BIPOLAR DISORDER: VERIFICATION OF INSIGHTS OBTAINED BY INTUITIVE CONSENSUS

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ABSTRACT: In the late 1970s research into the nature and treatment of bipolar disorders started expanding rapidly and it became important to identify the most promising research directions. Yet it was impossible to do so on the basis of available data. In 1980 and 1981, using the same set of questions about the most promising directions for research and treatment, the authors interviewed independently six intuitive experts accomplished in domains other than psychiatry or medicine. Using the technique of intuitive consensus they identified areas in which intuitive responses agreed. Recently, the investigators re-examined the earlier intuitive responses in the light of subsequent discoveries. The expert intuitives had earlier achieved some strikingly correct insights that have since been verified by subsequent investigations in mainstream psychiatric research on bipolar disorders. This observation suggests that skillfully applied intuitive approaches could play an even more important role in medical research processes.

Introduction

Historical Backdrop

The introduction of long-term lithium treatment around 1970 started an era of 1
effective medications for bipolar disorders (referred to here as BD); up to three quarters of patients with the classical type of BD could then be helped. During this era there had also been a number of new discoveries in neurosciences, with expanded understanding of neurotransmitters, neuropeptides, neurohormones, cell membrane transport as well as molecular genetics. Combined, these successes markedly stimulated psychobiological research into the nature and management of this malady. By the late 1970's such investigations were rapidly expanding into many domains. It became important to select which directions would be particularly promising to follow, yet it was not possible to do so in practice on the basis of available data. The authors decided to use the technique of *intuitive consensus*—a method of multi-intuitive inquiry (see Section on "Method" below) — which had achieved some impressive progress in other fields (Kautz, 2005).

Acknowledgements: The authors gratefully acknowledge (with their permission granted) the indispensable contribution and involvement of the following intuitive experts: Jon Fox [JF], Mary Gillis [MG], Lenora Huett [LH], Debra Reynolds [DR], Kevin Ryerson [KR], Verna Yater [VY] and Nell Thompson [NT]. They generously donated their time and skills to this endeavor.

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In the past many crucial ideas that led to the expansion of scientific knowledge required intuition: they arose out of sudden insights, subtle hunches, serendipitous associations and even dreams—as the extensive record of major scientific discoveries convincingly reveals. These are all non-rational mental events, not explainable by contemporary models of the brain and mind, and–excepting transpersonal efforts–not even a recognized, relevant part of present-day psychology. They fall collectively into the category of *intuition*, or the direct reception of knowledge into the mind without the aid of reason, memory or the senses (Vaughan, 1979).

The discovery process in science often includes intuitive insight into the nature or concept of the investigated problem, followed by methodical, rational exploration and verification of the intuited new hypothesis. Anyone mentioning science almost always refers only to the latter part of the process: testing of the new insight according to the consensus-based, rationally derived contemporary methodology. Alluding to the first one –the intuitive part–in straight science means touching on a "taboo," yet the history of science suggests that many major advances have been derived from intuitive breakthroughs (Koestler, 1967; Palmer, 1998; Poincare, 1952).

Intuition has been observed to be a powerful source of new ideas, hypotheses and understanding, not just in science but in many aspects of daily life and work. It is accessible as an innate ability, and can be trained and developed into a refined skill through deliberate desire and effort to do so, as many "expert intuitives" have demonstrated (Kautz, 2005; Klimo, 1987; Radin, 1997; Shealy, 2010; Schwartz & DeMattei, 1988). These individuals have been able to access many kinds of knowledge—even highly specialized information not already known by anyone.

As intuition is rarely mentioned in connection with the discovery process, we feel it is important in this context to elaborate upon how it has been experienced historically and used intentionally to provide new, accurate and useful information.

