Chapter 4
The New Unconscious: Agency and Awareness

> *There is a merciful mechanism in the human mind that prevents one from knowing how unhappy one is. One only realizes it if the unhappiness passes, and then one wonders how on earth one was ever able to stand it. If the factory workers once got out of factory life for six months there would be a revolution such as the world has never seen.*
>
> [The poet W.H. Auden (1939)].

The quote above is dated: as I write this, factory workers are likely to feel lucky to be working at all. It well could be, as the country emerges from its current financial distress, factory workers may feel dissatisfied again. But the fact remains that our current states of satisfaction are often creatures of past conditions utterly unbeknownst to us and therefore unconscious.

In the early 1960s symbolic interactionists rejected the Freudian unconscious for sound reasons.[1] However, two things compel me to make the case that we should attend to what cognitive scientists and neuroscientists refer to as the "*new* unconscious." One is that the unconscious is, in fact, compatible with Meadian theory. In his lectures gathered together in *Mind, Self and Society* (1934: 68–69) he states that

> We are more or less unconsciously seeing ourselves as others see us. We are unconsciously addressing ourselves as others see us. Like a Canary we pick up the dialects about us. . .We are unconsciously putting ourselves in the place of others and acting as others act.

As the social phenomenologist Polanyi (1958) observes, "We know more than we can say: We know more than we can tell and we can tell nothing without relying on our awareness of things we may not be able to tell."

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[1] Rather than being pushed by determinant past forces of external conditioning or driven by the unconscious tensions between the psychoanalytic "superego" and "id," voluntaristc behavior for symbolic interactionists was seated in the self-consciousness involved in taking the role of the other toward one's own actions. This had a strong teleological character wherein actors' present behavior is "pulled into being" by their own desired future – that is his or her positive anticipation of the future consummation of the act. In contrast to more prevalent deterministic approaches, the self was no longer rendered epiphenomenal it was in conditioning and earlier psychoanalytic formulations, but is placed on center stage as the key to a model of agency.

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The old reasons for rejecting the Freudian version of the unconscious no longer hold because the new unconscious is purged of the fanciful and largely asocial notions of the id and super-ego, infantile omnipotence, and universal oedipal, Electra, or castration complexes. The new unconscious was given birth by numerous cognitive scientists and neuroscientists entering the academic scene in the 1970s. Unlike Freud, these researchers had, and still have, a strong empirical orientation which has produced a mass of evidence that can no longer be legitimately ignored.

This is not to imply that the current researchers threw the entire Freudian baby away with the bath water. For example, we still find Freud's concepts about defense mechanisms and transference vital to an understanding of human affairs and he was the first to make so many aware of the unconscious.

Of course the unconscious, new or old, could be ignored if it had asocial implications and was irrelevant to social interaction; which brings us to the second reason for attending to it. It *is* relevant to symbolic interaction. As Lakoff and Johnson (1999: 10) insist, unconscious processes are involved in making semantic sense out of sentences as a whole, framing what is said in terms relevant to the discussion, making inferences relevant to what is said, filling in gaps in discourse as well as anticipating where the conversation is going and planning responses. If there is anything of relevance to a field such as symbolic interaction, it is language, thought, and emotion. A wealth of evidence is presented throughout this volume demonstrating that all of these symbolic processes are firmly dependent on brain processes, of which we have not the slightest awareness at their moment of use.

It would be unfortunate if symbolic interaction's strategic focus on "lived experience" meant that we have to reject those unconscious but symbolic processes that affect such lived experience. Some of these processes are unconscious definitions of situations and other convictions that make us vulnerable to political manipulation against our interests. This topic will be visited in more detail at the end of this chapter. It appears from many creditable sources that the American political and consumer unconscious has been deliberately and systematically manipulated throughout almost the entirety of the past century reaching a peak during the current decade of political deception. If we chose to ignore the unconscious, those who manipulate us by using the unconscious do not. (see www. Informationliberation – The Century of the Self).

Balancing Awareness and Unawareness

Like so many of us, I was drawn to our field by its emphasis on self-awareness and a voluntaristic theory of behavior stressing *self*-control that was nonetheless based on social control. In my opinion this voluntaristic framework is still critical in my opinion because it presents the only teleological theory of self-control that embraces what is distinctively human. At the same time it does not separate self from society.

Nor does it deny that conditioning can be a part of our lives, but conditioning is not the primary focus to those interested in what makes us human.

But Mead, who first outlined this viewpoint, was not deceived into thinking that we were self-conscious all the time or even most of the time. Action usually proceeds primarily in habitual ways until ongoing action is blocked. It is only then that we characteristically use self-conscious reasoning to deliberate on how to proceed and to self-consciously evaluate our capacities.[2]

On the first page of Gazzaniga's *The Mind's Past* (1998) he tells us that, "The mind is the last to know things." By the time it dawns on us that we know something. . .the brain has done its work. It is old news to the brain, but new to us. The brain finishes its work half a second before the information it processes reaches our consciousness. Gazzaniga goes on to say that, " the primate brain also prepares cells for decisive action long before we are even thinking of making a decision" and that our "motor system, which makes operational our brain's decisions about the world, is independent of our conscious perceptions." He then concludes that 98% of what the brain does is outside of our conscious awareness. LeDoux and Damasio would insist that emotions and the conscious feelings they produce need to be seen as separate processes with emotions proper being largely unconscious. Others may dispute this tidy separation, but there is little question that a great deal goes on which escapes our awareness.

In *Philosophy and the Flesh* (1999) Lakoff and Johnson write more specifically about the "cognitive unconscious." Conscious thought, they say, is the tip of an enormous iceberg and represents only a minute part of the processes involved in the brain, including those in the prefrontal cortex from which it emerges. They assert that at least 95% or more of all brain processes are below the level of human consciousness and shape and structure all conscious thought. If the hidden hand of the cognitive unconscious were not there doing this shaping, there would be no conscious thought (Lakoff and Johnson 1999:13). LeDoux (1996:29) quoting Lashley (1950) strikes a similar note: "We are never consciously aware of the processing itself but only of the outcome." Unknown to most of us, but not surprising to the American pragmatists, our very sense of the "real" depends on our sensorimotor cortices and other structures involved in bodily movements which are totally out of our awareness. (The next chapter presents an in depth treatment of this.)

