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## OBSERVATIONS ON COGNITION AND INSANITY

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*This article examines psychological, sociopolitical and biological assumptions and meanings associated with three focal concepts utilized in applying the cognitive tests of insanity: Substantial, Capacity, and Appreciation. The relationships of knowing, knowledge, mind, moral reasoning, and goal direction to these three concepts are delineated. Clinical and data based approaches used to examine the relationships among psychiatric conditions, symptoms and relevant sociolegal requirements and the concepts of capacity, substantial, and appreciation are described.*

Anglo-American justice has long recognized that exceptions to culpability are to be made in criminal matters when the proscribed act is committed by a child under seven, a "wild beast" or a "madman." These exclusions acknowledge that a system of justice incorporating retribution, deterrence, and rehabilitation must rest on a foundation of free will. In the absence of evil intention (*mens rea*), there can be no criminal conduct. Exceptions to culpability underscore the necessity of free will (agency) in choosing to act criminally. People capable of free and rational acts are able to choose and understand alternative behaviors. Those citizens who exercise choices to harm others or their property can then be legitimately held accountable.

One special exception to criminal responsibility is referred to as the "insanity defense." Extensive reviews of the evolution of this concept are to be found in Fingarette and Hasse (1) and in Perlin (2). Throughout the English speaking world, different statutory requirements regarding insanity prevail in various jurisdictions. These statutes are subject to complex sociopolitical influences. These considerations can subtly or not so subtly influence both the interpretation of and the application of the relevant statutes ("tests"). Even within particular jurisdictions, specific formulations

are subject to tension among the law, behavioral science, and the body politic. A detailed analysis of this tension within a single jurisdiction is found in Weinstock, Leong and Silva's (3) examination of the evolution and meaning of California's diminished capacity statutes.

The current article outlines and explores the tasks and orientations of the behavioral scientist when addressing the issue of whether or not a person lacked the substantial capacity to appreciate the wrongfulness of his actions. This is the so-called "cognitive test" found in many statutes governing criminal responsibility. Such statutes usually identify a mental disease or defect as consisting of abnormal mental conditions of such severity that they grossly and demonstrably impair a person's perception or understanding of reality. Abnormalities manifested only by repeated criminal conduct or excessive use of alcohol, drugs, or similar substances are typically excluded. Statutes usually specify that this mental disease or defect must exist at the time of the criminal conduct. The lack of substantial capacity to appreciate the wrongfulness of conduct must be the result of the abnormal mental condition. The bearer of the burden of proof and the standard of proof can differ by jurisdiction. In most jurisdictions, the defense bears the burden of proving by a preponderance of the evidence that a defendant lacked the substantial capacity to appreciate the wrongfulness of his conduct. The preponderance of evidence burden is met when it can be demonstrated that "something is more likely than not. It means evidence which, compared to that opposing it, produces in your mind a belief that what is thought to be proof is more likely true than not true" (4).

#### BIOPSYCHOSOCIAL PERSPECTIVE

A fruitful orientation to the forensic task of the assessment of the cognitive capacity to appreciate wrongfulness is that of the biopsychosocial perspective. The behavioral scientist can employ this orientation to construct a hierarchy of information to utilize in the analysis of the degree of capacity to appreciate that a person suffering from a serious mental disease or defect possessed at the time of the illegal action.

The analysis of the capacity to appreciate the wrongfulness of conduct usually begins with a determination as to whether or not the defendant suffered from a serious mental disease or defect at the time of the offense. Biological factors most often provide the foundations for such mental diseases and defects and these findings should be communicated to the finder of fact. The citation of epidemiological data, the commonality across cultures of various major mental illnesses and the results of twin studies are data based approaches utilized in this educational task. Increasing sophistication is now seen in the results of research vis a vis specific disorders (5, 6) and their biological and genetic predispositions.

The incorporation of biological perspectives into the biopsychosocial model requires an integration of both architectural and biochemical factors in the analysis of brain and body functioning. The implicit and explicit assumptions concerning the nature of mind encountered in the adversarial arena of the courtroom require the forensic scientist to adopt a working definition of the concept of "mind." I have found particularly useful the definition offered by Gerald Edelman (7): "...mind is a special kind of process depending on special arrangements of matter..." Edelman's definition allows the examiner to consider spoken words, nonverbal communication, and behavior as second order evidence of the "special kind of process" without discarding the notion of a "special kind of matter." The importance of this definitional anchoring will be seen during the discussion of the meaning of the word "capacity."