Intuition: Another way of knowing

Intuition is popularly and ambiguously regarded as a flash of insight, a gut feeling, a "psychic hit"[1] and even an unconscious reasoning process. A much older tradition, however, bespeaks of intuition as a fundamental mental process: *an innate human capacity for acquiring information, knowledge and understanding apart from reasoning, sensory perception or even memory in its usual sense* (Kautz, 2005). This kind of direct knowing (*nous*) was inherent to Greek philosophy and other early cultures (e.g., Gnosticism and Far Eastern religions) as both a root belief and a common practice. It persisted over most of the world throughout the centuries to follow, up until the scientific revolution in the 16th and 17th centuries in the Western world. It did not then totally disappear but took second place to the empirical, sense-based, materialistic and

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rational methods of modern science, which became the favored means for gaining new knowledge about humankind and the rest of the natural world.

Not surprisingly, intuition has not been a favored topic for study within science, which has regarded it as too subjective for rational study and therefore to be allied with the superstitions of past generations. Today it is barely mentioned in psychology textbooks and has never been the subject of systematic study by the mainstream psychiatric community. This exclusion is historically understandable, and partially valid, for the metaphysical assumptions on which modern science is based insist on objectivity, measurability, repeatability and certain presumptions about causality, none of which are fully satisfied by phenomena such as intuition (Barrow, 1988; Harman & Clark, 1994; Popper, 1959; Sperry, 1987). Thus, all that science can do with intuition is to verify empirically whether an allegedly intuitive event is or is not actually taking place, and whether the event is explainable through current physical understanding.

Until the twentieth century, science had been reluctant to do even this much. Several decades of careful parapsychological research have now firmly verified that intuition indeed exists as a mental capacity, and that it defies some of the laws of current physical science (Palmer, 1998; Radin, 1997; Targ & Puthoff, 1974; Vaughan, 1979). Such exploration into the nature of intuition is difficult, however, and may not even be possible using established scientific methods and models. A few recent attempts are seeking to explain intuition within the latest models of consciousness, as many recent multidisciplinary international conferences document[2]. Other attempts seek a place for intuition within theories emerging out of the paradoxes of quantum physics: Bohm's Implicate Order (Bohm, 1980), Laszlo's A-Field (Laszlo, 2003) and Pribram's holographic model (Pribram, 1987), for example. These derive largely from the observation that intuition shares with relativity and quantum physics the transcendence of ordinary conceptions of time and space and a more fluid flow of information. While such analogies can serve as suggestive metaphors, none of these speculative theories has yet won broad acceptance, even apart from its presumed intuitive association. Thus, an explanation of intuition within science is still lacking.

The classical Western philosophers—Descartes, Locke, Kant and others—all had their own notions of intuition, although most mixed it in with perception and intellect (Kinny, 1997; Tarnas, 1991). Freud had no use for intuition but his follower Carl Gustav Jung considered it to be one of his four fundamental psychological "types," along with thinking, sensing and feeling (Jung, 1990). The popular Myers-Briggs personality indicator utilizes these types (Myers, McCaulley, Quenk, & Hammer 1998). Philosopher Henri Bergson saw intuition as the essential ingredient of metaphysics and an evolved form of instinct that reveals the *essence of things*, apart from the symbols for them (Bergson, 2002). Michael Polanyi's *tacit knowing* referred to contextual personal knowledge that a person carries in his mind without awareness of it (Polanyi, 1966). The eminent neurobiologist Roger Sperry (1987) acknowledged intuition and assigned it to the right brain. All of these philosophers and

scientists sought to clarify the innate or direct-knowing quality of *mind* apart from perception, intellect and the senses. They all led to essentially the same definition of intuition as that given above.

This "direct knowing" capacity has always been an integral part of Eastern philosophy, which regards it as a significant means for gaining knowledge, thus an alternative to classical science (Aurobindo, 1993). Today only limited systematic explorations of intuition as such are taking place within the subfields of humanistic and transpersonal psychologies (Palmer, 1998; Vaughan, 1979; Walsh & Vaughan, 1993).