As will become evident, there is much more to say about the ubiquitous presence of the unconscious which enables reflective thought and rationality. Given the complexity of the one million billion synaptic connections in the human brain (Edelman 2004:16) it may be that Gazzaniga's 3% of consciousness is all that one person can reasonably handle.

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[2]I am not saying that we should deny the importance of self-consciousness, far from it. I *am* saying that in 2010 it cannot be considered the whole ball of wax, and symbolic interaction could both enrich and expand itself by addressing the fact of unconscious symbolic and semiotic processes.

Consciousness as Center Stage in Symbolic Interaction

Mead fostered social behaviorism by arguing that the distinctive capacity for everything human was the mind, which was defined as self-conscious behavior – that is, reflexive behavior which is aware of its own self-awareness. The key to social interaction is the role-taking process. This process has nothing to do role-playing wherein a solitary actor playing out a fixed role or performance part. Role-taking involves actors responding self-consciously to their own emerging actions as they anticipate what relevant others would do. That is, they call out in themselves the same responses to their incipient behavior that others have. They then use these imagined responses of others to shape their ongoing lines of action, especially speech. Actors do not do this all the time and role-taking is built on top of conditioning, but it is nonetheless a central occurrence in human interaction.

The concept of role-taking allows symbolic interaction to offer a unique theory of voluntaristic self-control of behavior which is at the same time thoroughly social. As we have seen, behavior is seated in the self-consciousness involved in decentering from one's own outlook and taking the perspective of the other into account in shaping one's further communications. In contrast to other approaches, this self is no longer rendered epiphenomenal, as in conditioning and early psychoanalytic formulations, but instead is placed on center stage as the key to a model of agency. (There will be much more about this later).

The Chicago pragmatists of Mead's time recognized that conscious, minded behavior was not a constant event. Habit and conditioning frequently were sufficient until the person met resistance and action had to pause for self-conscious considerations of alternative courses of action in the face of physical and social terms not of the actor's making. Blumer referred to this external trigger to consciousness as the "obdurate character of the world."

Additionally, symbolic interaction's focus on "lived experience" and the actor's definitions and interpretations keep it located inside the bounds of consciousness. Put succinctly, "We assume (and have observed) that human beings know what they are doing and why they are doing it. We have rejected the psychoanalytic emphasis on unconscious drives and the behaviorist emphasis on environmental stimuli in part because both of these competing perspectives assume (in different ways) that human beings are like marionettes at the mercy of their strings" (personal communication). This stance is not limited to symbolic interaction. Experimental psychology was forced into reluctant acceptance of the unconscious by a mass of evidence only in the 1980s.

In the 1960s when I was in graduate school, the Freudian unconscious was dismissed with the observation that "one person's unconscious was always in another's consciousness." This was more of a quip than a serious refutation and would currently be seen as embarrassingly inadequate in light of the more recent flood of findings to the contrary which have nothing to do with Freud. The remark's wide acceptance back then nonetheless may have been due more to the fact that other people deciding what you "really are thinking" can be extremely annoying.

Finally, Blumer's emphasis on "self-indications" reflects the central place of consciousness in symbolic interaction. But Mead and Blumer wrote long ago and had no knowledge of today's empirical science. The "new unconscious" has little or nothing to do with the psychoanalytic concept and a great deal to do with contemporary neuroscience and its empirical observations of patients as well as tightly controlled psychological experimentation.

The New Unconscious as Procedure and Content

The term "unconscious" is highly ambiguous and at times hints of unnecessary innuendos. Brothers (2001:14), for example, notes the fundamental difference between what is seen now as the somewhat more fanciful Freudian unconscious and the more mundane, but straightforward phrase, "out of awareness." There are at least two very different kinds of unawareness that are often not distinguished when talking about "the unconscious." One is the routine working of the material brain that supports our everyday biological functions of perception, breathing, and metabolic activities. This broad-ranging category involves the general processes enabling the brain to remember past events and to know on the "operant level" how to form the past tense in English even if a 2 year old may creatively produce "doded" rather than "did" as required by the King's English.

This "procedural" meaning of the unconscious focuses on how routine things are done in the brain rather than on the specific cognitive or emotional unconscious products of this process. Just because your brain can do something doesn't mean that there is a "you" who knew how it was done. (LeDoux 1996:31).

LeDoux refers to the next type of unawareness as the "dynamic unconscious" which he describes as a "darker" place. Here we focus on specific products of covert, procedural processes like specific hidden emotions, repressed memories, and defense mechanisms such as rationalizations, projections, and denials. Many, if not most racists vehemently deny that they have any such bias. They simply see as a "fact" what is really their belief that a certain minority group is inferior and must be controlled by some dominant group of which they are invariably members. Studies by Anderson and Phelps (2000) and Hart et al. (2000) have found that amygdala activation in white subjects exposed to unfamiliar black faces correlated highly with measures of racial biases. Subjects were not aware of these biases. LeDoux (2002:221) points out that negative emotions and biases have their strongest effects on behavior when they are unconscious. This is an important and common finding in the literature of unconscious affect.

Thus, the dynamic unconscious is all the more powerful just because it is out of our purview. We cannot control or evaluate that which we do not know. Zajonc (2001: 54) has concluded that unconscious affect, as opposed to the specificity of conscious cognition, is like moisture or odor. "It can disperse, displace, scatter, permeate, float, combine, fuse, blend, spill over, and become attached to any stimulus, even one totally unrelated to its origins." This is an important finding for all branches

of social psychology since power structures often use fear and anxiety to control the mentality of their publics by directing its displacements and projections to minority groups or foreigners. If symbolic interaction is still unaware of the unconscious, those controlling political capital are not. Theories of power – especially in its hegemonic forms, cannot offer adequate scope without appreciation for the many techniques of mind control residing in the hands of the status quo and outside of the public's awareness. We will address this thesis in more detail below.

