Challenging dogma in neuropsychology and related disciplines

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Abstract

Challenging “dogmas” in neuropsychology and related fields is important for the advancement of our professional development. Five dogmas that I have found worth challenging are reviewed in this article.

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1. Introduction

In the course of our clinical work, we frequently encounter phenomena that have not been adequately addressed by our teachers or by professional journals. Sometimes these phenomena are considered unimportant to science and to the practice of neuropsychology. In my experience, however, it is sometimes worthwhile to challenge dogmas in neuropsychology and related disciplines. Doing so produces predictable conflict and mental tension but often improves our understanding of a given phenomenon and is associated with the pleasure of reducing tension over a misunderstanding. This article focuses on five dogmas or beliefs commonly held in neuropsychology that I believe are worth challenging.

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2. Dogma

Dogma can be defined as a belief that is proposed by authority figures to be “true” even though no or marginal data support the belief. The term dogma has often been applied to religious beliefs, but dogmas also exist in science. In fact, the history of science reveals the necessity of questioning the unquestionable beliefs of the time if substantial advances are to be made. In his well-known book, *The Structure of Scientific Revolutions*, Kuhn (1970) named this process “paradigm shifts.” Paradigm shifts allow new and more useful ways of conceptualizing a problem after cherished beliefs in science are challenged.

Challenging dogma or cherished beliefs often comes with a price for the individual who does the challenging. Historically, for example, challenging the religious dogmas of the Catholic Church could result in anything from excommunication to being burned at the stake. From a psychological perspective, excommunication is an interesting phenomenon. It means that one is no longer welcomed as a member of a group and that is the price typically paid for disobedience. The disobedience is not following the cherished beliefs of the group. Such disobedience is a part of the process of individualization, and everyone must experience it if they are to grow psychologically.

The critical question becomes what beliefs are worth challenging and which are not? The answer is an individual matter. From my perspective, beliefs that appear to impede our clinical work with patients and that restrict our thinking about the nature of the phenomena that we encounter in neuropsychology are the ones most worth challenging. I find five dogmas worth challenging:

1. Randomized controlled studies provide the most convincing evidence of the effectiveness of an intervention (e.g., neuropsychological rehabilitation).
2. The material that emerges during the psychotherapy of brain dysfunctional patients is of no interest to the field of neuropsychology (i.e., the scientific study of brain-behavior relationships).
3. Because of their subjective nature, disorders of self-awareness cannot be studied scientifically.
4. The study of lateralization of higher cerebral functions is most important for advancing the science of neuropsychology.
5. Psychotherapy is often ineffective with persons who have brain damage because their behavioral sequelae are caused by underlying disturbances in neuronal circuits.

2.1. Dogma 1

In 1998, the National Institutes of Health sponsored a conference on the rehabilitation of traumatic brain injury (TBI). During that conference, a neurosurgeon presented a paper on the efficacy of cognitive rehabilitation using an evidence-based practice model to select papers for review. It was a classic example of how research design and statistical methodology guide which articles are chosen for review and what conclusions can be drawn. The review told us little about the efficacy of cognitive rehabilitation because it focused on methodology rather
than on the phenomena under investigation. This type of reporting is common in professional journals and does not aid clinical practice.

This point is highlighted further by considering a recent example of the dogma that randomized controlled studies provide the most convincing evidence regarding the efficacy of an intervention. In the *Journal of the American Medical Association*, Salazar et al. (2000) reported that a cognitive rehabilitation program modeled after a neuropsychological rehabilitation program described by Prigatano et al. (1986) did not notably improve outcomes compared to a limited home-based rehabilitation program. They used a prospective, randomized control design. Based on the so-called evidence-based practice model, this type of design produces “Class 1” data. The findings are misleading. Why?

First, the program of neuropsychological rehabilitation that they referred to was designed for postacute brain dysfunctional patients, not for acute patients (Prigatano, 1999a). However, Salazar et al. (2000) applied the program to patients within the first 30 days of their brain injury, ignoring recommendations to the contrary.

Second, Prigatano et al. (1986) repeatedly emphasized that the working alliance between the patient and treatment team has predictive value for who will benefit from such neuropsychological rehabilitation (Prigatano et al., 1994). This finding has been cross-validated and expanded (Klonoff, Lamb, & Henderson, 2000). Salazar et al. (2000) neither mentioned nor studied this important variable.

