

NEUROLOGY OF MEMOIR

"Where are you going over those rough paths? Where are you going? What are you aiming at... going on and on walking along these difficult and tiring ways? There is no rest to be found where you are looking for it." (Augustine: Confessions)

Theory of Memoir

memoir. 1567, from Anglo-Fr. *memorie* "note, *memorandum*, something written to be kept in mind" (1427), from L. *memoria* (see *memory*). Meaning "person's written account of his life" is from 1673. The pl. form *memoirs* "personal record of events," first recorded 1659.

A memoir is a slice of an autobiography. That term was invented by a Greek linguist in 1797 who, frustrated by the lack of a single word to define the jottings, both brief and long, of personal experiences, he fused the word *auto* (self) with *biography*. But as you can see, the concept of a memoir issuing from memory to aid the memory and later to artfully portray the memory, hit the literary scene in 1673, one hundred and twenty-four years before autobiography became the catchall phrase for the terms as well as the sum of life experiences.

A neurological theory of memoir is premised on the assumption that the word is interchangeable with autobiography but that the form is an extraction. It has a plot which structures several or one event within the huge plot of a whole life. Metaphorically, the memoir is to autobiography as one memory is to a complete collection, as one fragment fired along a fiber pathway is selected from a total neural network of stored memories.

It is impossible to theorize about memoir without defining the neurology of memory, because in the context of a literary nonfiction, the text of a memoir must derive from facts which are stored as

real memories in the brain. This theory will explain the science of memory and demonstrate how memoirs are formed from facts embedded in neurology; indeed, so verifiably accurate that brain scans can actually portray the origin of the memory-facts. A memoir, then, can contain the claim that it is not only the truth as I see it, but the truth as you see it.

A theory of memoir-memory, postulated before a neurological hypothesis was confirmed science, read like elegant narratives in much the same way theories in physics posit strings and quarks and gluons and dark matter long before they are found. James Olney, in particular, is one lyrical conjecturer. His theories of autobiography from the 1970s rely upon metaphor as an explanation for the process of memory. Stunningly, his system became a metaphor for the actual structure of the neurological process. In his 1981 book Metaphors of Self: The Meaning of Autobiography he truly predicted that "The billion phenomena that bombard is can, at best, advance our understanding negatively by proving a particular theory invalid or insufficient. On their own, however, they will never fall together into a pattern nor formulate a rule or a law; without the mind of man, they could never become an explaining, containing, protective, and satisfying theory. Knowledge [...] must start [...] with the mind and the self, and so also must theory (15-16). We must connect one thing and then another and finally assume the whole design of which the element is only a part. Metaphor supplies such a connection, relating this to that in such and such a relevant way. But whence comes the metaphORIZING imagination, and how are we able to connect elements so that they establish a pattern? For it is clear that the meaning pattern is not there in the items or the experiences themselves. Is this not what the individual supplies, the poet in writing, the reader in reading: a pattern of connection? And in supplying it, both extend that knowledge they had before to include the new, connected item or experience and the relation between the old and the new. The reader, like the poet, extends the possibilities of meaning-pattern in himself; he extends, that is, the pattern, or the adequacy of the pattern, which in turn may be taken, as it were, for a metaphor of the self" (30-31).

Olney correctly frames the subsequent science of perception and memory that emerged with technology, experimentation, and application. That the pattern of the mind and the pattern of nature reflect mirror images is an objective process wherein patterns are discerned by the subjective application of language as neurology will show. It is enough to state this without adding Olney's idea that the world itself is created through perception and that the connections are metaphors.

Perceptions are, rather, chemical imprints; connections are made via a different brain function that contains language; the “creation” is the application of language to memoir. Olney is closest to the truth when he states 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). He invokes Darwin to elaborate his theory while at the same time dismissing Darwin’s pragmatic naturalism. Olney says that it is Darwin’s talent of “self-effacement” that ties together the autobiographer and the scientist” (186).