The Procedural Unconscious. There are two basic forms of unconscious. One has to do with routine brain processes and the other involves content. Wentworth and Ryan (1992) offer a good illustration of unconscious procedural, or operant processes of the brain. One can hardly be aware of the brain processes like the "refracturing" of visual data involving person-recognition. This process illustrates the complexity of the brain processes involved in the taken-for-granted fact that we experience things as holistic unities, rather than the separate features that comprises them. We see a friend, a wife, or a parent abstracted from their background and its shading rather than merely the separate shape of the head, nose, and mouth, or the color of their hair. In perception these features are seen as an integrated unity rather than as fractured pieces isolation. As Wentworth and Ryan describe it, this experience of the simple unity of objects is anything but a straightforward process. The image of a doll is focused on the retina which becomes a mosaic of approximately a million elements that become impulses in optic nerve fiber. Once in the brain, the image of the doll is shattered once again by the process of "feature extraction." This process sends separate attributes to the occipital lobe in the back of the head where they are further refined in localized clusters into dimensions like color, motion, form, and depth. These separate bits of information are then sent forward into far-flung regions of the temporal and parietal lobes before being constructed into a unified whole and made conscious in the prefrontal cortex. These advanced regions allow us to recognize the doll's hair as blond even though the light-waves reflected in the morning and evening very different. This complex unifying process takes 0.5 s with no time lag being experienced.

Most of the probably 97% of what goes on in the brain is of this order and has little to do with thought as its product, be it conscious or unconscious. Neuroscience has identified many important processes beyond our awareness which assure social coordination and interpersonal attunement (see Damasio (2003) and the chapter on imitation).

On the cognitive level, Lakoff and Johnson (1999:15) point to the unconscious, procedural metaphors that make linguistic sense-making possible. In their perspective, "Unless we know our cognitive unconscious fully and intimately, we can never know ourselves nor truly understand the base of our moral judgments, our conscious deliberations, and our philosophy." If they are correct, symbolic interaction would benefit from what the unconscious metaphors of our language can tell us about our consciousness and thus, our minded behavior.

Actually, the unconscious as process has a long and accepted history in sociology. As a matter of fact, it has been at the heart of social psychology and linguistics. This was expressed particularly well by Katz (1999:7) who asked, "What is it that, itself

being invisible, is responsible for all that is visible?" It is axiomatic that covert social interaction is made possible by hidden background processes such as "assumptive orders," tacit knowledge, " or even Durkheim's classic "non-contractual element of contract." In describing Merleau-Ponty's understanding of the preobjective, Osrow (1990:28) notes that in the act of seeing we see objects, we do not usually perceive the eyes that enable us to see. "We do not in the first place 'know' our bodies; we have them, are them, and only when we turn to the body in awareness – such as when our eyes hurt while reading... does it take on the status of a perceived and known object."

In this same vein Dijksterhuis (2005: 82) alert us to the surprising fact that we are never aware of thought itself in the moment of thinking. If we are asked to think of a word that is associated with a particular noun like tree as quickly as we can, another word like root or limb "comes to mind." How it got there is beyond us. According to Scheff (1990) social conversation is as lightening-fast as any athletic event. The boxer Sugar Ray Robinson said that when he became aware of his opponents' openings, he knew he was too slow to stay in the ring. He did not need lessons in biophysics to tell him that motor action takes less time than 0.5 s of sight. Recent studies of batters hitting a baseball have shown that the experience some batters had of narrowing their focus down to the size of a quarter and hitting the third of the ball they decide on hitting is an illusion. The ball is coming far faster, and the batter's body must react more quickly than conscious sight. It is more plausible that they hit at where they anticipate the ball would be. In speech, speakers must certainly be aware of their final point, but normally specific words come out of our mouths much faster than conscious deliberation. The caution "think before you speak" is common because taken literally we so frequently do not, or cannot, take time to think before our utterance, given the pace of interaction and constraints on energy demanded by decisions. Playing the piano is analogous to this. "Performers report that they are not aware of the intention to activate each finger, instead they focus their attention on expressing their emotional feelings" (Burton 2008, Sudnow 1979).

On the other hand, the major structural concepts of sociology, like hegemonic power, culture, opportunity structures, ideology, etc., work unconsciously as well. Sociology's very task has been seen as the emancipation from such processes through gaining an awareness of them (Mills 1959, Hughes 1963).

Sociologists interested in agency have to confront the apparent challenge from Libet (1996). For every subject who intentionally initiated a particular motor movement, he found a prior electrophysiological neural potential causing the action 100 ms before the conscious decision to act. (This has provoked a robust discussion about "free-will," determinism and the importance of consciousness that will be considered in the following chapters.)

Damasio (2003) and LeDoux (1996) posit a similar situation for emotion: By the time it enters our conscious as emotional feelings, our brains and especially the amygdala have already done their work (see also Franks 2006: 52). LeDoux (1996: 69) tells us "the emotional meaning of a stimulus can begin to be appraised by the brain before the perceptual systems have fully processed the stimulus." We

have already seen that it is indeed possible for your brain to know that something is good or bad before it knows exactly what it is.

Gregory (2002) whose work was discussed in the first chapter concludes that his findings on subliminal clues of dominance support the statement by the anthropologist Ray Birdwhistell (1974) that "65% of the social meaning in human interactions is conveyed by nonverbal clues." As Gregory and Gallegher (2002) implies, this is consistent with Polanyi's statement that "We know more than we can tell." His work also makes evident the importance of the unconscious in providing the micro-supports of macro-level status structures. Neuroscience has identified many important processes beyond our awareness which assure social coordination and interpersonal attunement (see Gregory 1999).

Perhaps the most dramatic cases reflecting how our brains can know things that our minds do not, involve "blind sight" (Frith 2007: 28–29) and Ramachandran and Blakeslee (1998: 73–79). Frith, for example, reports on a patient who had damaged the part of her visual system which recognized shapes. To those around her, however, it was obvious that she could walk around without bumping into things and pick items up far better than one would expect from a person who was nearly blind. This led her therapists to design a study that would focus on her complete loss of the ability to be aware of shapes. If the patient was asked to tell the angle of a rod held up in front of her she was at a complete loss to say whether it was horizontal, vertical, or in between. However, if you asked her to mail a letter in a slot that was at a 45-degree angle, she would rotate her hands, wrists, and fingers in such a way as to insert the letter on the first try. Obviously her brain knew something that her conscious mind did not. As uncanny as this may be, blind sight is commonly reported in the neuroscience literature. The boxer's ability to hit before he sees may be just another form of blindsight.

Another illustration of the unconscious as process involves the classic work of Gazzaniga (1985) among others on split-brain research discussed in Chapter 1. As is true for many rationalizations and other defense mechanisms, the only person deceived is the actor himself. The best way to convince others of one's innocence is to convince one's self first. Split-brain research supplied evidence that the ad hoc statement of intent was oriented to social sense making rather than describing authentic "well-springs of action."