The importance of intuition is evidenced today by the role it continues to play in scientific creativity, the arts, human interactions generally and psychotherapy. Indeed, many psychotherapists are well aware of its important role in their practice. The most firmly established attributes of the human intuitive faculty are provided by the carefully conducted scientific experiments in parapsychology over the last century, mentioned above. This work has shown conclusively that various kinds of specific information not accessible by ordinary means, not predictable in any real sense, and in some cases not known by any living human, can be accessed through this direct-knowing process (Mishlove, 1975; Radin, 1997; Targ & Puthoff, 1977). Moreover, the individuals who have manifested this capacity are not obviously exceptional in any other way. Basic intuitive capacity appears to be natural, not supernatural, and to be virtually universal, needing only to be suitably enabled to function well.

An extensive research study in the 1980s again showed that intuition, as defined above, is a genuine mental faculty, and may be practically applied in a dozen knowledge-dependent fields (Kautz, 2005). The applications studied included ancient history, geophysics, nutritional science, linguistics, personal counseling, business consulting, archeology, nuclear technology and medical problems. Intuition revealed itself in these studies as a significant aspect of the human mind and a practical tool for many human endeavors that depend for their success on new information, knowledge and understanding, including medicine.

While the existence issue for intuition has been settled, there remain many questions about the conditions under which intuitive perception may take place—accurately, deliberately and under control. For example: What are the limits on the types and depth of information that may be obtained intuitively? What governs its accuracy and clarity? Where does the new information come from? How does intuition relate to more familiar mind functions such as imagination, memory, dreams and cognitive function? And especially, what are the psychological and neurological mechanisms that underlie the intuitive process?

While answers to these questions are not presently available, the questions are the same that arise with certain other human capabilities such as reasoning, creativity and language. We have learned to utilize such capacities effectively, even though we do not fully understand their limitations and the brain processes involved. Similarly, while waiting for acceptable explanations of intuition, we are free to develop and make use of it.

Background and Approach of the Study

In an attempt to speed up research advances, we sought more than twenty five years ago to obtain new insights into the nature of bipolar disorder. This was done through collaborative inquiry with a team of ''intuitive experts.'' We describe in this article a selection of these insights that have been later supported by developments in the mainstream, traditional type of psychiatric research. This effort was also motivated by the lack of information on the etiology of BD, the recognized limitations of contemporary diagnostic approaches and the need for effective treatment algorithms.

We did *not* attempt in this study to prove the existence and general veracity of intuition. Neither were we trying to show that intuitive information is always accurate and constitutes authoritative and substantive factual knowledge; both of these claims are impossible for such a subjective and poorly understood mental capacity such as intuition. Still, we believed there were good grounds for successfully *applying* the intuitive process toward a better understanding of BD by generating new ideas, perspectives and hypotheses. This effort, if successful, would open the door to subsequent verification of selected results by accepted scientific methods: experimentation, validation and proof.

Method

This study comprised (a) definition of the main topic and sub-topics chosen for inquiry, (b) formulation of questions, (c) selection of the intuitives, (d) execution of the actual inquiry sessions with them, (e) identification of agreeing responses (consensus), (f) comparison of the consensus and other suggestions with already existing knowledge and (g) final integration, conclusions and reporting.

Our prior experience with intuitive inquiries had shown that the formulation of the questions posed is critical to success. They should be focused, well-motivated (that is, not arising from curiosity alone), specific, clear, and without bias or implicit assumptions. These principles, derived from our earlier observations, were followed as closely as possible for the basic set of questions asked of the intuitives (see Appendix A), which was derived from the understanding of BD that existed in the early 1980s. The subject of the nature of BD appeared to be rather large, so the questioning was more broad than deep, and more exploratory than strictly focused.