Herein is the beautiful theory for the most accurate memoir—that a writer, an autobiographer can act as a scientist who rigorously grounds the poetic narrative language in the facts. Darwin’s autobiography is a model of integrity of a process that sticks to the facts. Olney derogatively writes of Darwin that he “expressly intends [his autobiography] to be as objective and as detached [...] as if he were a coral reef in the South Seas. Darwin deliberately looks at himself from without, studying a creature, presently not living, to whom a series of things happened in the past and over whom a series of changes came in sixty-seven years of life” (183).

Olney, because he insists, incorrectly, that perception creates the world and patterns are metaphors, derides a system of discerning theories from facts. It is a brilliant act of the imagination to postulate theories, to be sure, and many discoveries are made by such creative acts, but most theories derive from observation. Darwin wrote his autobiography as though he himself were a specimen, once living, now dead for the purposes of synthesis. Unwittingly, Olney defines a precise theory of memoir in this, his dismissal: “in Darwin’s own account of his method of working and of his formulation of a theory, he was simply led on by accumulated facts to the necessary conclusion. He had no performed theory to impose; rather the body of facts, brought all together, imposed the theory upon him, pointed inexorably, unavoidably to the one theoretic end to be recognized” (189). Darwin, in effect, invoked his store of memories, connected them in language, and produced a theory of himself in his autobiography, which would, of course, congruently mirror, reflect, and pattern his lifelong work—the facts of natural selection.

Another argument might aptly reason that a new theory applied to the facts of one's life is necessary to produce a memoir, especially a recovery memoir, which is the theme most of them seem to take; however, this would involve applying a new set of facts evident in a changed environment. For example, if post-traumatic stress pathology emerged in response to a life threatening event in the experience of a young writer and those external facts no longer justify an intense response to similar benign stimuli, then the memoirist might apply a different theory to the facts, a narrative recovery, a theory as memoir. This concept will be developed in the Conversion section of the paper.

Iulia de Beusobre writes of political solitary confinement in her memoir The Woman Who Could Not Die an elucidation of the concept of corresponding patterns between the environment and the mind. This theme predominates in recovery memoirs in which the will to survive overcame the negative life-threatening pathological story by focusing on beauty, on reality, however diminished it might be: "My body and mind, wrenched out of the ordinary rhythms of their previous life, find new rhythms to which they attune themselves. During the day-time, when my cell is filled with grey-green twilight, I live in a world of weaving light, shot through with flashes of an entirely new comprehension. After every such flash the heart within the emaciated form on the camp-bed begins to pound loudly and I become aware that two eyeballs are burning almost intolerably and that a swollen throat hurts. Then, just before returning again into the weaving light (which is more restful even than utter darkness could be), I comprehend my body and its pain in an entirely new way, and it is with a song of supreme serenity that I rise into Light" (57).

In summery, memoir is created when the writer feels compelled to deal with events, possibly traumatic, in a new way. The process often results in the re-application, reconstruction, imposition, of a new theory to accurately describe current environmental reality. In this way the patterns of mind are reordered and recorded to mirror environmental realities. This is a neurological act in which memories are recalled, reordered, and rendered with language in a process called the computational theory of mind. A formula might look like this:

ENVIRONMENT <> PATTERNS <> BRAIN <> MEMORY <> LANGUAGE >
PATTERNS <> THEORY <> MEMOIR

Brain Chemicals

perception. c.1300, via Anglo-Fr. *parceif*, O.N.Fr. **perceivre*, O.Fr. *perçoivre*, from L. *percipere* "obtain, gather," also, metaphorically, "to grasp with the mind," lit. "to take entirely," from *per* "thoroughly" + *capere* "to grasp, take." Replaced O.E. *ongietan*. Both the L. senses were in O.Fr., though the primary sense of Mod.Fr. *percevoir* is literal, "to receive, collect" (rents, taxes, etc.), while Eng. uses the word almost always in the metaphorical sense.

