writers use a talent (of which more in ch. 16), deploying the canons and codes of their culture, the acceptable genres, characters and words that will be familiar, the resources of language and all the rest. And guiding these choices will be the wish to "make it good" (or at least profitable, as in Dr. Johnson's well-known maxim, "No man but a blockhead ever wrote except for money.") Whatever impels a writer to write must come from very deep and personal levels of personality--identity, really. The choice of material, the structuring of it, the choice of words--all these must involve identity strongly using canons and codes. Identity is key here. As a hundred years of psychoanalytic criticism has shown, a writer's style derives from a writer's personality (or identity).⁵⁴ And identity, as we have seen earlier in this chapter, begins with the the early interactions between an infant born with a certain temperament and a mother (or caregiver) with an already-established character. Early infancy establishes an identity theme on which experience plays a myriad of variations that then constitute the history of that identity. Out of such a history, that is, such an identity, will come a writer's style.

Understanding one another

Using this model of hypotheses governed by an identity, we can understand how writers with their individual and cultural styles communicate to us who may have very different individual and

⁵⁴ See, for example, Holland 1968, ch. 8.

cultural styles. We can equally understand, then, how individuals with similar dialects but different idiolects talk to one another and understand what is said.

When I say something, my words hang in the air, as it were. They become a thing like any other thing in your and my environment. You understand that thing the same way you understand other things. That is, you, your persistent identity, makes hypotheses about it, what it sounds like, what phonemes make it up, what it means semantically. You understand in your way what I said. Then you say something in reply. Your words become a thing that I interpret using my own auditory cortex, Heschl's gyrus, my phonological and semantic lexicons, and so on. All answer to the essential me, and I understand your reply in my way. To the extent we share schemas or hypotheses about phonemes, vocabulary, and meanings we understand each other at the lower level of the hierarchy above.

But, as the Pirandello character says in the epigraph to ch. 12, "How can we understand each other, sir, if into the words which I speak I put the sense and the value of things as they are inside me, while at the same time whoever is listening to them inevitably assumes they have the sense and value that they have in his or her inner world?" Once we get above the lower levels of the hierarchy, into the realm of codes perhaps but certainly canons and identity, words and sentences begin to have individual meanings. At that point, to understand one another, we need to talk it out, try to understand those individual meanings. Unfortunately, this is something we all too rarely do in the current world of polarized political discourse. But with writers and dramatists and moviemakers we do. We discuss. We behave like critics, and that is what criticism, I think, should be: a conversation. That way, even when our understandings differ because we have different styles, we can communicate.

The answer to the chapter title

Once we have answered what a style is, the answer to, Why are there styles?, falls into place. There are styles because evolutionarily and neurologically they are built into our brains. In some respects these styles are alike--why? Because we humans have to live among similar beings. Human

societies re-create themselves fulfilling the identity principle or autopoiesis). Our parents who represent society to us as infants cannot help but instill in us the hypotheses by which they understand the world. And we in turn pass them on willy-nilly to our children. Culture reproduces itself because humans do. But we are also different people. We have different heredity. We had different upbringings. We read different books. We live different lives. Therefore styles are both alike and different. And that makes for a very interesting world.

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