Fact finders untrained and inexperienced in the field of psychiatric disorder often express skepticism in regard to such symptoms as ideas of reference, hallucinations, disorganized thought, and, in particular, delusions. By utilizing the biopsychosocial model in the exploration of capacity, the biological foundations and processes these symptoms reflect can be examined and explained. Adequate training and the requisite clinical background are necessary to examine the reality of, for example, hallucinations (8), or the possibility of malingering (9). Relating specific symptoms such as hallucinations to the biological processes involved (10) and

their continuity and semantic organization (11) is necessary lest the biological determinants of "capacity" and "appreciation" be subsumed under a fluid and untrustworthy mentalism.

Social considerations relevant to the determination of the capacity to appreciate fall into two categories. The first category concerns itself with implicit assumptions which may be shared by scientists and lay persons alike. A common social assumption can misinform a central predicate of the M'Naghten rule: The belief that cognition (or intellect) is the predominate determinant of individual action. This is a highly questionable assumption, particularly in regard to persons with severe and persistent psychiatric disorders such as schizophrenia, schizoaffective disorder, bipolar affective disorder, and certain neurological disorders with psychological sequelae (12). Social factors are also in operation in terms of the culture and context of information gathering. The tasks and responsibilities of the clinician differ significantly from those of the forensic evaluator. The demands of a forensic evaluation of a patient who has been incarcerated or hospitalized for six months post crime differs from the task of the forensic evaluator called upon to make an assessment of the defendant within hours of the incident. The potency of media accounts on the defendant's (and witnesses') reports secondary to exposure to accounts of the crime can be particularly vexing for the evaluator because of source attribution errors. The accuracy of witness accounts, police reports, and family member reports are all subject to social influences which can profoundly distort information (13). Indeed, the very idea of wrongfulness is subject to social influence.

The final aspect of the biopsychosocial orientation is that of the psychological perspective. This element is often the subject of intense scrutiny by fact finders. It is here that common sense and the compulsive search for meaning by members of the human species are most subject to error, distortion, and manipulation. Our religious, philosophical, folk tale/myth and psychological (particularly psychoanalytic) heritage can construct half shuttered windows through which fact finders and behav-

ioral scientists alike view the substantial capacity to appreciate the wrongfulness of conduct. Four such windows are of particular interest and will be examined in detail.

#### **Knowledge**

A frequent assertion advanced by some jurists and forensic practitioners is that the concept of knowledge can adequately explain the capacity of the brain to appreciate that a particular act or series of actions is morally or legally wrong. Using this narrow definition of knowledge, the capacity to appreciate the wrongfulness of conduct then becomes the simple assertion that the actor was in possession of historical, social or ethical information. The possession of such knowledge is then presumed to be a true and accurate indication of the defendant's capacity to appreciate. The two errors common to this conclusion are the equation of the "capacity" of human memory with the "capacity" to appreciate and the equation of the content of memory (knowledge) with the biological processes underlying "knowing."

An error commonly committed within jurisdictions where the standard references the capacity to appreciate is the unconscious or deliberate substitution of the word "know" for the word "appreciate". Once this substitution takes place, the forensic task is altered and rather than an effort undertaken to analyze the capacity to appreciate, the forensic task mistakenly focuses on whether or not a person was in possession of a fact, i.e., whether they knew something. In those jurisdictions where the word know stands in the place of the word appreciate, the debate focuses on the meaning of the word "know." Most persuasive is the point of view that knowing is a process which reflects biological operations, and has affective as well as cognitive meaning, i.e., that the mind, body, and brain are involved in knowing (as opposed to understanding which is a more purely rational or cognitive operation).

**Goal Direction**

A second window which can confound the forensic task is the concept of goal direction. The observation that nonrandom bodily movements, preplanning, efforts to avoid detection or apprehension, the systematic utilization of various tools, machinery, or weapons must be dispositive of an adequate capacity to appreciate rests on the assumption that the forbidden behavior was accomplished by a process of goal direction and hence must reflect a substantial capacity to appreciate. It can be observed that an elephant running amok in a circus could have identical motives, awareness and capacity imputed to their behavior. The forensic practitioner is required to examine the direction or goal of behavior and the underlying processes which determine the choice, direction, and meaning of behavior. Goals founded on delusional or hallucinated precepts have important ramifications for the examination of the capacity to appreciate.