Perception is no metaphor. Connections among perceptions made through language are, however, more abstract and can be explained by the theory known as computational theory of mind developed by a group of computer scientists, philosophers, and a mathematician (Pinker 24). The neural act of perception does literally "grasp with the mind." The theory defines the mind as the operating system of the brain capable of complex reasoning. These mental events are physical events, matter that is changed on its way to reorganization, matter that is fired from neurons according to its particular, in this case, invisible substance. This explains what we call "imagination," because information, the symbols of these neural connections, are constantly encountering new perceptions that stimulate new information.

Causes for all the decisions we make, desires, behaviors, creations, are embedded in the information that our brains perceive; hence objects in the world stimulate brain chemicals via perception. Perceptions are real physical mental representations of the world. They are not "magic," they are not "God's will," nor are they social constructs.

Steven Pinker explains the neurology of perception in How The Mind Works. "People cannot reconstruct an image of an entire visual scene. Images are fragmentary. We recall glimpses of parts, arrange them in a mental tableau, and then do a juggling act to refresh each part as it fades. Worse, each glimpse records only the surfaces visible from one vantage point, distorted by perspective. To

remember an object, we turn it over or walk around it, and that means our memory for it is an album separate views. An image of the whole object is a slide show" (294). An image of the whole object might also be called a narrative.

According to Pinker, these mental representations come in four formats: visual, phonological, grammatical, and "mentalese, the language of thought [...] the traffic of information among mental modules that allows us to describe what we see, imagine what is described to us [and] carry out instructions" (90). Mentalese "consists of codes for objects" that are processed in a complex system between the hippocampus and the frontal lobes, between sensory and conceptual fiber pathways of the brain.

These codes embody the information that is needed to reconstruct relationships between perceptions or objects and the memories retrieved as such; without these abstract connections, known as language, narrative would not exist. The question is, how accurate is nonfiction narrative retrieved from memory, reprocessed as pattern, and produced as memoir? Its accuracy must depend upon a conceptual reordering of events to match not only the pattern of events from memory, but the pattern of events of the present reality. To understand this process, it is necessary to understand the neurology of memory.

memory. c.1250, from Anglo-Fr. *memorie*, from L. *memoria*, from *memor* "mindful, remembering," from PIE base *men-/*mon- "think." Computer sense is from 1946. *memorize* is 1591 in sense of "commit to writing," the mental meaning is from 1838.

The word "memoir" cannot be peeled from its root, which is "memory." A memoir or autobiography is always a conceptual reconstruction of stored visual images that, for one reason or another—usually cathartic—warrant creative production, a retelling. Some stored images are more vivid than others; these stand out, intaglio, chemically illuminated in a neural glow that demands instant reply. Stored

images do not actually recur as instant replays, but some memories (usually traumatic) can stimulate the visual cortex more vigorously than a real display because the mind layers them with ever more complex conceptual patterning. A memory of “yellow” can become flavescent. Pinker credits this to the “Perky effect: images were like very faint experiences” (288).

How are these images processed? Memory is more like visual thinking that organizes images than it is like a slideshow. According to Pinker “images cannot serve as our concepts, nor can they serve as the meanings of words in the mental dictionary. If a mental picture is used to represent a thought, it needs to be accompanied by a caption, a set of instructions for how to interpret the picture—what to pay attention to and what to ignore. At some point between gazing and thinking, images must give way to ideas” (297, 298). Brain images are in fact two-dimensional sketches comprised of geometrical points in the visual field that correspond to geometrical points in the neural field. Remember connect the dots craft projects? These sketches from perception, the eyes, are compressed for storage in long term memory and recalled, uploaded, expanded, into the frontal cortex when needed. “Shapes are represented by filling in some of the elements in a pattern that matches the shape’s projected contours” (286). The language description of the shape is the filled-in part. Language is the connection between the dots that forms the pattern that forms the shape. This is the compressive process.