In another study reported by LeDoux (1996) and by Nisbet and Wilson (1977) pairs of women's stockings were lined up on a table. The female subjects examined them carefully as they were asked to choose which they preferred. Later they were questioned about which stockings they liked the most and why. Their answers were full of detail and knowledge about texture and sheerness of the material that justified their choices. The stockings, however, were identical. Like Gazzaniga's patients, the subjects were convinced they had made their choices on the different quality of the stockings that their left-brain told them they recognized. LeDoux concludes that both normals and split-brain patients attributed explanations to situations as if they had introspective insight into the real cause of their behavior when in fact they did not. Because of brain systems that operate unconsciously, we frequently do things for reasons which we do not know. One of the main jobs of consciousness is to

weave our lives together in a story that makes sense to us and is consistent with our self-conception. Introspection may be valid at times but it "is not going to be very useful as a window into the workings of the vast unconscious facets of the mind" (LeDoux 1996: 33). It may just be that one of the most dangerous things about *Homo sapiens* is that the statement which makes "logical sense" to us is the one which makes us most comfortable with the story.

Regarding the unconscious as process, if we were conscious of everything we were doing or thinking, we would be so overloaded that action and thought would grind to a halt. Awareness is a very slow process. While our visual system alone handles 11 million bits of information a second, our consciousness can deal with only 50 bits per second. All the rest is processed without awareness. Much of the 95 or 97% of the unconscious referred to above contains this processing and leaves time for consciousness to reflect on distinctively human matters and interests.

Other unconscious procedural processes like the "implicit learning" that allows children to use grammar long before they are aware of doing so or the automatic operation of mirror neurons, subliminal persuasion, and processes of imitation are important items in the conceptual toolbox for social psychologists.

The Unconscious as Dynamic Content: Emotion. We have seen that the procedural unconscious consists of automatic brain mechanisms allowing any thought, perception, emotion, or memory to occur. In contrast, *content* has to do with particular cognitions, beliefs, emotions, and memories. For example, Scheff (1990) discussed the negative effects of chronic unacknowledged shame. This is broken down into two types, both equally beyond the awareness of the patient. One is overt, undifferentiated shame and the other is bypassed shame. Both types of shame are both equally hidden because one is misnamed and the other avoided. He makes the case that shame can be ubiquitous yet usually escapes notice (Scheff 1990: 87).

Also, one can suffer so long from anxiety or guilt that it becomes a part of the person's taken-for-granted, emotional "assumptive order," recognized only on the occasion when it is lifted (Franks 2006: 51).

Remembering Happenings Without a Memory. The earliest illustrations of memory as unconscious content come from amnesiac patients who had lost their ability to remember from one day to the other. As early as 1889 physicians experimented by either pinpricking or shocking those suffering from amnesia; these patients later shied away from them accusingly when they met on later occasions even though they had no memory of the original harsh encounters. On one occasion, a day after being pricked a patient declined to shake the doctor's extended hand saying in effect that something about him just made her nervous (Carter 1999:94).

Damasio (1999:44–45) describes similar situations although he treated his patients with more consideration. His patient, David, had lost all conscious memory because of a trauma to his hippocampus and amygdala. He could not recognize individuals whom he saw every day because he could not remember them. Nonetheless, Damasio noticed that he did seem to gravitate to certain people and avoid others. To probe this further Damasio placed David in social situations with three different types of experimental accomplices. One accomplice was pleasant and rewarding and a second was neutral. The third was brusque and punishing. After exposure to

situations involving these three confederates, David was shown four photos including the faces of the three accomplices and asked to whom he would go to for help and who was his friend. In spite of his inability to remember any of them, he immediately chose the pleasant accomplice as the one who would be most helpful.

Frith (2007: 27) also reports a similar case involving a patient with memory loss so severe that Frith had to be reintroduced to his patient every day. Nonetheless the patient was learning motor skills that he retained for a week; each day he would say that he had never met Frith and had never performed the task before although he performed it better every day.

Kihlstrom et al. (2000:39) note that the evidence for this type of unconscious emotion is not limited to anecdotal case studies; they describe other current experimental case studies like the one above by Damasio. For example, unconscious preferences for melodies were created in amnesic subjects who had no ability to remember the exposure.

Damasio's Research on Unconscious Emotion. Damasio's (2003) stronger argument for the unconscious nature of emotion came from a study he conducted incorporating a sophisticated construct-validity design. The hypothesis addressed the question of which brain structures would be activated by emotions of sadness, happiness, fear, and anger before they emerged into consciousness. Emotional activation was measured by blood flow in the regions implicated in these emotions as measured by PET scans. These brain areas included the cingulate cortex, two somatosensory cortices (including the insular), the hypothalamus, and several nuclei in the back of the brainstem (the tegmentum). PET scans reflect the amount of local activity of neurons and thus the engagement of these structures. Next subjects were coached in theatrical techniques of reliving memories of experiencing the four emotions. With this coaching they became able to experience these feelings to a surprising degree. Then they selected the emotion they could best experience for the final study. In this stage they were asked to raise their hand when their memories started to evoke their chosen emotions. Before and after the hands were raised, heart rate and skin conductance were measured. These are reliable indicants of emotional processing.

In terms of results, all the brain structures identified above became activated before the onset of emotional feeling. Furthermore, these patterns varied among the four emotions in expected ways. Most important for the purposes here, changes in skin conductance and heart rate always preceded the hand signal that the feeling was being felt – that is, these unconscious emotional processes occurred before the subjects were aware of their feelings and raised their hands. Damasio (2003:101) concludes that this is just one of many cases where emotional states come first and conscious feelings afterward. As counter intuitive as it may seem, it is possible for your brain to know that something is good or bad before we become aware of what it is. In LeDoux's opinion one reason for this is that perceptual representation, consciousness, and affective evaluations are processed separately in the brain (LeDoux 1996:69). Others disagree about the independence of emotional and cognitive processes. They feel that while this may be true for his pathological patients, it is contrary to what happens in healthy emotional development where these systems

become fully integrated (Greenspan and Shanker 2004:7, 18 and 251). However, the observation that affective feelings about something may precede an identification of what it is remains valid namely because of the amygdala's ability at times to bypass the slower cognitive processes of the prefrontal cortex.

