

# Impaired Cognition Part 2

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In a previous paper (Bowerman, 1979) the thesis was made that cognition may be impaired in all psychiatric conditions. Emphasis was placed particularly on memory as being impaired in subtle or gross ways in all psychiatric disorders whether or not the findings of organic brain syndrome are easily apparent. This paper will describe in greater detail cognitive impairments, and describe the barriers to the discovery of these impairments.

Cognition may be defined as the process of thinking in which bits of information are examined, manipulated, and compared for the purpose of computation, abstract reasoning, forming judgments, concept formation, generalizing, ordering, organizing and planning. There are the information being manipulated and the process of manipulation as two aspects of cognition (Lezak, p. 24, 1976). Information from sensation and perception form part of the data manipulated in the cognitive process. A proper functioning of cognition is necessary for a person to deal with previous learning, processing

of stimuli, integration of wishes, and projecting to the future in order for him to have satisfactory independent existence. Impairment in cognition leads to uncertainty, indecisiveness, dependency, apprehension, depression, anxiety, fearfulness, frustration, anger, rage, slowness, and inefficiency. There is probably no area of mental life where the orderly functioning of the cognitive process is not essential from the moment one awakens in the morning until one goes to sleep at night. The malfunctioning of the cognitive process in psychiatric disorders may be subtle or obvious, usually variable from day to day and hour to hour, is affected by fatigue, illness, sight of geometric shapes, lighting, diet, just to name a few factors. When the major factors for a patient are known, elimination of them brings improved cognition, and exposure to them results in symptoms obvious to the patient.

Since individuals with the more subtle forms of impairment have usually had some impairment of this kind since infancy they do not recognize it until something aggravates it and it becomes gross or is found in the psychiatric examination. The mental status examination and even sophisticated psychological testing usually miss substantial cognitive impairments.

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Resistance on the part of patients to the discovery of cognitive impairment is major and in initial examinations they often deny such disability or they do not understand the examiner's question and say "no". This is true even when the outcome of lawsuits or criminal charges may depend on finding some cognitive difficulties. In examining patients for criminal charges and for post injury deficits it is essential to get information from family, friends, and employers. One man who was the superintendent of the electrical contracting division of a large contracting firm was examined after a minor injury which had caused no obvious impairment. On the outcome of the examination hinged whether or not he would be well compensated as a disabled executive or discharged as a useless employee. He did not tell the examiner that a few months after this accident he was demoted because on a job that was making money, there was in one month a sudden \$8,000 loss. The employer who stood to lose considerable money if the man was compensated said that shortly after the accident the man became forgetful, poorly organized, could not properly assign men to their tasks; in short he became incompetent.

Not only is denial used, but also avoidance. Patients attempt to order their lives in such a fashion as to avoid the uncertainties of cognitive weaknesses. Failure to learn to drive, avoiding reading, avoiding pencil and paper work, working at tasks far below ones intellectual capacity are clues to this disorder.

Sometimes this avoidance is not created by the patient. A person otherwise qualified for a job may be noticed by an employer to be slow, ineffective, inefficient or in subtle ways not up to handling the job. Often the patient thinks this is a matter of personal dislike on the part of the employer. Thus he may be put on a job considerably below his general abilities or be fired. In either case the patient may be unaware of the reason so that rationalization may be used to explain something he does not understand.

Rationalization itself is also a clue. When one fails in school, work, marriage, or even in an avocation, the reasons given by the patient may not be valid. This is most obvious when the

patient's history is replete with why he quit work, was divorced, or got into a fight, but is lacking in the "how" of these events.

At examination, problems with cognition may first become apparent in the making of the appointment for the examination when the patient gets someone else to make it. This helps him avoid having to grasp his own schedule or to remember the directions to the office. If he arrives quite early or late an inability to organize himself or estimate time lapses may be a problem. Sometimes in making the arrangements for the first appointment more is learned in this regard than in the initial examination itself.

On arrival, patients are asked to fill out a ROCOM medical and psychiatric questionnaire. It is surprising to see how many literate psychiatric patients try to avoid this even to the point of outright refusal.