IMAGE <> SKETCH <> COMPRESSION <> MEMORY <> RECALL <>
SKETCH <> LANGUAGE <> MEMOIR

Pinker calls the neural sketch “a topographically organized cortical map [...] and in a very real sense they are pictures in the head” (287). The spectacular evidence for the literal reproduction of objects in the world to objective images in the brain is irrefutable: “Neuroscientists can inject a monkey with a radioactive isotope of glucose while it stares at a bull’s-eye. the glucose is taken up by the active neurons, and one can literally develop the monkey’s brain as if it were a piece of film. It comes out of the darkroom with a distorted bull’s-eye laid out over the visual cortex” (287). “Mind” is this embodied information—the connections that make sense of the pattern that reproduces the image-object. Neurons are literally plugged into cortical maps like a telephone operator in the 1950s

plugged wires from one incoming call to another. "Space in the world is represented by space on the cortex because neurons are connected to their neighbors and it is handy for nearby bits of the world to be analyzed together" (287).

Augustine examined a literary form of memory that is remarkably apt in the scientific sense: "Suppose I am about to recite a psalm which I know. Before I begin, my expectation is extended over the whole psalm. But once I have begun, whatever I pluck off from it and let fall into the past enters the province of my memory. So the life of this action of mine is extended in two directions—toward my memory, as regards what I have recited, and towards my expectation, as regards what I am about to recite. But all the time my attention is present and through it what was the future passes on its way to become past. And as I proceed further and further with the recitation, so the expectation grows shorter and the memory grows longer, until all the expectation is finished at the point when the whole of this action is over and has passed into the memory. And what is true of the whole psalm is also true of every part of the psalm and of every syllable in it. The same holds good for any longer action, of which the psalm may be only a part. It is true also of the whole of a man's life, of which all of his actions are parts (11.28.282. Olney 3).

accurate. 1612, from L. *accuratus* "prepared with care, exact," pp. of *accurare* "take care of," from ad- "to" + *curare* "take care of." The notion of doing something carefully led to that of being exact (1651). "an accurate reproduction" (of ideas, images, representations, expressions) characterized by perfect conformity to fact or truth ; strictly correct; "a precise image"; "a precise measurement."

The stored images of memory are accurate; it is the compressive process, language patterns between neurons, that muck up shapes, particularly when the visual cortex enhances traumatic experiences for easy retrieval. It is important to understand this process in order to validate the claims of memoir.

Pinker calls a neural connection a “proposition [...] an austere statement of some abstract fact, uncluttered with irrelevant details. Spatial arrays, because they consist only of filled and unfilled patches, commit tone to a concrete arrangement of matter in space. And so do mental images: forming an image of “symmetry,” without imagining a something or other that is symmetrical, can’t be done” (291). The mind saves images and retrieves them from memory in a further process called “Mental rotation: In assessing an object’s shape, a person cannot ignore its orientation—which would be a simple matter if orientation were sequestered in its own statement. Instead, the person must nudge the orientation gradually and watch as the shape changes” (292). The uncluttered proposition, nudged into shape by mental rotation, can easily accumulate debris like a rolling snowball, like a memoir layered with poetics. However, the accuracy test is simple if a memoir is a reordering of internal patterns with external patterns.

Imagine a Iraq veteran with a stored memory of injury from a car bomb explosion. This memory is illuminated with extraneous perceptual stimuli that accurately codify the experience but what have nothing to do with cars that backfire on streets in his neighborhood, yet in a fearful rage, he ducks and covers at the sound. As the filled in sketch, the memory narrative, from the Iraq experience is detangled from the current experience of cars that backfire in his neighborhood, the sketch is filled in with new perceptions and recodified to match reality. If the sketch can be recodified to fit reality, a propositional proof of accuracy can be achieved. If it cannot, then the memoir claims are suspect. Sketches are recodified in a process of conversion.

Roy Pascal writes in his book Design and Truth in Autobiography that “Every experience is a nucleus from which energies radiate in various directions [...] a dominant direction that is not accidental, so that ultimately the life is a sort of graph linking the experiences. But the graph is an imaginary line, in actuality the movement oscillates, perhaps violently, and the autobiography misrepresents the nature of the experience if it fails to indicate these oscillations. It may fail too if the author, while faithfully relating the oscillations, overlays them with commentary that insists too heavily on the present wisdom of the author (17). In order to counterbalance the effects of commentary, the filler in a Pinker sketch, the writer must have “an objective relationship to oneself” (61).