Effects of Subliminal Perception: Preferences Need No Inferences. In 1968 Robert Zajonc initiated an up-hill battle within experimental psychology to convince his colleagues of the existence and importance of the emotional unconscious. According to LeDoux (1996:58) his techniques and experiments were some of the first to make the unconscious seem undeniable. One of his major findings was that mere exposure to an innocuous picture created an affective preference for it. We seem comfortable with what we are used to and if a familiar message or even a familiar sound is presented in connection with some essentially neutral phenomenon we have a tendency to like it just because of its connection with the familiar. In Zajonc's case the familiar association was presented so quickly that his subjects were unaware of perceiving it. The technical language for presenting the experimentally created preference was "subliminal emotional priming." A prime is a word or image that is displayed too quickly for a subject's awareness. Nonetheless, it can have the effect of influencing later judgments. When the primes were allowed to be available to the subject's awareness the effect of the negative or positive prime diminished. This demonstrated the powerful effect that the unconscious manipulation can have. The finding was replicated on numerous neutral targets such as nonsense words, letter strings, and random sequences of tones.

The prime can also be an affectively charged picture like a smiling or angry face or a positive or negative word. It is subliminally presented at 5 ms or 1/200th of a second, which is almost below the threshold of consciousness. In a classic study, Chinese ideograms were used as the "target" of the experimentally created affect. Since the ideograms are unfamiliar and look similar to most Americans, there should be little disposition to have a preference for any given ideogram. However, when the ideograms were primed with subliminally perceived smiles or frowns, this also spilled over to affect how subjects liked or disliked the otherwise neutral "targets." One can justifiably suspect the influence of the socially sensitive amygdala at this point.

One well-known replication of Zajonc's thesis was conducted on subjects who had been briefly shown a number of faces. To insure that subjects had no awareness of the exposures, the first exposure was "masked" by presenting a second face at less than about 40 ms intervals. When asked at a later time to tell which of the faces they recognized, no one was surprised that the subjects were unable to identify any of them. However, when asked how they liked the faces, the pre-exposed faces received the most positive ratings (Bornstein 1992). In spite of the many replications of Zajonc's research and the consistent finding that our preferences were more easily influenced when we are not aware of what caused them, it was decades before his work became widely accepted (see Bornstein 1992 for a review and also Ekman and Davidson 1994).

Acceptance of the unconscious was no doubt aided by the introduction of brain scanners. This allowed clear evidence that an object or picture with negative affect

would produce a change in brain activity, even when the perception of it was unconscious. Previous research had shown that activity in the amygdala increased when people were shown fearful faces. So the researchers masked the perception of fearful faces as well as that of neutral faces and showed that the amygdala activity increased when the faces primed with fearful ones were shown. Thus Frith concludes (2007:46), "Our brains respond to fearful things we are not aware of seeing." Once again, in Merleau-Ponty's terms the brain knows things that we do not.

Subliminal Persuasion. A closely related field of research into unconscious influences involves subliminal persuasion. Significantly, it was received with the same lack of enthusiasm as subliminal perception even though the evidence for such phenomena is massive (Dijksterhuis 2005). The idea that forces exist which affect us outside of our consciousness makes many scholars uncomfortable, not only symbolic interactionists. The idea that advertisers and politicians can manipulate these forces adds a new dimension to the discomfort. Many psychologists have insisted that subliminal persuasion is a myth unworthy of serious investigation.

This may be especially true since in 2000, presidential hopeful George W. Bush was accused of employing these tactics against Al Gore. (Dijksterhuis 2005; 88, 90 and 92). One of the television ads used by the Bush campaign flashed pieces of the words bureaucrats and democrats on the screen as an attempt to evoke "near-evaluative conditioning techniques." The word RATS was also presented covering the entire screen for one-thirtieth of a second. This could be detected by paying very close attention which very few watchers did. While "subliminal evaluative conditioning" as it is called can indeed affect attitudes and behaviors, it is dubious that it could influence very deliberate decisions like voting practices where previous attitudes have already been formed.

Nonetheless, in other contexts subliminal evaluative conditioning has been successful. Clearly some of these techniques could be refined for political purposes in the future. One simple technique commonly used today is simply repeating a fearful message over and over in regular speeds. What is unconscious is not the words, but their effects.

Debner and Jacoby (1994) also conducted a similar convincing study. Five letter words like "scalp" were subliminally placed on a computer screen and immediately afterward participants were presented with a word-stem composed of three of the letters in the subliminally presented words (e.g., sca-). Subjects in these groups were then asked to spell out the whole word which they did. A control group was asked to spell out the whole word when presented with the first three letters but without the subliminal prime. Another experimental group exposed to the words subliminally were then asked to try not to use the words shown previously. Despite themselves, this group ended up using the primed word more often. The study demonstrated the semantic processing of words while ensuring that the processing was unconscious (see also Marcel 1983; Merikle, Joordens and Stolz 1995). Numerous studies also demonstrate that subliminal perceptions can elicit more than semantic effects. They influence emotional responses, social judgments, and overt behavior in surprising ways.

These studies demonstrate how much is going on with us of which we are completely unaware. While these studies may not cause the concern that hidden persuasion in politics may engender, it is still difficult for westerners so steeped in the rhetoric of self-reliance and autonomy to admit we are so suggestible. In light of these findings and studies on mimicking and later ones on imitation, the better part of wisdom is to be careful of the company we keep.

Ohman (1999) made an important contribution to the new unconscious with his study of various fear responses. Students were recruited from a group which was very fearful of snakes and also from those who did not mind snakes but were very apprehensive about spiders. A control group was arranged which did not fear either one. Slides that consisted of snakes, spiders, flowers, and mushrooms were shown to all groups. All slides were shown at a speed faster than that which allowed conscious perception. When exposed to the imperceptible snake slides, those fearful of snakes had elevated skin conductance responses to the snakes, but they did not have an elevated response to the slides of the spiders. Participants fearful of spiders responded similarly to the spider slides but not to the snakes. Controls had no elevated responses to any of the slides. Thus, with no consciousness of the slide's contents, subjects showed enhanced sympathetic, unconscious responses. After citing similar studies, Ohman (1999) in accordance with LeDoux concluded that the cause of unconscious fear responses could be independent of conscious processes.