The combination of a defendant's assumed dictionary knowledge of the wrongfulness of their behavior in concert with apparent goal direction of behavior is a seductive explanatory alternative to the difficult task of examining the capacity of the defendant to: accurately perceive external stimuli; to differentiate such stimuli from internally generated information; to comprehend the utilitarian or survival value of behavior; to accurately conclude the degree of threat represented by outside forces; to reasonably evaluate the power or invincibility of real or imagined external agents; to meaningfully distinguish and voluntarily respond to the source(s) of stimulation leading to high (sometimes extraordinary high) degrees of emotional arousal, and by so doing appreciate the potential wrongfulness of conduct.

**Moral Reasoning**

The third concept that is frequently commingled inappropriately with the capacity to appreciate is that of moral reasoning. The belief that there exists a separate moral compass is the legacy of a faculty psychology much indebted to phrenology. This notion is on occasion "scientized" via

research concerning the development of moral reasoning. The proposition is often advanced that this moral compass can somehow detect socially sanctioned direction despite an aroused physiology and a lack of insight and judgment secondary to the acute phase of a serious mental disorder. This notion can become particularly vexing in situations where the illegal behavior is protracted over time or involves multiple victims and/or actions. Common sense recoils at the notion that some ego awareness of wrongfulness was never encountered in the process of engaging in the proscribed behavior. Grisso (14) has made a valuable theoretical and clinical contribution to the process of determining competencies in such areas as parenting, the need for guardianship, competency to stand trial, and, most recently, the competency to consent to treatment. It would be a misapplication of this conceptual approach to select out moral reasoning as some discreet competency that can be consistently, independently and unilaterally exercised by persons actively suffering from serious mental disorders. None of the foregoing is meant to imply that all or even most persons with severe and persistent mental illnesses (even when highly symptomatic) always lack the capacity to appreciate the wrongfulness of their actions. It is for these reasons that most statutes require the qualifying adjective "substantial." Indeed, one of the more unexpected findings of the Grisso and Applebaum competency to consent to treatment studies was the high percentage of patients with psychiatric diagnoses who demonstrated the capacity to evaluate health care information and make decisions based on an adequate analysis of information and opinion (15).

#### **Mind**

The final shrouded window requiring examination is that of mind. Edelman's definition of mind avoids the postulation of an enduring self or a historical observing ego. Clinicians familiar with the symptom patterns of severely afflicted psychiatric patients frequently observe the periodic dissolution of the historical self by patients in the throes of a manic episode, derealization, catatonic excitement, or in the grips of fearful para-



noid hallucinations and delusions. It is the substitution of the concept of an observing ego or self for the concept of mind that has led to the practice of offering psychodynamic explanations for the cause of behavior and by so doing ascribing nonexistent motive, agency, and capacity to actors. Contemporary efforts to legitimize psychodynamic fictions appear to have been again reborn via the post modern notion of narrative or deconstruction. Whatever the usefulness of stories in psychotherapy, such efforts have a limited place in the courtroom. These explanatory constructions are often signaled by their narrators via the use of the word "theory" to describe the narrator's description of the defendant's behavior and the use of the word "stories" to describe the self reports of defendants.

It is commonplace in insanity trials to hear experts proclaim that no matter what the skills of an individual practitioner, no one can read the human mind. This equation of the contents or products of the human mind with the mind itself effectively precludes an informed examination of the substantial capacity to appreciate the wrongfulness of conduct. The content argument is often used as a straw man to help in the construction of a narrative edifice to explain the defendant's behavior in terms of a historical and continuing ego. This effort to camouflage content as process (capacity) is promulgated equally by experts retained by the defense and the prosecution.

#### EXAMINING CAPACITY

In initiating an examination of a defendant's capacity to appreciate wrongfulness, one begins with the assumption that such capacity is present and then documents confirmatory evidence, disconfirmatory evidence, and/or alternative hypotheses. Standard procedures call for an examination of data in the form of arrest records, medical histories, school and military records and the like. Police reports are examined, and, if necessary, collateral interviews are conducted with witnesses who observed the defendant in the time periods preceding, during, and following the event. Psychological, neuropsychological, neurological and other medical tests can be undertaken. A forensic evaluation of the defendant is almost always con-

ducted. These procedures result in multiple data sources which can be weighed differently.

The threshold question is whether or not the defendant suffered from a serious mental disease or defect at the time of the offense. It is frequently the case that a differentiation must be made between personality qualities and the symptoms of psychiatric disorder once the threshold question of the presence of a psychiatric disorder has been answered. Care must be taken not to confuse personality attributes with pathology. Relevant databases as well as the DSM-IV (16) are used in examining the symptoms of the diagnosed illness. The usual course of the specific mental disease or defect should then be explored in view of the defendant's particular symptom history.