Oscillation may be called plot, Pinker’s topographically organized cortical map, which is the inherent structure of events that the writer textually recounts. Felicity Baker emphasizes this structure

in her article "Autobiography As Non-Fiction." "The story-discourse distinction, established by the absence or presence of indications of the narrator's hand in the narrative, corresponds closely to Aristotle's description of tragedy as imitating actions in the real world (praxis) by forming an argument (logos: history, or story) from which the poet selects and may rearrange the units that form the plot (mythos: discourse). Perhaps the importance of story in autobiography should make us rethink the separation of public and private spheres in the light of the subject-self's capacity to mediate the social and cultural moment poetically."

Baker fails to mention that Aristotle's complete proofs are irrefutable arguments. Credible composition is demonstrated by reasoning logically. Logical reasoning is displayed by irrefutable proofs. Objective reality (objects, concretes) must correspond with the propositions of a statement to be infallible. "The fact that he is getting divorced is evidence that he was married." This statement applies the particular to the universal case, so it is a complete proof. Some statements about objects are "probable" and some are "signs" of the first type, the second type applies the universal to the particular and is refutable. These literary proofs correspond exactly to propositional proofs of accuracy in filled-in sketches.

Conversion

confession. c.1378, from O.Fr. confesser, from L. *confessus*, pp. of *confiteri* "to acknowledge," from com- "together" + *fatus*, pp. of *fateri* "to admit," akin to *fari* "speak" (see *fame*). Its original religious sense was of one who avows his religion in spite of persecution but does not suffer martyrdom.

A literary conversion contains three parts: confession, narrative, recovery. These occur in order within the structure of a memoir such that the reader is led through an identical system of conversion via identification; the conclusion is a reordering of internal patterns of reality to match external patterns of reality. This system was invented by Augustine in the Confessions in 397 A.D. The book is structured as a trinity that may correspond to the three parts of conversion herein. Augustine writes of the trinity: “‘There are three times—a present of things past, a present of things present, and a present of things future.’ For these three do exist in the mind, and I do not see them anywhere else: the present time of things past is memory; the present time of things present is sight; the present time of things future is expectation” (11.20.273 Olney 3). Robert McMahon, “Augustine’s Prayerful Ascent: An Essay on the Literary Form of the Confessions,” calls the Confessions a prayer as a literary form, a dialogue with God in one voice that is not composed but a self-presentation (3). This concept rings true to the concept of a narrative structure as a mirror of reality. If prayer is a literary dialogue that takes the form of memoir, it an immediate recollection of experience and a systematic reordering or events, particularly if it is uttered as a confession to someone who nudges the dialogue to fit the current experience.

Confession is action and interaction in the form of speech, or in this case, text. In the religious meaning, a confessor receives forgiveness, grace, offered by Christ who sacrificed himself to clear original sin. Many 12-step programs also clear the wrongs of substance abusers so that life can begin anew. Confession is achieved only in the telling to people who can identify, whereupon acknowledgement and repentance, the new story, lead to recovery. The point of confession is to be aligned with the truth so to be a living example of the truth and this can only be achieved by exposing memories and realigning them with reality. Narrative is the testing mechanism whereby the past is revealed in alignment with memory and the present is revealed in alignment with the present and the future is revealed in alignment with expectation.

**PAST <> MEMORY <> CONFESSION <> PRESENT <> NARRATIVE <> PRESENT <> FUTURE
<> RECOVERY <> EXPECTATION**

William Spengemann, The Forms of Autobiography, cites a trinity of action in “three methods of self-knowledge—historical self-recollection, philosophical self-exploration, and poetic self-expression—from which every subsequent autobiographer (since Augustine) would select the method most appropriate to his own situation (32). Of confession Spengemann says “the events [memories] themselves have a powerful attraction [...] for the narrative artist who has taken the pains to depict them accurately and forcefully. Disparage his sins as he will, they are his subject. they constitute the life he is striving to depict, and they make the narrative both necessary and plausible” (25).