Third, Salazar et al. (2000) reported that the rates of patients returning to work after participating in the hospital and home programs were 90 and 94%, respectively. Yet they state that their patients had moderate-to-severe TBIs. World statistics indicate that only about a third of patients with severe TBIs are able to return to work 2–3 years after brain injury. Given these established statistics, Salazar et al. failed to account for their high rate of return to work, which is unprecedented in the literature. Their patients may have been much less severely impaired than reported in other studies or perhaps they returned to work prematurely.

Fourth and perhaps most telling, many patients treated acutely in the postacute program showed an increase in aggressive behavior 1 year after treatment. From my experience, this behavior suggests that a potentially useful program has been applied inappropriately (Prigatano, 1999a, 2000).

Thus, without understanding the phenomenon under investigation, these researchers conducted a well-controlled study but reached erroneous conclusions. This study is a good example of what I call scientism—the practice of focusing on statistics and research methodology when conducting a study without understanding the phenomenon under investigation (Prigatano, 1999b). Randomized, controlled clinical trials only provide useful information when they ask the right questions and the phenomena are approached in a reasonable manner. Otherwise, such studies cannot provide good evidence about the efficacy of neuropsychological rehabilitation or any other intervention.

To my knowledge, John Hughlings-Jackson and Luria never conducted a controlled clinical or prospective randomized study. Nevertheless, their insights into the nature of brain-behavior relationships are now being reaffirmed by modern neuroimaging techniques. For example, the concept of functional overlapping systems responsible for complex psychological processes proposed by Luria (1966) can be reflected in almost any functional magnetic resonance imaging (fMRI) study on cognition that is reasonably designed. John Hughlings-Jackson’s concepts
that the organization of the nervous system most likely reflects principles of evolution has repeatedly been supported by theorists and researchers interested in the comparative anatomy and physiology of brains across species (see Prigatano, 1999a). His insights concerning the nature of epilepsy, aphasia, and recovery of function were perceptive because he carefully observed patients and did not focus on statistics and methodology alone.

It is this spirit that is most important for research. Careful clinical observation of patients who benefit from rehabilitation programs compared with those who fail is the most important method for advancing knowledge in this field. For example, I believe that personality factors greatly influence the outcome of rehabilitation even in programs that focus mainly on cognitive rehabilitation. Motivation to work at the rehabilitation task, reasonable insight into the nature of their difficulties, and the formation of a therapeutic alliance with a rehabilitation therapist help sustain TBI patients during difficult times when they become discouraged or upset, or when they fail to succeed at a variety of tasks that they once could easily accomplish. First-class evidence is based on first-class observation, not on randomized controlled studies.

2.2. Dogma 2

The practice of psychotherapy with persons who have suffered brain injury has never been recognized adequately by the field of clinical neuropsychology. It is recognized that patients have emotional reactions to their cognitive deficits and that certain brain abnormalities can directly produce changes in the experience and expression of emotion. However, a belief persists that the material that emerges in the psychotherapy of brain dysfunctional patients is of no interest to the field of neuropsychology (i.e., to the scientific study of brain-behavior relationships).

This belief can be challenged by considering patients’ descriptions of how their dreams are affected after brain injury and what patients report during psychotherapeutic sessions. What patients reveal about their impairments and associated disabilities within the confines of a safe and supportive relationship may be different than what they report when answering questions during a standardized interview or on a standardized questionnaire.

While doing psychotherapy with brain dysfunctional patients 20 years ago, I noticed that a number of brain dysfunctional patients often yawned, particularly when involved in group psychotherapy. Many reported disturbed sleep. Upon further questioning, many stated that the frequency of their dreams decreased after brain injury. This report led to a study that compared rapid eye movement (REM) sleep in postacute TBI patients and normal controls (Prigatano, Stohl, Orr, & Zeiner, 1982). To our surprise, REM sleep was comparable in both controls and postacute TBI patients, but TBI patients awoke about three times more frequently than the controls. This finding was later replicated (Mauseau, 1995). Sleep disturbances and disturbances in dreaming after TBI are poorly understood, but the area is worthy of scientific investigation. The mental fatigue experienced by TBI patients may partially reflect ongoing sleep disturbances. However, this problem only came to light within the context of psychotherapeutic dialogue.