Caution must be exercised in according weight or meaning to the postevent reports of the examinee. Defendants can decompensate following traumatic criminal acts and may have their conditions exacerbated by confinement in correctional or psychiatric facilities. Shame, fear, guilt, remorse, exaggeration and malingering can all influence defendant self reports. Data hierarchies can be productively constructed by paying particular attention to which hypotheses are the most seductive, the most objective, and the most compelling. When available, external behavioral observations and behavioral correlates should be appropriately weighted. All behaviors are overdetermined, and one can be readily misdirected by an overemphasis on the examination of the contents of the mind via a defendant's self report.

#### DETERMINATION OF LEGAL INSANITY

The foregoing sections have identified the misapplication of the concepts of knowledge, mind, moral reasoning and goal direction when evaluating a defendant's capacity to appreciate the wrongfulness of their conduct. The utilization of the biopsychosocial model in conducting such examinations has been described. We next turn to an examination of three key words used in most statutes governing insanity defenses. These

words/ideas are central to the determination of legal insanity or the lack of criminal responsibility. The definitions of "substantial," "capacity" and "appreciation" are offered with a caution that each word's definition must be considered in relation to each of the other word's definitions and to the totality of meaning of the legal standard of "substantial capacity to appreciate the wrongfulness of their conduct."

**Substantial**

By substantial is meant something that is of considerable size, weight, importance or palpability. Something of substance is tangible, perceptible, or has real meaning. Substantial may be viewed in contrast to that which is trivial, negligible, insignificant or insubstantial. The word substantial is used to modify the word capacity in many statutes. One must determine if the degree of capacity present is substantial. Is it more likely or more unlikely that the weight of available forensic evidence points to the presence of substantial capacity or the absence of substantial capacity?

**Capacity**

There are two distinct meanings to the word capacity. One is related to content or volume and the second refers to an ability or potential to do something. Both meanings of the word capacity can be relevant in the determination of whether or not a person has the substantial capacity to appreciate their conduct. Has the defective brain process engendered by a serious mental illness overwhelmed the capacity of the mind to function within the parameters of reasonable normalcy and accuracy? Had the malfunctioning body and brain created such an overwhelming amount of information and arousal that the mind can no longer meaningfully assess or output appreciation? Had the presence of hallucinations, delusions, high arousal or other psychiatric symptoms so impaired the mind's ability to integrate internal and external information that the capacity to appreciate was rendered inoperative? Despite the presence of psychiatric symptoms, could the brain more likely than not continue to adequately differentiate

internal from external stimuli so that the meaningfulness of conduct could be appreciated by the mind? Even in the midst of a manic episode, was the defendant still in possession of the capacity to perceive reality, modulate behavior, and appreciate conduct?

#### Appreciation

The statutory meaning of appreciation is related to the processes of perception, recognition, analysis and understanding. The substantial capacity to appreciate wrongfulness cannot be artificially separated from the substantial capacity for insight, judgment, and the ability to differentiate internally from externally generated information. Appreciation is then a product of capacity. The noun "appreciation" is as meaningful a word in relation to the statute as is the verb "appreciate."

#### CONCLUSION

Having examined the forensic meanings of the individual words capacity, substantial, and appreciate, the importance of considering the totality of the meaning of the phrase "substantial capacity to appreciate" must be re-emphasized. A substantial capacity is one which is more likely than not able to result in an appreciation of the quality and nature of conduct. The law does not require an absolute, all or none demonstration of proof in this regard. A "more likely than not" standard is required. A determination of the capacity to appreciate does not necessarily require a specification of the contents of mind. Determining the capacity to substantially appreciate conduct does require an examination of the processes (capacities) of the brain and body to accurately decode the meaning of sensory and cognitive information and to determine the relevance of that information to overt behavior. If a discernable but not substantial capacity to appreciate is demonstrated, wrongfulness cannot be fully known or appreciated by the actor. If the capacity to appreciate the meaning of most external stimuli, internal conclusions, and behavior is substantially compromised, the ability to appreciate the wrongfulness of conduct is more likely than not substantially lacking as well.

The task of determining the capacity to appreciate is fraught with a tension of opposites. The tensions of madness versus evil, mind versus matter, retribution versus forgiveness and science versus art all complicate the task of determining whether or not a person possessed the substantial capacity to appreciate their conduct. The goals of compassion and justice are better served by an emphasis on process, observation, biology, and probability than on content, theory, phenomenology and absolutism. Although this difficult and important task is best accomplished artfully, it is more the application of science than the creation of art that will serve the noble ends of justice, truth and compassion.

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