A narrative is necessary because it situates the confession within a context for interpretation. Augustine compares this model to an archaeological dig: excavated memories are artifacts that have suffered some erosion over time. The narrative description catalogs the find and rotates it in the sunlight where it is changed from a static artifact to an object with history to a contextual tool of imagination and reality. Here again is a trinity-structure:

EXCAVATION <> OBSERVATION <> STORY

Past, present, and future. Once the memory-story is converted from its historical context to a memoir-story that mirrors reality, the memoir itself becomes an artifact of recovery available for retelling.

narrative. 1450, from M.Fr. *narratif*, from L.L. *narrativus* "suited to narration," from L. *narrare* (see *narration*). The noun meaning "a tale, story" is first recorded 1561, from the adjective. Narrator first attested 1611; in sense of "a commentator in a radio program" it is from 1941.

Narrative is an adjective, a noun, and a verb, a trinity of movement from design to story to recital. We have seen how the memoir as adjective begets its design in a neurological process of perception, sketch, storage, retrieval, and repatterning—the confessional stage. The next step is to convert (create, refashion, “expel”) the mind’s depiction as an object, a noun, a story. Augustine writes of this stage in the Confessions: “I encounter myself; I recall myself - what I have done, when and where I did it, and in what state of mind I was at the time. There are all the things I remember to have experienced myself or to have heard from others. 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, events, hopes, and then I can contemplate all these as though they were in the present” (10.8). The structure (plot) of the narrative if truthfully rendered is congruent with the structure of the memory (the past), the structure of the commentary (the world), and the structure of the recovery (the future). Augustine says of the Psalm and memory analogy that successive recitations are precise repetitions if they conform to the narrative will (Olney 63). This same test is exactly applicable to the accuracy of a memoir.

According to Olney, Memory and Narrative: The Weave of Life-Writing, “Memory, along its continuum from rote to almost free invention, like narrative also, is [...] moving in time and ceaselessly changing, yet in its very motion imitating and dimly figuring that which is immoveable and changeless. All of us, with out divided will, our flawed memory, and our frail understanding, have been exiled from the unchangeable world, “but yet have not been cut off and torn away from it”; thus, when it comes to seeking the truth that does not change through constructive, deconstructive, and reconstructive acts of remembering and interpreting” (66-67). The unchangeable world for Augustine is oneness with God; for the purposes of memoir it can be simply objective reality—that which is safe in the present without pathology from the past.

The memoir is a story of a life in the world that has a past which must be integrated with the present and also with expectations for the future. The “act” of memoir (writing) joins the past with the future and becomes the present structure. This act propels the writer into recovery—the “verb” stage of being present to present reality without pathology. Spengemann, The Forms of Autobiography, says “The elaboration takes the form of the recording of experiences, events, actions, of thoughts and

feelings that involve action and decision. What is important has to have a shape, an outward shape in the narrative, and this shape is the outcome of an interpretation and collusion of inner and outer life, of the person and society. The shape interprets both. This is the decisive achievement of the art of autobiography: to give us events that are symbolic of the personality as an entity unfolding not solely according to its own laws, but also in response to the world it lives in" (185). This is most succinctly an act of ADAPTATION by an organism to its environment—a sign of adjustment, of good mental health. In order to achieve it, the writer must SWITCHBACK between inner and outer sketches of reality and objects in the world from whence perceptual experiences arise. The fruit of the switchback produces a memoir, the new story, adaptation and recovery. "Without this sense of discovery, the very nature of living is distorted, for life is always an expedition, perhaps a groping, into the unknown. The act of writing it is a new act of the man, and like every significant new act it alters in some degree the shape of his life, it leaves the man different" (Spengemann 183).