Psychotherapy also provides an avenue for understanding how patients symbolize their disturbances. This information is important to obtain a systematic understanding of brain-behavior relationships after brain insults. One of the first patients whom I worked with related a dream
in which he was crying from the left eye. He recalled being told that he had suffered an injury to the left side of his brain. Crying from the left eye symbolized his sadness about his left-sided brain injury.

During a psychotherapy session, the spouse of a brain-injured patient reported the following. The patient had been involved in a day-treatment program that had terminated her care because of her lack of involvement/commitment. She was upset and felt that the clinical director of that program was unduly harsh and difficult to approach. After much trepidation, she reported a dream to her husband in which the clinical director of that rehabilitation program had a brain injury, but the clinical director’s staff were afraid to tell the director. The dream reflected the intimidation the woman felt and her inability to establish a working alliance with the director. The contents of the dreams of brain-dysfunctional patients are as important as the content of dreams of nonbrain-dysfunctional patients. Neuropsychology should not reject the insights that patients’ dreams may offer.

Psychotherapy also provided insight into the problem of denial of disability versus impaired awareness after brain injury. In the 1980s, I took seriously the need to talk to brain dysfunctional patients regarding their emotional and cognitive disturbances. In one case, I worked with a patient daily for 6 months. She was unwilling to admit that she had any memory problems despite a severe amnestic disturbance. I attempted to break through her “denial” by being more confrontative. She became more emotionally distressed but often insisted that her memory was fine. I brought her husband into the sessions for fear that people might misunderstand what I was attempting to accomplish with this woman. After attempting to force her to recognize the irrationality of her statements that she had no memory problems, I became convinced that she simply did not experience the problem and that she was not exhibiting denial per se.

In contrast, the spouse of a brain dysfunctional individual was a very angry, argumentative woman. During the course of doing psychotherapy with her, she suddenly recalled being sexually abused as an adolescent. Her anger over the injustice she perceived occurring in her husband’s rehabilitation stemmed from the anger she felt over her family’s failure to deal with the injustice associated with her sexual abuse. Differentiating denial from impaired awareness becomes clear during psychotherapy because the therapy provides a protected long-term setting for personal communication. This type of material is crucial to advance the field of clinical neuropsychology.

Recent research in the field of medical compliance for diabetes underscores the importance of incorporating psychodynamic principles when working with medical problems (Ciechanowski, Katon, Russo, & Walker, 2001). For example, the patient–provider relationship clearly affects whether patients adhere to their medications for diabetes. Based on John Bowlby’s concepts of attachment theory (Bowlby, 1973), this study showed that if physicians understood a patient’s style of interpersonal action, they could talk to the patient in a manner that would increase the likelihood of compliance.

This same phenomenon occurs daily when working with brain dysfunctional patients. The notion that a clinician can work with a brain dysfunctional patient by relying only on neuropsychological knowledge is nonsense. To conduct a reasonable neuropsychological examination and to provide reasonable interventions, clinicians must have some understanding of the patients’ psychodynamics, their psychosocial history, and their learning history, as well as knowledge about brain-behavioral relationships. Thus, Dogma 2 can be dismissed.
2.3. Dogma 3

It is repeatedly claimed that science cannot progress without replicating findings and without the objective assessment of phenomena. Consequently, some scientists have stated that subjective or personal states can never be studied scientifically.

In our early work with brain-dysfunctional patients (Prigatano & Altman, 1990), we noted that TBI patients who underestimated their behavioral limitations often demonstrated finger tapping impairment with both hands. The phenomenon was most pronounced with the nondominant hand. This association of slow finger-tapping with impaired awareness was replicated in a Japanese population (Prigatano, Ogano, & Amakusa, 1997).

Furthermore, awareness can be impaired for specific neuropsychological deficits, depending on where a lesion is located in the brain (Prigatano & O’Brien, 1991). For example, patients with a focal frontal lesion are often unaware of their socially inappropriate behavior. In contrast, patients with occipitoparietal lesions might have impaired awareness about the extent or nature of a dressing apraxia or visuospatial disturbance. This same point has been echoed by theorists interested in the problem of impaired awareness (Bisiach & Geminiani, 1991).