We selected for participation six ''intuitive experts.'' None had prior experience with BD or more than an ordinary public exposure to medicine or science. They were uniquely qualified for this task because (a) every one was experienced and had demonstrated his/her skill on at least a dozen prior intuitive inquiries, ranging from deeply personal to highly technical, and (b) all attempts made to confirm the answers provided in these prior tasks showed them to be responsive, self-consistent and accurate, whenever the questions posed to them were clear and based on knowledge already well established.

The inquiry sessions with the intuitives were conducted independently by the method of *intuitive consensus*, always using the same questions. This approach makes it possible to later identify the responses shared by several intuitive experts, since previous investigations (Kautz, 2005) demonstrated that such consensus reduces markedly the probability of incorrect answers. The consensus was created only out of statements that were substantially the same; deviations were excluded from the consensus and this report, but were retained for their suggestive value for subsequent studies.

The interviews were conducted by the two authors of this article. Special care was exercised to avoid unnecessary explanations to the intuitives, beyond what was needed to make the questions clear, and also to prevent accidental leakage of the interviewers' prior knowledge, personal beliefs and the prevailing hopes and expectations of the psychiatric community.

Objective

The broad objective of this earlier investigation was, first, to obtain answers to these questions which could focus our research, and, second, to generate ideas, perspectives and hypotheses that might be put to test later. A subsidiary goal was to identify those aspects of BD that might be explored by intuitive consensus more deeply in the future. These questions referred to the typical (''classical'') BD as the term was used around 1980, not to the contemporary, much broader, bipolar spectrum disorder. In addition to the general questions about BD that we asked all intuitives (as listed in the Appendix), at the end of the interview we asked selected intuitives specific questions related to individual patients. This specific questioning was only a pilot exploration.

Summary of Earlier Results Obtained By Using Intuitive Consensus

We described the ideas that emerged from this endeavor in a report (Grof & Kautz, 1990). In this section we first briefly summarize, in general terms, what the intuitive team revealed.

BD is a complex disorder, a collection of various dysfunctions that manifest clinically in a similar fashion and lies hidden behind a relatively limited pattern of symptoms. It arises from different origins in different individuals, the intuitive team said, and there is a host of interacting factors that influence whether, how and when it manifests. To describe these origins and interactions properly and fully would require a more refined conceptual model than was currently available, and a deeper understanding of the human body-mind system. It felt to us that it was somewhat like asking for the cause of cancer; no simplistic answer can be given to such a question, in view of its many forms and causes and the various ways in which it reveals its presence.

The intuitive experts indicated further that no particular single factor or set of factors is solely responsible for all forms of BD. They explained BD as a total

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system imbalance in which genetic and other biological factors, as well as psychological, environmental and spiritual factors, all contribute in a complex interactive pattern. The interplay and the relative importance of internal and external imbalances vary greatly from one ill individual to another and from one time to another.

Nevertheless, some of these factors are common for many affected persons and could be investigated through basic medical research and controlled treatment trials, thus offering some hope for symptomatic relief and perhaps actual control of the disease. Important subtypes of the primary disorder might be identified and studied individually. At that point all of the factors identified by the intuitives, more than a dozen, merited further study.

While the intuitives also indicated that there is no single, universal treatment for the disorder, they provided an abundance of interesting recommendations. Some of the therapeutic suggestions amounted to a reallocation of emphasis among available treatment methods, while others were totally new, untried approaches. The counsel was particularly strong in favor of nutritional balancing, control of environmental factors, and enhanced and improved versions of psychotherapy. Individual tailoring of the treatment regimen was considered essential. Careful timing was also described as important: a treatment helpful at one time may not be appropriate at another time.

No strong consensus emerged for a single preferred, future research strategy, possibly because our inquiry was not sufficiently focused for such specifics to be given. However, as a whole it generated dozens of specific and intriguing topics for further investigation. The intuitives also recommended several new treatment modalities and made specific suggestions for future physiological and psychological research. A few of these topics and suggestions could be carried out immediately, without seeking further information, though the majority would require additional intuitive or other input to elicit the necessary specifics before laboratory research and patient trials could be profitably undertaken.