Iulia de Beusobre in her 1938 memoir of Russian political solitary confinement, The Woman Who Could Not Die, articulates a kind of trinity of conversion "And this existence, formed of three interwoven lives, goes on for what appears to be ages. I think of it as a long plait of hair. One strand is golden, and is made of the weaving luminous Peace where I live during the time which would otherwise be twilight to me and is day-time to people who are not living in cells like mine. The second strand is silver, and shines with the reflected witchery of fairy land and legend. The third is dead-white, the color of the bones of small animals ploughed up in the soft brown earth of a field. This strand is the least real of the three. Yet it is the one that holds the other two together and has caused them to shine so brightly. But it is ugly, and when you taste it, you find it bitter. As time drops away into the past, the actual living of the last strand becomes ever more unreal to me (57-58). de Beusobre accepts reality by resolving her fantasies and hopes into the present moment, and the truth is, she is safe in the moment.

recovery. c.1300, "to regain consciousness," from Anglo-Fr. *rekeverer* (1292), O.Fr. *recovrer*, from L. *recuperare* "to recover" (see *recuperate*). Meaning "to regain health or strength" is from c.1330; sense of "to get (anything) back" is first attested 1366. *Recovery* is c.1302, in Anglo-Fr., both of health and of legal possession.

Narrative recovery often begins in a therapeutic context, specifically for sufferers of post traumatic stress syndrome, the condition most likely to spur a writer into narrative action. A New Yorker article, January 26, 2004, examines a successful narrative recovery technique devised by Edna Foa from the University of Pennsylvania to treat P.T.S.D. rape victims using cognitive behavioral therapy: "The victim is taught to slowly restructure her reactions to her memories of the rape. First, a therapist sits with the woman and asks her to close her eyes and recount the event in detail. Then the woman is told to repeat the story. Subsequent therapy sessions span come thirty to forty-five minutes each and are taped so that the victim can listen to them at home. The story changes and is relived. It becomes more organized. more flowing. A narrative emerges, with a beginning, a middle, and an end."

Neurological evidence further supports this theory as a biological fact. The New York Times, December 17, 2002, reports that sustained stress overproduces cortisol and can have "chilling effects on the hippocampus, a horseshoe-shaped brain structure intimately involved in memory formation." The over-production of cortisol in stressed people, "if it remains chronically elevated, can shrink nerve cells in the hippocampus and halt the creation of new hippocampal neurons. These changes are associated with aging and memory problems. Some evidence also links a smaller hippocampus with post-traumatic stress disorder, depression and sexual abuse in childhood."

Narrative recovery works because of the neurology of the brain. Victims exposed to trauma learn to associate subsequent sensory stimuli with the past event via the compressed sketch of the memory image. Foa's technique works precisely because the same sensory stimuli is exhaustively repeated without absent the connection to the original trauma. In this way, the compressed sketch is

reordered through renarration. In this way the accuracy test aforementioned may be applied as a truth test to a literary memoir.

The narrative arrives at the moment of conversion for Augustine when he integrates the three stages of conversion through confession, narrative, and recovery—the trinity of movement from design to story to recital—and finally to the reordered patterns of inner and outer reality. Spengemann writes “the reconstruction of the movement of a life, or part of a life, in the actual circumstances in which it was lived. Its center of self-interest is the self, not the outside world, though necessarily the outside world must appear so that, in give and take with it, the personality finds its peculiar shape [...] which is a shaping of the past. It imposes a pattern on a life, constructs out of it a coherent story. It established certain stages in an individual life, makes links between them, and defines, implicitly or explicitly, a certain consistency of relationship between the self and the outside world” (9).

Olney, *Metaphors of Self: The Meaning of Autobiography*, concurs “one discovers a creative, patterned construction that operates from and in the present over a past made coherent in the recall of memory. In our reconstruction, set moving by the autobiographer’s original construction, we properly desire a knowledge not of him nor of the past, not of an external and distant object [...] personal memory in the act of autobiography [...] is fused with the pattern-making creativity of the individual [...] autobiographer” (37-38).