We became convinced that impaired awareness after brain injury is a real phenomenon that can be studied scientifically. Recently, we attempted to apply fMRI to this problem. The first step was to ask what areas of the brain are activated when normal individuals perform the Halstead finger-tapping test. Many brain sites, including the ipsilateral cerebellum, the contralateral sensory motor strip, and the ipsilateral sensorimotor strip, are activated (Johnson & Prigatano, 2000). Perhaps even more interesting was the question of what areas of the brain are activated at the end of the Halstead finger-tapping test compared to the beginning. Widespread activation in areas Mesulam (1985) has referred to as the heteromodal cortex was observed. This finding was the first objective evidence that indirectly supported the theoretical notion that finger-tapping may be associated with damage to the heteromodal cortex. Damage in this area has been thought to account for the impaired awareness common in patients with severe TBI (Prigatano, 1991a). Subsequently, we applied these data to a specific case example. In a TBI patient with impaired awareness 12 years after a severe injury, the heteromodal cortex failed to activate when the patient performed the finger-tapping test. In contrast, a normal control showed activation patterns suggestive of heteromodal cortex involvement (Prigatano, 2001).

Our most recent efforts to study impaired awareness using fMRI techniques has been spearheaded by Sterling Johnson. He has developed what he refers to as a self-reflection task. In this paradigm he asks individuals to reflect on general knowledge of the world or personal knowledge about themselves. In every normal subject studied to date, the mesial frontal region and posterior cingulate have been activated (Johnson et al., 2002). These findings suggest that certain neural networks may be important for accessing information that can then reach self-awareness. I do not believe self-awareness is located in any particular region of the brain. Rather, it is likely distributed throughout the brain and is an emergent function. However, crucial neural circuits involving cingulate and cortical regions may need to be accessed for self-awareness to emerge. These observations suggest that self-awareness is open to scientific investigation as are other neuropsychological impairments.
2.4. Dogma 4

In an extraordinarily insightful but seldom referenced chapter, Moore (1986) discussed “neuroanatomical considerations relating to recovery of function following brain lesions.” She emphasized that the study of lateralization of functions in phylogenetically new brain regions is of interest but not of major importance to understanding how the nervous system works. She reminded us that “Practically everything that man (or animal) does (work, play, or activities of daily living) is accomplished by the bilateral, three-dimensionally organized and integrated nervous system” (p. 31). She further noted that “Everything man does on one side of the body immediately affects and is affected in turn by the opposite side” (p. 88).

This important observation is often forgotten by theoretically oriented neurologists and neuropsychologists interested in what I call the “new phrenology” common in contemporary cognitive neurosciences. With the advent of powerful techniques such as fMRI and positron emission tomography (PET), there has been a rush to identify discrete areas of the brain most important for performing specific higher cerebral functions. Researchers in this area, however, readily admit that different patterns of cortical activation are seen depending on where they place the cursor and the probability level of statistical comparison. Reflecting on the basic anatomy of the cerebral vasculature, one recognizes that shifts in blood flow occur in multiple places any time a higher (integrated) cerebral function is exercised. Many of these studies are looking at only the tip of the iceberg.

Studying the bilateral and integrated nature of the central nervous system is more important for advancing our understanding of brain-behavioral relationships than studying the lateralization of the nervous system. Moreover, if we are to understand recovery and deterioration of brain function and the mechanisms that control these processes, a strict focus on lateralization of higher brain functions will likely lead to misleading information.

What are the advantages and disadvantages of this argument? The early work of Broca and Wernicke instilled a tremendous amount of enthusiasm in the scientific community for the importance of the left hemisphere in producing language function. Lesions of the left hemisphere produced predictable deficits in language function (Damasio & Damasio, 2000). However, the notion that language function is limited to the left hemisphere has progressively proven to be incorrect (Damasio & Damasio, 2000). As Moore (1986) pointed out, individual case studies such as that of Brodal (1973) provided clues. Brodal, who had a lesion in the internal capsule of the right hemisphere, had a predictable left monopareses. He noted, however, that he experienced difficulties in rapidly retrieving information and in expressing himself in an articulate way, even though there was no ongoing dysarthria or dysphasia. He noted that the right hemisphere “was not without influence” as it related to language function. PET studies of normal individuals have now emphasized that the actual process of preparing to speak and speaking itself always involve bilateral activation (see Prigatano, 1999a).