Defense Mechanisms as Windows to the Unconscious. For those of sane mind, the capacity of human beings for telling lies is beyond dispute. Less appreciated, however, is that the person whom we deceive the most is ourself. As Smith says in *Why We Lie*, (2004:1) "...The gradual changes in brain structure that eventually produce the modern mind did not endow us with much ability to understand ourselves. Self understanding does not come naturally to human beings."

This provocative contention comes from many different directions of the neuroscience literature and has to do with the practical human need for intellectual coherence and consistency as well as the more affective needs for self-acceptance. We have seen how Gazzaniga's split-brain patients produced clear evidence of the left-brain's talents for self-deception since the only persons in the dark about the validity of their "accounts" were the patients themselves. After all, as you will recall, it was the researcher who told the mute right brain what to draw or do; the only person who knew the reason for the action was the researcher. Neuroscience's convergence on the fictional aspect of self will be discussed below, but our concern here is how self-denial and other defense mechanisms provide windows to the unconscious. Granted, defense mechanisms subserve the self but the operation must be below the level of consciousness. A conscious defense mechanism is a failed exercise.

Few neuroscientists have given more convincing evidence for this than Ramachandran and Blakeslee (1998). His work with stroke patients exhibiting extreme denial about their consequent paralyses provided his window to the unconscious. Their markedly blatant denial of serious affliction was a defining feature of "anosognosia," which means the inability to acknowledge one's bodily disability. Ramachandran calls it an "unbridled willingness to accept absurd ideas." Patients

not only deny that the limb is paralyzed, but when the paralyzed limb is pointed out, they often insist that it belongs to someone else! One patient said her arm belonged to her brother and when asked why, she said, "because it was big and hairy and that she did not have hairy arms." At the time her brother was many states away, as she knew. Ramachandran sees the less obvious everyday denials of all of us as writ large in these unusual cases.

The route he takes from the extreme to the more mundane, however, is necessarily circuitous. If anosognosia is basically self-deception in an exotic form, then it should be a function of the left-brain interpreter doing its normal work creating unity, coherence, and sensibility – at times when none of these are present. He notes also that this kind of extreme denial is almost always associated with damage to the right side of the brain resulting in paralysis of the body's left side. In contrast, stroke patients damaged on the left side of the brain (which paralyzes the right side) almost never deny their injury and talk about their useless limb constantly. From the split-brain research, which revealed the contrasting capacities of the two hemispheres, this asymmetry hints of neurological answers. If extreme denial were merely psychological, the side of the stroke would not make any difference. According to the split-brain findings, the left hemisphere is specialized for production and comprehension of language in the Broca's area and Wernicke's area, respectively. Ramachandran remarks that the left, so-called dominant, side of the brain does all the talking and the mute right side cannot protest. This right side slides over details to get the gist of things, seeing "the forest instead of the trees" and responding to the global emotional significance of events. Strokes on the right side hinder the emotional realization of events and therefore can leave patients blunted as to the full realization of their plight. Because the right brain is not so concerned with sense making and rationalizations, it is free to call attention to things that aren't necessarily congruent with these rationalizations and which can unwittingly "play the devil's advocate" or give "pause to thought" by bringing up discrepancies. Denials are based on intellectual rationalizations and the nonfunctioning right brain gives the left "executive" brain free reign to weave its intellectual monuments into rationalizations, denials, and assorted confabulations.

The next question Ramachandran asks is how deep does this denial go? I have said that a conscious denial is a failed defense mechanism and because we all have such mechanisms, this is an important question bearing on both human nature and the nature of the unconscious. Rather than fruitless attempts to confront the patient with rational strategies, Ramachandran presented them with motor tasks that involved both hands. These tasks were presented quickly before patients could think about them. A cocktail tray with six glasses partially filled with water was placed in front of his anosognostic patients. Normally one would take the tray with both hands to raise it in a stable manner, but with only one good hand it would be necessary to raise it from the middle of the tray. Normal stroke patients with only one good hand did just that. But, stroke patients with anosognosia went straight for one side of the tray with no thought given to their deficiency. When the glasses fell, they passed it off as clumsiness rather than because they only had one good hand. One patient insisted that she lifted the tray successfully even though her lap was full of

water. At this point the patients' lack of knowledge about their limitations seemed to be all that was going on.

The next series of experiments went further. They included giving anosognostics the choice between a simple task that took one hand with a five-dollar award and an unrealistic task that took two good hands for ten dollars. When four patients in denial were presented with this option they all went for the unrealistic task (of tying shoelaces) to claim the higher amount as if they were normal. They spent minutes attempting the impossible without any trace of frustration and when they were given the same option 10 min later they went for the shoelaces again. One of the patients did this five times in a row with no recognition of frustration or failure. When asked the next day if she remembered Dr. Ramachandran, she said in effect, yes, he gave me a shoe and asked me to tie the shoelaces. Then she added that she did it successfully with both hands. Ramachandran recognized the oddity of going to the unnecessary trouble of explaining that she tied them with both hands. How else could one tie shoelaces? Other anosognostics exhibited the same overdone tendencies in similar situations. Ramachandran states that " it was almost as though inside (the patient) there lurked another human being – a phantom within – who knows perfectly well that she is paralyzed and her strange remark was an attempt to mask this knowledge" (Ramachandran and Blakeslee 1998:139 parenthesis added).

The Window to Repression. As Oliver Sacks has repeatedly shown, neuropathological behavior is often bizarre. Ramachandran found a way to look past his anosognostics conscious denials into that unconscious phantom inside who knew differently. This occurred when he read of an Italian neuroscientist who had irrigated a "denying" patient's left ear channel with ice water – an uncomfortable procedure that had been used to test vestibular nerve function, which relates to a sense of equilibrium. Both doctors discovered that the procedure also resulted in a temporary remission from anosognosia. When Ramachandran tested this on his patient who had been constantly denying her paralysis for weeks, she suddenly voiced obviously repressed memories that had existed below consciousness and were successfully denied. She matter of factly stated that she could not move her arm because it had been paralyzed since her stroke. This lasted at least half an hour; later that day she remembered numerous details of her visit by the doctor (including his query about the use of her bad arm) but her memory of admitting her paralysis failed her and she insisted that she had told the doctor that her arm was fine. Her "phantom within" had been successfully repressed once again. Ramachandran conjectures that the cold water activates circuits in the right hemisphere, which makes the patient, pay attention to the left side and temporarily recognize that she is paralyzed.