Finally, the intuitives encouraged the trend towards more intensive, intimate and continuous work with individual patients, more risk taking, and a shift of responsibility for the healing away from the therapist and more into the patient's hands. They also stressed the importance of regarding the disorder as a challenge at the psychospiritual level, the place where the patients need to work through their own existential crisis, rather than just to "undergo treatment."

Intuitive responses verified by subsequent mainstream research

In this section we present examples of intuitive responses that were subsequently verified as new advances by traditional research on BD.

Just as with any new information, insights generated by intuition must be regarded initially as hypothetical, and then validated independently before they

can be taken as factual. As discussed in the next section, it is striking that some of the observations and recommendations from the "intuitive experts"—which at the time of inquiry (1980–1981) were totally unexpected, improbable or contrary to existing theories—have since emerged as a result of mainstream, traditional medical research.

Conceptual insights

Some intuitive insights into the conceptual nature of BD were directly relevant and resonate very well with corresponding ideas that have recently appeared in the literature about the heterogeneity and complex genesis of BD. For example,

> *"[Bipolar depression] is not of one specificity, although it is put into one category. …There are various causations and various treatments." [VY]*[3]

> *"There are several possibilities in which rather similar symptoms can be manifested … that would have different sources. But the primary one is a miscommunication, so to speak, between the being and its environment." [JF]*

> *"The circumstances and conditions vary greatly from person to person." [VY]*

While not amenable to direct factual confirmation, these insights are consistent with a number of current observations on the nature of BD. Psychiatric diagnostic systems (DSM IV, ICD 10) and their application to important practical tasks such as clinical trials essentially recognize BD as a single entity, at best divided into subtypes according to intensity. However, recent research has been confirming with increasing frequency the heterogeneity of clinical forms. Distinct subtypes of the illness, with markedly different clinical profiles and treatment response, have been described (Angst, Gerber-Werder, Zuberbuhler, & Gamma, 2004; Grof, 2003; Passmore et al., 2003). Manic-depressive illness, the intuitives said, lies hidden behind a relatively simple pattern of symptoms and arises from an interaction of factors. While most of psychiatric research has in the past searched for "the cause" of BD, the concept of bipolar illness expressed by the intuitives wascloser to more recent, sophisticated ideas that view BD and its clinical manifestations as a dysfunction of a complex regulatory system resulting from an intricate interplay among genetic and other biological, social and transpersonal factors. The understanding of a complex system has been confirmed particularly by brain imaging methods (e.g. Mayberg, 2007).

The Genetic Contribution to BD

For some years a confluence of a number of relevant observations had been indicating that there is an important genetic contribution to the genesis of BD. For example, BD is known to cluster in affected families, a concordance of illness in monozygotic (identical) twins is distinctly higher than in dizygotic

ones, and twins adopted away at birth resemble in their morbidity their biological, but not their adoptive parents.

The intuitive responses concurred that BD has an important, though variable, genetic propensity and that much research would be required to discover the specific genetic indicators. For example,

> *''Genetically inherited chemical imbalances can also occur, though the genetic contribution to primary BD varies greatly, from 20 to 80%. Your research has a long way to go before even the simplest genetic codes are sufficiently understood to be helpful'' [JF]*

> *''The role of heredity is a chicken-and-egg issue. Indeed, the tendency for manic depression is in the genetic code, but one must look at where the code comes from, and how a particular case of manic depression arises within a given genetic code. It is more profitable to study the family patterns, since these are the areas where the healing can occur.'' [MG]*

Over twenty five years ago such intuitive statements seemed to contradict completely the available information. Of all psychiatric disorders BD has the strongest genetic contribution and the laboratory prerequisites for identifying the BD genes by molecular genetics seemed present. Furthermore, we gathered a suitable, uniform population of excellent lithium responders (Grof, 2006) and the effective molecular genetic techniques needed for the discovery of the culprit genes were developing very quickly. The discovery of the specific genetic factors seemed at that time to be within easy reach.