A second area of research in neuropsychology that emphasizes the importance of lateralization of function involves visual spatial disturbances (Mesulam, 2000). Considerable literature has described how lesions of the right hemisphere often produce visuospatial disturbances and specific forms of attentional deficit. An important component of visuospatial problem-solving
is the ability to visualize information in “working memory” when performing any kind of problem-solving task.

Lesions in the parietal lobe and sometimes in the frontal lobe in the “nondominant hemisphere” can produce predictable deficits in these areas. However, recent studies on working memory with normal individuals and those with a mild brain injury emphasize the importance of bilateral activation. In normal individuals performing working memory tasks, the posterior portions of the frontal lobes and parietal lobes are often activated bilaterally (McAllister et al., 1999). After a mild TBI, symmetrical bilateral activation is often disturbed, even in individuals who perform well on neuropsychological tests but who report difficulties with mental energy and problems with concentration. Recovery of normal function may involve regaining the “old balance” of activities between the two cerebral hemispheres.

A third area that traditionally emphasizes the importance of lateralization of function is research on motor disorders. It is well known that unilateral lesions in the sensorimotor strip produce contralateral hemiparesis. Rehabilitation often attempts to improve the function of the affected limb. In fact, recent research on constraint movement therapy builds on Shepard Ivy Franz’ concept that forcing an affected arm to move even several months after injury may be associated with some improvement in function (Ogden & Franz, 1917). Yet, the so-called “unaffected” hand is often “affected” in patients with a “unilateral” lesion and clear contralateral hemiparesis. Prigatano & Wong (1997) demonstrated that speed of finger-tapping was bilaterally affected after a unilateral cerebrovascular accident. Perhaps more importantly for practicing clinical neuropsychologists, the recovery of speed of movement in the so-called “unaffected” hand correlated best with obtaining rehabilitation goals, even during the acute setting. Working on the bilateral aspects of motor functioning is important to rehabilitation outcomes.

Research on anosognosia has also traditionally capitalized on the importance of lateralization of a lesion. The world’s literature emphasizes that lesions to the right hemisphere tend to produce anosognosia more frequently than left hemisphere lesions. Yet anosognostic phenomena change rapidly after a lesion is sustained. Recent studies suggest that unilateral lesions actually produce bilateral hypometabolic disturbances (Prigatano, 1999a, 2001). When the so-called unaffected hemisphere begins to return to normal metabolic activity, frank anosognosia often disappears. Incomplete syndromes appear when there is evidence that a unilateral disturbance persists. These studies reinforce the notion that “normal” bilateral activity is important for maintaining self-awareness.

Finally, research on the study of emotion emphasizes the importance of the bilateral nature of the nervous system. Davidson (1992) has suggested that the right and left anterior brain regions play special roles in the production of emotion. He suggests that the anterior left hemisphere is involved in approach behavior and that the right anterior region is involved in avoidance. Thus, lesions of the left anterior brain region produce a deficit in approach that looks like depression. Lesions of the right anterior brain region produce a deficit in withdrawal that often appears as inappropriate social behavior. This research is important because it considers the natural interaction between two sides of the brain during the performance of everyday complex emotional activities. This dynamic interaction between the two sides of the brain must be studied to obtain the insights on which the science of neuropsychology will stand.
2.5. Dogma 5

The fifth dogma to be considered is seldom explicitly expressed in journals but is implied in the writings of many authors. The notion is that psychotherapy is ineffective with persons with brain damage because their emotional and motivational disturbances appear to be related to underlying disturbances in neural circuitry. When patients’ problems are thought to be reactionary, clinicians often assume that medication is the best treatment. Cognitive limitations are thought to preclude such patients from benefiting from psychotherapy.

This dogma is dangerous because it deprives brain dysfunctional patients of the opportunity to engage in psychotherapy, and this service is crucial for some patients. I have tried to indicate in various papers that psychotherapy does not “work” for all brain dysfunctional patients. However, clinicians must seriously consider the need to determine when psychotherapy will be helpful and when it will not. The following case examples illustrate effective psychotherapy, ineffective psychotherapy, and unnecessary psychotherapy.