Lisa Knopp, *The Nature of Home*, poignantly captures the difficult recovery phase of reshaping memory “The trees in my neighborhood literally changed overnight. But I am not able to make such sudden revisions in the map of my home terrain that I carry within me. I am not able to forget what my memory has prepared me to see. Perhaps in time I will see, know, remember, and imagine the trees as they are instead of as they were” (33).

Process Art

pedagogy. 387, “schoolmaster, teacher,” from O.Fr. *pedagogue* “teacher of children,” from L. *paedagogus* “slave who escorted children to school and generally supervised them,” later “a

teacher," from Gk. *paidagogos*, from *pais* (gen. *paidos*) "child" + *agogos* "leader," from *agein* "to lead."

Augustine constructed his Confessions as a processional for the reader. He wanted to convert the reader via a narrative through confession to absolution and recovery. His was a pedagogical memoir as any memoir can be. Peter Dorsey, Sacred Estrangement: The Rhetoric of Conversion in Modern American Autobiography, notes that "conversion discourse often contain a cyclic pattern of conversion and reconversion, as if the converted are predisposed to repeat and reinforce this fundamental experience over and over [so that] the autobiographical text is a kind of machine for conversion [...] that provides a reliable index of the relationship between the self and larger cultures because it has traditionally served a socializing function, signifying that one had come into alignment with certain linguistic, behavioral, and cultural expectations. In many such cases "conversion" is actually triggered by reading or hearing the narrative of others" (3-5, 9).

This is a monumental achievement of the memoir. The impact of the literary creation upon the brain, the mind, and the conversion of self and others is an art form of reckoning. The written account is an essential contribution to history because it always aims at the highest form of truth: that verifiable by correspondence between perception and facts in the world. In the classroom the virtuous professor perpetuates this process forever. Spengemann writes "When the protagonist gives way to the narrator, his story ends. At the same instant, the narrator is born to tell the story already told. The end joins the beginning to form an endless circle, which is at once the figure described by the narrative. The value and truth of autobiography—and its value is always linked with its truth—are not dependent on the degree of conscious psychological penetration, on separate flashes of insight; they arise out of the monolithic impact of a personality that out of its own and the world's infinitude forms round itself, through composition and style, a homogeneous entity, both in the sense that it operates consistently on the world and in the sense that it creates a consistent series of mental images out of its encounters with the world" (Spengemann 15-16, 188).

Here, then is the formula for the memoir art form:

**f: ({ENVIRONMENT ⇒ PATTERNS ⇒ BRAIN ⇒ MEMORY ⇒ LANGUAGE ⇒
 PATTERNS ⇒ THEORY ⇒ MEMOIR} → {IMAGE ⇒ SKETCH ⇒ COMPRESSION ⇒ MEMORY ⇒
 RECALL ⇒ SKETCH ⇒ LANGUAGE ⇒ MEMOIR} → {PAST := MEMORY := CONFESSION ⇒
 PRESENT := NARRATIVE := PRESENT ⇒ FUTURE := RECOVERY := EXPECTATION} → = Σ
 {ENVIRONMENT ⇒ BRAIN := IMAGE := MIND ⇒ PAST := MEMORY := SKETCH := PRESENT ⇒
 CONVERSION:= MEMOIR ⇒ FUTURE := PEDAGOGY})**

In case you don't understand this formula, here is a surreptitious narrative reconstruction in the words of Knopp "The act of making something else from what is already there always involves a simultaneous creation and destruction. Even what seems like the purest, most self-contained type of creativity—turning the events, images, and ideas of one's life into a written story—is a destroyer. Writing about one's memories, trimming, padding, moving them around, reshaping them until they fit a readable or "tellable" form, changes those memories in great or small ways. What the writer remembers after her act of creation is not her memory of the event that is the subject of her essay or story, but the written account of her memory" (40). May the memories, especially the traumatic ones keyed to environmental stimuli from the past, be destroyed herein upon this narrative reordering practice of writing... and pedagogy.

"And gathering myself together from the scattered fragments into which I was broken and dissipated during all that time" (Augustine: Confessions).

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