The unconscious repression and the overdone denial running through these experiments have been explained as a result of the left brain's attempt to preserve a coherent and emotionally acceptable worldview. In the case of anosognosia, this entails shutting out information from consciousness which threatens the stability of self. While these patients exercise denial in an extreme form, the same general tendency is common to all of us. What would happen to them if the threat to self-stability were taken away by offering them a non-threatening alternative explanation? Ramachandran did this by telling the patient that he was going to inject her

arm (the one she was denying was paralyzed) with an anesthetic that would temporarily paralyze it. After the "injection" (actually a saline solution) he asked if she could move her arm. The denial was temporarily lifted as she admitted she could not. He then did the same with the good right arm and when he asked if she could lift it, of course, she said "yes." At that point he feigned surprise and asked how that could be since he injected it with the same anesthetic that paralyzed her left arm. Her immediate response was to the effect that she has always believed in mind over matter.

In the past 30 years scholars have rejected Freud's untestable ideas about infant sexuality. But many researchers have come to recognize the validity and importance of his list of defense mechanisms. Ramachandran argues for the power of unconscious defense mechanisms for apparent and sound reasons. He argues that his patients are microcosms of you and me (Ramachandran and Blakeslee 1998: 155). As he further argues – and as we shall find below – we are often more accurately deceivers than conscious liars, although humans are certainly liars too (Smith 2004). It is easier and more effective if we can make ourselves believe our fabrications and our brains seem geared to help this enterprise. But the human self – so important to our emotional well-being and practical adaptations – is a fragile, if flexible, process that must be protected at all costs including costs to self-knowledge. Once again, the unconscious becomes more powerful simply because it is unconscious and therefore out of our awareness and control.

The Unconscious and Political Manipulation

The possibility of political control of the public's unconscious has become one of the most interesting social psychological subjects in the last decade. Tavris and Aronson (2007) describe these processes. They show how the Bush administration first denied, and then rationalized the use of torture in the "War Against Terror" producing the cognitive dissonance which activates a "downward spiral" of defensive formations which produce a sense of "absolute certainty" of one's legitimacy. Obviously, this can be a very dangerous thing. Rational self-awareness is diminished by the original dissonance and the ensuing rationalizations. This closes off private experiences of the emotions of social control – guilt, shame, or embarrassment – and with it the psychological motivation for change. Behaviors which once were justified by extreme situations become routine, creating the downward spiral, more defense work, and an even deeper lack of awareness. The authors conclude that both governments and their publics can harden their hearts and minds by this process in ways which might never be undone. In the short time since these authors wrote of this process, more and more examples have come to the fore.

The Manipulation of Fear. Psychologists Pyszczynski, Soloman and Greenberg (2002) have conducted one of the broadest studies to date of the political use of fear and the manipulation of unconscious factors in controlling voting practices of the American public. In a well-quoted statement at the Nuremburg trials, Herman

Goering succinctly described the basic strategy for galvanizing public opinion behind preemptive military force by their government:

> Naturally, the common people don't want war, but after all it is the leaders of the country who determine the policy, and it is always a simple matter to drag people along whether it is a communist dictatorship. Voice or no voice, the people can always be brought to the bidding of leaders. This is easy. All you have to do is to tell them that they are being attacked, and denounce the pacifists for their lack of patriotism and exposing the country to danger. It works the same in every country (http.//www.rense.com).

While few students of history will quarrel with the gist of Goering's statement, it was greatly refined by Pyszczynski et al. (2002) whose work is premised on the late Ernest Becker's award winning book*, Denial of Death* (1973). Becker's thesis was that the fear of annihilation by death was a basic feature of the human condition. As an adaptation to this inherent anxiety, cultures offer either symbolic or literal immortality through what amounts to "hero systems" embedded in broader cosmic worldviews. These systems define ways that people can retain feelings of self-worth in the face of death. They are often religious in nature and offer immortality to those following the ideal. As players in these systems, we can at least symbolically deny death. The somewhat counterintuitive hypothesis tested by Pyszczynski et al. was that acute recognition of one's mortality evokes an embracement and defense of the worldview perpetuated by the status quo and its hero systems as well as the public leaders representing it to their publics. As a function of anxiety, adherence to such systems often takes on a compulsive rigidity and intolerance of other worldviews whose very existence challenges our own. As we have seen, unconscious, free-floating anxiety seizes on unrelated targets to explain such fear. Thus, in times of threat to the cultural system, defense mechanisms such as projection and displacement operate to increase scapegoating practices and general distrust of outsiders (see, for example, Kai Erickson's *Wayward Puritans* 1968).

In a pilot study of their larger project concerning this thesis, Pyszczyniski et al. asked 22 municipal court judges to fill out a personality inventory. Eleven of the inventories asked the judges to imagine their own deaths. Following this, they were asked to set bail in a hypothetical case of a prostitute whom the prosecutor claimed was a "flight risk." The bail set by those who had been sensitized to their mortality averaged $455.00 while those who had not been so sensitized averaged only $50.00. Findings like these were replicated consistently during a 10 year period, showing that sensitizing people to their mortality (referred to as "mortality salience") affected participants' negative views of other races, religions, and countries as well as an acceptance of a "my – country – right – or – wrong" brand of patriotism. To show that it was anxiety about one's mortality that was responsible for this uncritical attraction to the status quo, other studies evoked various other anxieties as possible independent variables, but only exposure to "mortality saliency" produced these uncritical effects.

At this point two other issues needed to be addressed. One was whether the mortality salience was more effective when it was conscious or, as Zajonc would suggest, if unconscious anxiety would have greater effect. The other issue was to show that the effects could, indeed, be attributed to "mortality salience" rather than

to something else. Being embedded in the status quo definition of patriotism had to be the specific result of a fear of one's own death instead of something else. To pinpoint the importance of "mortality salience" per se, the three researchers created a diversionary interval after exposure to questions relating to mortality and the dependent variable which they referred to as "worldview defense." The latter was operationally defined as heightened religiosity, traditional patriotism, concern about increasing "homeland security," and support for government officials stressing the possibility of attack, especially before major elections. It also included measures of intolerance and concern for "law and order."