2.5.1. Patient 1: gunshot wound to the head

In other publications (Prigatano, 1991a, 1994, 1999a), I have described a young woman who suffered a gunshot wound to the left temporal lobe and the psychotherapy that followed. She is one of the most outstanding examples of how psychotherapy can be effective. Her story continues, but I will highlight some of the major aspects of her treatment, which emphasizes that psychotherapeutic interventions after brain injury can be exceptionally helpful.

This young woman was a victim of a drive-by shooting. I first saw her on an inpatient neurorehabilitation unit. Her head was wrapped in a scarf to cover where the surgeons had shaved her hair in their attempt to remove gunshot pellets from the left side of her brain. Like many such patients, she sat with her head bent over and her eyes facing down. She was extremely compliant throughout her inpatient rehabilitation stay and showed no resistance to entering a day-treatment program.

During the first few months of her day-treatment program, she was equally compliant. She was soft-spoken, cooperative, and followed the advice and direction of the various therapists.

One day in a cognitive group exercise, the task of videotaping individuals practicing for job interviews was introduced. This very compliant patient surprisingly stated that she would not participate in such a task. The therapists were shocked and immediately contacted me to work with her to “convince her” that she needed to participate in this task.

I too was surprised by her unwillingness to engage the task but spoke with her to better understand her experience. During many of the initial sessions, I found myself doing all of the talking while she sat quietly, again looking down and doodling. She made small little boxes repetitively with paper and pencil. After three or four sessions of getting nowhere, I asked her if she would go home and draw “anger.” I had never before asked a patient to do this and have never done so since and am even unsure why I asked her to draw anger. I think I sensed, however, that she was feeling a lot of anger. She looked at me and quietly agreed to do so. I provided her colored pencils and drawing paper that Thursday afternoon. On Monday morning, she gave me the picture that is referenced as Figure 2.3 in Prigatano (1999a, p. 40).

This patient had a lot to say even though she was quiet during her psychotherapy sessions. Her drawing had no mouth and no eyes, but it did have tears. She had a lot of sadness and
a lot of anger. The words she wrote around her face indicate the typical experiences of brain dysfunctional patients. She was lonely. She was scared. She was isolated. She was confused. She was angry. She felt like she was falling away from others and not maintaining social contact.

She felt that the walls that were enclosing her were permanent. Psychotherapy, however, helped her realize that this was not the case.

The patient also drew a big question mark and noted that she could not be a perfect patient. She was not a computer and she did not have buttons to program her.

I was moved by this picture and told her that she had captured what many brain dysfunctional patients experience. I remember her looking at me quietly, somewhat quizzically. The next day, she passed my office and stuck her head into my office asking if she could talk to me for a moment. I agreed and she looked me in the eye and said “so I can have a brain injury and still be creative?” I said, “Absolutely, that is the case.”

This event was a major turning point in our working alliance. She insisted that the picture that she had drawn could not be shared with the rehabilitation team during our daily staff meeting. She was specifically angry at one psychologist who she felt was cold and indifferent to her needs. I concurred. I told the treatment team that I had good reason to believe that this woman would be cooperative with the program but that we would not force her to be videotaped. The team expressed their concern to me. They felt that I might be having a countertransference reaction to her and was allowing her to get away with something that could disrupt the fabric of our program. If she could refuse to do a cognitive retraining task, what would stop other patients from doing so? I insisted that we follow this course because I knew this woman was honest and cooperative even though she could not participate in this particular activity.

Eventually, she completed all other activities and completed the rehabilitation program. She received further training and is working today. I believe psychotherapy was especially helpful in allowing her to sense that she still had creative abilities and that she could speak up for herself without devastating effects. In many ways, this could be the end of the story, but there is more to it.

After the patient left the rehabilitation program, she began to have seizures. She was in a relationship with a young man for a number of years and became pregnant by him. The neurologists who had been prescribing her antiseizure medication failed to tell her that the medications would reduce the potency of her birth control pills. She faced a major dilemma that many young women confront. Should she have an abortion or keep the child? Despite her religious upbringing and the shame that she experienced in becoming pregnant without being married, she chose to keep the child. She did not insist that the young man marry her. In fact, she insisted that they should not marry under these circumstances. With time, the young man was so impressed with her character that he apologized for not immediately proposing, and eventually they married.