In the examination vagueness is a clue. It begins with a lack of clarity about why the patient is there at all. This may be true even though other information indicates that the patient's motivation for examination and treatment are good. Lack of clarity about previous treatment such as the benefit or complications, doctors or institutions, may be indications. Failure to clarify the nature of the complaint even with the examiner's help may not only be due to difficulty in putting some symptoms into words or fear of the examination, but also poor ability to either generalize or be specific especially under stress. Getting specific information from other sources should not keep the examiner from realizing the patient's inability to provide it. The very structure of our examinations and the manner in which they are carried out often enable patients to perform better in our offices than they do anywhere else.

Patients have very different kinds of impairments, and they may have manifestations of impairment at one time and not another. This week an electrical engineer was referred after his second graft of the abdominal aorta. He was crying, but he was not crying because of his fear of impending death. He was having a catastrophic reaction be-

cause he could not clearly understand what was happening around him. After his first surgery in June, 1980, he recovered well with rapid healing and return of strength. After the second in August, 1980, by the same surgeons, he could not understand the explanations given to him by physicians or nurses. When he tried to watch television he could no longer make out what was happening. No longer could he read with adequate comprehension nor would he drive a car except for dire necessity. He expressed serious reservations about his surgeons' honesty, and for that reason he had consulted an attorney. He did not want compensation, but he wanted his attorney to read his medical record, thinking that he could then give the patient the facts. In spite of obvious impairment he was able to review his treatment in detail as to the conditions he had and the nature of the surgery that had been performed. There was no amnesia even for the period of intensive care. Today it appears that the source of his symptoms was not hypoxia, but mainly the large amount of sugar that he was given to build him up after the second surgery.

Expanding with the patient on the problems of vagueness, poor memory, poor organization etc. indicates the examiner's willingness and ability to explore this area. Patients have often tried to raise this issue with teachers, parents, employers, physicians and others, but have been rebuffed in doing so.

One can begin this process by simply asking questions about sensation and listening for difficulties with sensation, perception, and cognition. Questions about vision are used to distinguish field defects, fuzziness of vision, changing visual acuity, nervousness about motion in the peripheral field, distinguishing foreground and background, and open up the discussion to uncanny experiences. Perceptual distortion in relationship to rooms, heights, distances, and configurations are then explored. One young man stopped playing golf after a surgical procedure because he could no longer judge the distance to the pin.

In regard to hearing it is important to know if patients can understand speech clearly especially in noisy or crowded situations such

as classrooms. Can they locate the source of a sound and tell whether it is coming or going? If one does not know for certainty about these things he must either get out of the situation or guess as to what is going on. When he guesses wrong, things then turn out badly and he feels foolish. Hyperacusis can be mistaken for hallucinations. Hyper-alertness is usually accompanied by hyperacusis. A hyperalert person can be most difficult in the family situation.

The sensation of touch may be perverted after neurological injury, but there the etiology is plain. Formication, in my experience, has always led to the diagnosis of diabetes mellitus. Asking a patient to touch the couch where he is sitting sometimes leads to a remark indicating that it feels like it looks, but seems to be in the wrong place, i.e. wrong distance. This Alice in Wonderland distortion is rare, but more common than one would think if one never looks for it. Lewis Carroll simply put into reality perceptual distortions.

Taste and smell are not only affected by gross neurological disease, but may undergo changes after illnesses. A most instructive and humorous autobiographical article "All I Could Do was Stand in the Woods" (Roueche, 1977) explains how a deteriorated sense of taste and smell had serious social consequences and became the basis for a temporary paranoia about food and about people.

Problems related to the vestibular apparatus are important since patients often report some uncertainty about their balance or position in space. There are good reasons to suspect that the fear of bridges, elevators, heights, and out of doors are related to discrepant information from the visual and vestibular systems. One patient was seen in the hospital because he refused to go to physical therapy, but his rationalizations gave no clue to the problem. What was happening was that on the way to therapy on a litter as he turned the corner to go to the elevator he would feel as if he fell through the floor. This was a Coriolis reaction, not a phobia.

Although aphasia is usually discussed in

relationship to gross neurological disease, it is responsible for some of the vagueness seen in psychiatric patients. Circumlocution is, after all, a solution to the problem of aphasia. If a person cannot use a word, he will take up time describing the situation in detail with words he can use. Recently an intelligent 15 year old boy was accused of not understanding his assignment to collect information about political candidates and what they were doing. What the boy said was that they were going to do in class what the candidates do (debate), but neither to his father or in the family session did he use the word "debate" although he knew that was what was to be done in class. Also he could not use the word "convention". During the elimination diet a schizophrenic patient was placed on wheat for three days. Then he complained that he could not find the right word to express himself. He did not have this symptom with other foods. After all, isn't the term "blocking" another word for expressive aphasia?