First, Pyszcznski et al. conducted experiments using subliminal clues showing that after the conscious anxiety about morality had time to subside from focused attention, the thought remained active unconsciously in a manner that could increase adherence to "worldview defense." Subjects were asked to complete the endings of two word stems. Between the presentations of these two stems the word "death" was flashed to one group faster than awareness allowed, while the word "field" was flashed subliminally to the control group. A word-stem test offered the possibility of completing the word fragment "coff" – as in "coffin" or "coffee" but those who were primed by "death" more frequently completed it as coffin while those in the control group tended to completed it by the word coffee. Participants were then asked to evaluate two essays one of which was critical and the other supportive of United States policies. Compared to the control group, those primed unconsciously by death were more rejecting of the critical essay and more accepting of the patriotic essay.

Based on these initial studies, and at the bequest of the American Psychological Association, the three researchers applied what they had learned to an explanation of how the events of 9/11 heightened religiosity, patriotism, and support for the invasion of Iraq and for President Bush generally during the 2004 election. The destruction of the twin towers was hypothesized to be the equivalent of unconscious "mortality salience" at least to many potential voters among university students. To explore this possibility, the researchers used the same subliminal word-stem completion test as described above, but words reminding the subjects of events of 9/11 were substituted for the word death. This study and later replications supported the conclusion that reminders of the terrorist attacks functioned as unconscious mortality reminders.

These reminders were then shown to enhance the appeal of a hypothetical candidate who told students "they were not just ordinary citizens, but parts of a special state and nation." These pilot studies led to a direct test of unconscious fear of terrorism and Bush's appeal. University students were given mortality salience exercises embedded in a personality test they were told was part of a study of personality and politics. (Remember that although they have similar consequences, mortality salience or fear of death is different from reminders of the attack on 9/11.) A control group took the same test without the mortality salience reminders. Afterward they were asked to evaluate an essay that endorsed President Bush and his policies on invading Iraq. For example, one sentence read: "Ever since the attack on our country on September 11, 2001, Mr. Bush has been a source of strength and inspiration

to us all." The study was repeated in several months but they asked one group of students to write down the emotions that September 11 evoked at that time in order to establish once again if emotions about the attack per se functioned as a mortality reminder. Both of these questions increased the approval of Bush's policies among both liberal and conservative students.

A final study directly tested the effects of mortality exercises and the preference for the political candidate participants said they would prefer. The control group who were administered the personality test without the mortality reminders favored Kerry four to one. Those who took the personality test with the mortality reminders favored Bush by more than two to one. The authors conclude that the government's pre-election terror warnings, including Cheney's caution on election eve that: "If we make the wrong choice we'll get hit again," increased mortality salience and affected the results of the election.

Systems Justification Theory. Jost et al. (2004) conducted another broad study of the place of the unconscious in producing a general bias toward identification with current power structures. Their review of an expansive range of studies found that the weight of evidence throughout the social psychological literature supported "systems justification theory." This framework is comprised of four general hypotheses: (1) There is an unconscious ideological motive to justify the existing social order. (2) This motive is contrary to the conscious tendency to identify with in-groups like one's self. (3) Instead, the unconscious motive leads to an unconscious identification with dominant groups especially among members of minority groups. (4) This tendency is sometimes stronger among those who are most disadvantaged by the social order.[3]

While these findings stem from different research questions which are different from than those of Pyszcynski et al., they still emphasize the strong unconscious forces at work; these forces give robust power to the hold that the status quo and its rationalizations have on us regardless of our self-interest and regardless of whether or not we are conscious of its influences. The implications of these findings cause even more embarrassment to those supporting the unfalsifiable, but ideologically persuasive theory of self-interest as a ubiquitous and primary motive. As economic and social gaps in a population increase in a population, the unconscious identifications with the status quo and its justifications increase as well. These unconscious forces simply add to the overall contributions supporting the power structure in times of war that were identified by Pyszczynski et al.

My In-Group Right or Wrong

The instrument measuring unconscious identifications used in the system justification theory evaluation was the Implicit Association Test (IAT) developed by Greenwald and Banaji (1995). As with most instruments used in tapping the

[3]These findings are reminiscent of Marx's methodologically questionable "false consciousness."

unconscious, much revolves around the time taken to respond. Stimuli were presented too fast for anything but limbic impulses to operate. In the case of the IAT, a key assumption was that among consciously liberal white students it takes longer to fight an unconscious tendency to associate black faces with "bad" compared to the time it takes to associate white faces with "good." Fourteen white students where placed in a MRI scanner and asked to view photos of unfamiliar black and white male faces. If the picture were the same as the preceding one they were asked to press one button and if the pictures were different from the preceding ones, they were asked to press another button. The next step involved a measure of automatic association of positive and negative words to the black and white faces. If it took more time to associate black with good words or qualities, and whites with bad words or qualities, this was taken to indicate an implicit hesitancy to connect blacks with good words and whites with bad.

The MRI measured flow of blood through the amygdala while the participants made these quick judgments. As described above, the amygdala registers lightening-fast, unconscious evaluations of objects and faces. The strength of the amygdala activity when the students evaluated the unfamiliar black faces was then related to the degree to which students responded to a subliminal startle measurement. On the IAT proper, for most subjects it took longer to associate the "good" with unfamiliar black faces and the white with the "bad." When the subjects were administered a self-reported racism scale, no correlation was found between explicit self-reports and the Implicit Association Test showing once again that we are often the last to know about our own tendencies. Also when white students viewed well-liked and well-known famous black and white faces, there was no relation between preferences and amygdala activity.

Returning to the assessment of systems justifications theory, the IAT test as a methodological tool was used on very large samples. For example, 103,316 European Americans and 17,510 African-Americans contributed to their finding of implicit outgroup preferences by the latter (Jost et al. 2004:898). This was because the IAT lent itself to be administered online (see www.yale.edu/implicit.).

Conclusion

For sociologists, the new unconscious will always remain secondary to the symbolic interaction focus on awareness and agency, yet it is certainly pertinent to know how the unconscious affects consciousness and language. Processes which are below consciousness are all the more powerful simply because they are out of our purview. We cannot control or evaluate that which we do not know. Symbolic interaction has been a theory of conscious-minded behavior, and based on this awareness it has developed a theory of self-control that is nonetheless social. However, it is also a study of face-to-face interaction and self-presentation, much of this is beyond our awareness. If our field were really data driven, we would have to pay attention to the mass of data from social psychology, cognitive psychology, and neuroscience demonstrating the effect that we are so often completely unaware of the real causes

for our behavior. One of the most established findings from all of these fields is that our emotional preferences determine how we will interpret such facts.

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