It took her a year after she had the baby before she could call me and tell me what had happened. She said that she was ashamed to tell me. When I indicated to her that there was nothing to be ashamed about, she was comforted and returned. In many ways, her story reflects a recurring theme discussed below; that is, the hero’s journey, which seems to be the crucial component to successful psychotherapy. I will return to this point later.
2.5.2. Patient 2: fell from a horse

In contrast to the first patient, I worked with a Navajo man who fell from a horse while drinking alcohol. Unlike the first patient, I was unable to establish a working alliance with him. He did not actively resist rehabilitation, but he also would not talk with me honestly about his feelings. He came from a different culture and was suspicious of white men and white man’s medicine. Moreover, his family felt that if he returned to Native American practices (i.e., smoking peyote) he could deal with the spiritual crisis that the brain injury had caused.

This patient became increasingly belligerent and often hit his wife, who was devastated and did not know how to handle the situation.

Despite numerous efforts to help him, I was unable to establish a working alliance. Eventually he left the rehabilitation program and deteriorated further from a psychiatric perspective. A picture of this individual riding a horse before his injury as well as a drawing that he made after his injury can be found in Prigatano and Klonoff (1988). I have also referred to this patient elsewhere (Prigatano, 1994).

2.5.3. Patient 3: fell down a flight of steps

In contrast to the first two patients, the third patient suffered a moderate brain injury at work. I have written about him in a paper entitled Disordered Mind and Wounded Soul: The Emergent Role of Psychotherapy in Rehabilitation After Brain Injury. This man was well adjusted to the changes that followed his injury.

He was from South Vietnam and had been a pilot in the South Vietnamese Air Force during the Vietnam war. He was also an attorney. He had fought diligently and had immigrated to the United States when the war was over.

Despite his high intelligence, his pilot’s training, and his education as an attorney, he could not get a job commensurate with his abilities or professional background. Therefore, he took a job wherever he could find one and was in a middle management position in a manufacturing company when he fell down a flight of stairs. He hit his head and sustained a mild-to-moderate brain injury with associated moderate neuropsychological problems that particularly affected his memory. Yet, he did not seem to be especially bitter, angry, or depressed.

While in formal psychotherapy sessions, I once commented that I was not sure why I was seeing him and he concurred. At that time in my professional work, I was impressed with how fairy tales can influence how we perceive life events and how they can guide our lives. We were talking about fairy tales in group psychotherapy. The patient had indicated from his Oriental background that fairy tales were uncommon, but that certain stories were common. He then told us the following story, which helped me understand why he did not need psychotherapy. This story, which follows, is taken from Prigatano (1991b).

There was an old man named Thong who lived in Vietnam. Thong was a farmer and had one horse to plow his field in order to raise his crops to care for his family. One day, Thong went out to the barn to fetch his horse and discovered that the horse had run away. Other villagers came to console him, stating that it was certainly bad luck he lost his horse. The old man looked at his friends and said, “Maybe it is and maybe it isn’t, only time will tell.”

A few weeks later the horse returned, not only by himself but brought along a female companion. The female companion was expecting. The villagers once again gathered around
Thong proclaiming his great luck. Now he was the envy of the whole village! They stated that he was indeed fortunate to have his horse back with an expecting companion. Again the old man looked and shrugged his shoulders and said, “Maybe it is and maybe it isn’t, only time will tell.”

Then, as the story goes, Thong’s son went out one day to ride the horse. The horse bucked him off, and the young man suffered a brain injury. The villagers once again gathered around Thong stating what a tragedy this was for him. Again, the old man looked at the villagers and shrugged his shoulders and said, “Maybe it is and maybe it isn’t, only time will tell.”

And the patient then stated that a war came to Vietnam and only the healthy young men went to fight and were eventually killed! [Reprinted with permission from Prigatano G. P.: Disordered mind, wounded soul: The emerging role of psychotherapy in rehabilitation after brain injury. *Journal of Head Trauma Rehabilitation*, 6(4): 1–10, © 1991, Aspen Publishers.]

This man’s philosophy of life allowed him to recognize that setbacks had to be placed in perspective. Time provides perspective like nothing else. Given his maturity and his relationship with his spouse, this patient was able to cope with brain injury without any form of psychotherapy.