Yet, even after 25 subsequent years of intense research with advanced genetic techniques, the genetic roots of BD remain hidden. The road to discovery turned out to be much lengthier and thornier than we had good reasons to expect over two decades earlier. Several very large, collaborative genetic meta-analyses of data from thousands of patients and their families came out empty-handed (e.g., Segurado et al., 2003). Similarly, the yield from genome scans of a large, relatively homogeneous sample of excellent responders to lithium and their relatives has been surprisingly meager (Alda, 2004; Alda, Grof, Turecki, & Rouleau, 2005). Thus, the intuitive assessment of the difficulty of obtaining a genetic solution remains validated.

Identification of Genes

Based on segregation analyses and computer modeling we then expected to find one or more major genes, particularly in a relatively homogeneous population of excellent lithium responders (Grof, Ahrens, Yamamotova, & Fox, 1994). The intuitives did not come to any consensus on the gene location but recommended that we focus more on family patterns. Indeed, in the case of large families, this would have been a more profitable strategy because BD now clearly appears genetically heterogeneous and different genes may be involved in individual families.

Furthermore, some intuitives correctly identified chromosomes 6 and 13 now implicated for the subtypes of illness that respond to different mood stabilizers (Alda, 2004; Alda, Grof, Turecki, & Rouleau, 2005). However, it seems clear now, after a number of large linkage studies have been completed, that the genetic predisposition for BD is much more complex than we, as psychiatric researchers, expected at the time of our initial intuitive inquiry.

Recurrent Clinical Course of BD

In psychiatry, there is as yet no generally accepted explanation of the nature of the recurrent course of BD. The intuitives indicated that a disruption in the mechanism of calcium absorption upsets the delicate balance of hormones, particularly thyroid hormones and serotonin, and that this results in the oscillatory processes leading to manic and depressive episodes.

The intuitives also commented on rapidly fluctuating electrical activities in the brain during the course of illness:

> *''The brain tends to enter an alpha rather than the normal beta state, and an almost autonomically induced state of meditation occurs. … The brain waves fluctuate rapidly between the beta and alpha states.'' [KR]*

Based on oscillatory processes in the brain of experimental animals, Lat and Yamamotova later explained the recurrence of illness as oscillating levels of arousal in the brain (Lat, Indrova, & Fischlova, 1982; Yamamotova, Lat, Indrova, & Muronova, 1985). The explanations emerging from the studies by Lat and Yamamotova are very plausible, in agreement with many observations in our large database containing life-long courses of BD (Grof, Ahrens, Yamamotova, & Fox, 1994), and resonate well with the intuitive responses.

Gifted Children

''Many of these susceptible children [of bipolar parents] are high achievers who are seen as gifted, but who cannot accept failure in any form. This stage must be distinguished from ego-building, a time when competition is useful.'' [MG]

The unusually high achievements of children afflicted by early onset BD have been confirmed by several investigators, most recently in a series of systematic studies (Duffy, Alda, Crawford, Milin, & Grof, 2007; Duffy, Alda, Kutcher, Cavazzoni, Robertson, Grof, & Grof, 2002; Duffy, Alda, Kutcher, Fusee, & Grof, 1998).

Lithium: Use, dosage, measurement

The intuitive consensus indicated that administering lithium carbonate has positive effects on the illness but is usually prescribed in doses that are too large, for too long, and given continuously rather than only when needed.

"Lithium should be used sparingly, and only for situations threatening to self or others." [MG]

"Generally speaking, lithium is too gross a treatment for the body." [VY]

"The degree of absorption of lithium varies, depending upon what foods are taken into the body at the same time. … Some experimentation will be needed to get this right." [VY]

The intuitives also recommended that it would also be helpful to predict the times when depressive and manic episodes are about to occur, so that one may apply effective treatments (the administration of lithium, for example) only at such times rather than continuously.