Subtle apraxias may also be found. An industrial chemist and teacher of industrial laboratory procedures could not do any of his work or balance his check book after slipping on wet grass and falling to the ground. In spite of exhaustive neurological examinations there were no findings. However, a resident who disbelieved his denial of a previous episode found a record of an examination for the same kind of symptoms a few years earlier. A 21 year old patient lost his job as a messenger because he could not get the messages from one place to another correctly in spite of the fact that he is very intelligent.

Perhaps a few other examples will clarify this further. A 30 year old nurse was missing too much work. She had episodes when her neck felt too long and other distances were also distorted. During these times she could not trust her judgment so she stayed home. It was found that when she was fatigued and then ate whole wheat she precipitated these symptoms.-A 30 year old man with measured IQ 140 attempted suicide because of repeated job failures. In each job he was quickly promoted because of his abilities, but with increasing responsibility and paperwork he soon lost his job. He was able to handle reading in 72 hours after being given

adrenal cortical extract intravenously every eight hours for three days.

A 32 year old machinist was failing at college work. He was a good machinist but it took him eight hours to change over his machine for a new procedure. Other men required only two hours. This was due to defective grasp-not rituals. A 26 year old female college student with a long history of academic failure was able to "see" the man in the moon for the first time when she was taken off milk, butter, and yogurt.

Psychological testing has not been of any help in finding patients with these symptoms. The Minnesota Multiphasic Personality Inventory, Hooper Visual Organization Test, Shipley Institute of Living Scale, Experiential World Inventory, Wechsler-Bellevue, Mini Mental State, Bender Gestalt, Tests from the Mental Examiners Handbook have all failed to discover such deficiencies.

The discovery of these difficulties is of more than academic interest. The ability to understand them is greatly reassuring to the patient and it helps him to understand his failures and limitations better. Also, the knowledge of such symptoms is a valuable guide to the effectiveness of treatment. From the standpoint of vocational counselling of the impaired patient much effort is wasted on retraining of the cognitively impaired individuals in areas where they cannot function.

Since the patient is at least daily or even hourly aware of his clumsiness and ineffectiveness in certain situations, is it any wonder he is filled with rage? An inability to deal with anger and to discharge it is a common accompaniment of cognitive dysfunction. Anger toward employer, teacher, parents, society, government, and himself come from projection, displacement, or turning upon himself for things he and others expect of him, but because of difficulty in cognition he cannot do or do well. Thus difficulties dealing with time, space, order and sequence, organization, and other aspects of the physical world result in rage which then enters the social world of himself and others. Since the disturbances

may arise from endogenous physiological and biochemical changes and up to recent times have not been perceived by examiners, while at the same time the emotional states were recognized, the causes of emotional distress in this century have been attributed too much to the emotional sphere. Psychotherapy has its place, but to try to get a patient to accept the world when he is failing almost hourly in the conceptual field is to miss the point, especially when satisfactory treatments are now available. Nutrition and use of vitamins and minerals have been of great benefit to the cognitively impaired patient.

The role of the cognitive process in the examination and treatment of patients as described here may seem very subjective both from the patients' and from the doctors' point of view. Many of the pejorative remarks about subjective experiences are directly attributable to the failure to understand the objectivity of cognitive experiences and impairments. The suffering patient will after all in his attempt to communicate his distress to the doctor use a wide variety of metaphors, examples, or descriptions if he is aware that his point is not being made. The relief that comes to the patient when these disturbances are identified and discussed in language he can understand are enormous, even before satisfactory relief of symptoms is obtained.

What is not a subjective measure of the benefits of this understanding is that in a practice where these matters are consistently

examined for each patient, among suicidal patients, those with panic attacks, hallucinating patients, patients with long standing illnesses, including those whose first examination is of an urgent nature, no more than an average of one phone call per month comes outside office hours either from patients or from the families of patients. When patients are properly heard and due attention is given to these factors, it is amazing how much they will tolerate in subjective discomfort. At their visits they will often describe periods of great distress which they handled themselves. As an objective measure such a test of the soundness of this position is more reliable and valid than rating scales or lines on a graph.

**References**

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