Consider Hebb’s (1974) paper “What is psychology about?” Hebb argued that psychology is concerned with the mind and the mind is the capacity for thought and thought is the integrated activity of the brain. He noted, however, that psychology had a poor track record in teaching patients to live well and wisely. He suggested that psychologists turn to other sources of information when they wanted to teach patients (and themselves) how to live well and wisely, information from the humanities including art, literature, history, and philosophy. I have been very impressed with the wisdom of this statement, and yet many professional psychologists are concerned about doing anything not done in the name of science. Many neuropsychologists feel that catastrophes can occur if patient care is not guided by the scientific method. As noted earlier, however, significant mistakes can be made in the name of science as well. The question is whether the clinician is sensible and sensitive to the patient’s needs (Prigatano, 1999a).

What, in fact, is the underlying process associated with successful psychotherapy in many cases? I believe that process is described as the hero’s journey. It is the prototype, or perhaps better, the archetypal description of growing up psychologically. In this motif, individuals are called to an adventure or must face something frightening. Often, the initial reaction is to reject the call. Nevertheless, the call persists and ultimately individuals respond to the need to do something that they initially did not want to do.

This journey is beautifully portrayed in the Star Trek movie, *The Undiscovered Country* (Winter, Jaffe, & Meyer, 1991). Captain Kirk, whose son was killed by Klingons, is called to a Federation meeting in which they are told that the Klingon Empire will die within 50 years. To keep governments stable within the universe, Kirk is asked to help the Klingons. His initial reaction is understandably “let them go to hell.” But his call to duty makes him rethink this response, and Spock, who is the voice of reason, provides a strong rationale for why they should help the Klingons.

Kirk responds to the adventure and goes out into outer space. Many events take place, but at the end of the movie they encounter a Klingon warship, a cloaked bird of prey. The cloaked Klingon ship then attacks the Starship Enterprise. What are they to do? With the help of Scottie, the engineer, and McCoy, the sensitive doctor, they rig up a torpedo with a
heat-seeking component that is able to hit the cloaked warship. They destroy the enemy and save the universe. When people see this dramatic story in theaters, they yell with laughter and clap. Why? Because it captures all of the ingredients of the hero’s journey.

In each case, once an individual responds to the call, he or she must leave the security of home and confront something frightening. This journey parallels losing a certain psychological security about oneself, as often occurs when entering insight-oriented psychodynamic psychotherapy. When security is shaken, the intellect and feelings help guide the individual to face and defeat his or her fears. Both bravery and cunning are needed, and all heroes have both. We confront this issue not only in psychotherapy, but also in our personal lives as we in the United States deal with terrorism today. Any threat to our well-being or to our ability to function in our daily life invokes the archetypal path of the hero. In each case, we must respond to the call, face our fears using bravery and cunning, and return home further developed, wiser, and better able to cope with the universe. The scientific method has not taught us this, but the study of humanities has. We should not forget this body of knowledge as we live our lives and practice as neuropsychologists (also see Prigatano, 1989).

3. Summary

Challenging dogmas is important for our field. The future of clinical neuropsychology rests on challenging dogmas specifically associated with ideas concerning recovery and deterioration of higher integrated brain function. Understanding mechanisms of change after brain injury will improve our diagnostic skills and enhance rehabilitation and intervention programs. It will help us to revisit and revise theories about brain-mind relationships.

When we engage in this struggle to challenge certain dogmas, we will inevitably experience conflict. Ultimately, however, this process can help establish a more meaningful, professional existence.

On the occasion of receiving this award, I must reflect on the insights of Carl Gustav Jung who has greatly influenced my thinking about conducting psychotherapy with brain dysfunctional patients. Jung emphasized that individuals cannot stand a meaningless life. Ultimately, there will be a reaction and that reaction is always to advance the human spirit and to face adversity as best we can. When the fabric of our life and culture are being threatened as they are by terrorism today, we must again reflect on what gives us meaning and be willing to face our fears to establish or to re-establish meaning in the face of inevitable losses. No matter what threats are leveled against us individually or collectively, we must find the courage to stand up for what we believe is true. In so doing, we not only enhance our own individuality but improve the care of the patients that we serve.

References