At the time of intuitive inquiry the use of intermittent lithium treatment would have been considered heretic. However, this revised procedure has since been recommended repeatedly in the literature (Abe & Oota, 1989; Ananth, 1990; Grof, 1983) and proven successful for selected good lithium responders who exhibit a fully episodic course of illness and relatively predictable risk periods.

In 1980 the recommended serum lithium levels for the treatment of BD were between 0.8–1.2mEq/ l. However, subsequent studies by Coppen, Abou-Saleh, Milln, Bailey, & Wood (1983) indeed demonstrated that for many patients lower concentrations are preferable. Coppen's recommendation was gradually accepted and now appears in most current guidelines for lithium treatment.

The intuitives pointed out that a simple, reliable non-invasive means for measuring the levels of lithium in the brain needed to be developed. Although not simple or necessarily reliable, a method was subsequently developed using Li7 isotope for brain imaging, and utilized in several studies (Silverstone, 2005; Silverstone, Rotzinger, Pukhovsky, & Hamstock (1999).

Melatonin Measurement

Melatonin plays a major regulatory and harmonizing role in important bodily functions. At the time of the intuitive inquiry the only available technique of measuring melatonin was by radioimmunoassay in a blood sample. Intuitive insight stressed the role of melatonin and recommended the quantification of melatonin in urine as the preferred approach of the future. However, such a technique of measurement was not available or feasible at that time.

Several years later, however, it was developed and became the preferable way of monitoring melatonin levels (Brown, 1994; Kennedy, 1996).

Misdiagnosis of BD

"Primary depression is due in part to a general shutdown of the body-mind's energy system, and is usually misdiagnosed." [DR]

Recent epidemiological studies have since estimated that up to 40–50% of patients with recurrent depression are indeed misdiagnosed and in fact suffer from BD (Akiskal, Bourgeois, Angst, Post, Moller & Hirschfeld, 2000; Angst, Gamma, Benazzi, Ajdacic, Eich, & Rossler, 2004).

Nutrition

There was clear agreement among the intuitives that nutritional factors and a poor diet, while not the primary causes of BD, contribute to the seriousness of the disorder and to the timing of the manic and depressive episodes. Some insights indicated that these abnormal states depend on the body's nutritional state:

> *"There is typically a deficiency of vitamins B_2 and B_{12}, calcium, phosphorus and zinc, and an excess or deficiency of sodium and potassium." [DR]*

> *"A loss of minerals, especially potassium salts, usually accompanies entry into the depressive state, so there is then a need for calcium, magnesium, manganese and zinc supplements" [MG]*

> *"One may expect mineral imbalances, cellular disruption, growth problems and so on, with consequent changes in blood chemistry and long-term tissues (skin, hair, etc.). The mineral imbalances typically involve lithium and copper and, because of a tie-in to the adrenals and thyroid, also sodium, potassium, magnesium and calcium." [JF]*

During recent years nutritional prevention of recurrences of abnormal moods has arguably become the fastest growing new approach to stabilization, in particular by the administration of omega-3 fatty acids (Freeman et al., 2006; Stoll, Locke, Marangell, & Severus, 1999). Both zinc and Vitamin B12 have been recommended and used increasingly in the treatment of mood disorders (Coppen & Bolander-Gouaille, 2005; Popper, 2001). The need for magnesium supplementation, often accompanied with low intracellular magnesium levels, has been identified in a significant proportion of mood disorders (Cashman, 1999; Murck, 2002; Stoll, Locke, Marangell, & Severus, 1999a, 1999b).

Sunlight

> *"Sunlight … can be of direct benefit to depressives." [JF]*

Subsequently, bright light therapy for depression was developed primarily by Lewy (Lewy & Sack, 1986, 1996) and disciples and is now a common part of the armamentarium for the treatment of mood disorders. The initial idea that patients with mood disorders lack a seasonal exposure to sufficient light turned out to be too simplistic, Later studies showed that the bright light activates brain serotonin (Rao, Muller-Oerlinghausen, Mackert, Stieglitz, Strebel, & Volz, 1990, 1992) and can be utilized therapeutically in a variety of depressive moods.

Social Environment

The intuitive consensus recommended that one regulate the social environment in order to help stabilize abnormal moods:

> *"As the depressive stage is being entered it can be helpful for the manic depressive to move into a stabilizing environment where he or she may help others directly, particularly at tasks where thinking is not required," [MG]*

> *"It is also wise for these individuals to be located in a rural environment, away from densely populated areas—though not, of course, to the point of loneliness." [JF]*

It has been only during the last 15 years that several research groups have found that engineering of the patients' social environment, schedule and routines was beneficial in the stabilizing treatment of BD (Malkoff-Schwartz, Frank, Anderson, Sherrill, Siegel, Patterson, & Kupfer 1998; Miklowitz, 2006), partially confirming the intuitive responses.

Massage

> *"Other stabilizing influences… would be massage, hatha yoga and hypnosis, [the latter] to assist them to find their own center and for giving suggestions, but not for analysis. … The lymph flow tends to be stagnated. This may be aided by acupuncture, using heat and either electrical stimulation or physical manipulation of the needles." [MG]*

> *"Both magnetic and chemical treatments are more effective if accompanied with massage, deep relaxation and even hypnosis to increase general circulation." [KR]*

In the 1990s Mueller-Oerlinghausen et al. carried out and published a series of observations about the salutary effect of massage in the treatment of mood disorders (Mueller-Oerlinghausen, Berg, & Scherer, 2005; Mueller-Oerlinghausen, Berg, Scherer, Mackert, Moestl, & Wolf, 2004). We later made similar clinical observations and found magnetic stimulation, acupuncture and yoga helpful in the treatment of some bipolar depressions

Thyroid dysfunction

> *"Disruption in the mechanism of calcium absorption upsets the delicate balance of hormones, particularly …… thyroid hormones." [JF]*

> *"Most important are the endocrine hormones, particularly the thyroid hormones." [DR]*

While earlier clinical observations suggested the importance of thyroid hormones in the genesis of depression and periodic catatonia, more recent

studies (Bauer, Bauer, Berghofer, Strohle, Hellweg, Muller-Oerlinghausen, & Baumgartner, 2002; Whybrow, 1994) have demonstrated its critical role in the stabilization of treatment-resistant bipolar disorders. Their patients benefited greatly from the administration of high, supranormal doses of thyroxin.

Psychotherapy in the treatment of BD

The intuitives indicated that psychotherapy can be very helpful in treating most manic depressive individuals, though it needs to be given a special "twist" for this particular condition. The emphasis should be on working intimately with the depressive on the psychospiritual level rather than only the psychological. Traditional psychoanalysis was not called for. For example:

> *"It needs to be understood that many times the depressive state must be respected as a self-induced moratorium, in order that there can be a regathering of the body's energy forces." [MG]*

> *"It is always valuable for such individuals to achieve some degree of self-understanding of how they are creating their own condition, especially at the more subtle levels. … Their experience can greatly assist other depressives, for they hold the potential to reach, to touch, to enlighten and especially to inspire others …" [JF]*

> *"Treatment modalities will be improved … mainly through attitudinal work. …Therapy will shift [in the future] toward allowing much greater responsibility on the part of the depressive, with the therapist working much more intimately and at deeper levels than is done at present." [VY]*

> *"Communication skills need to be taught more thoroughly. …They [the therapists] need to be encouraged in greater risk-taking." [MG]*

> *"There are many therapeutic modalities that can be effective, different ones for different individuals. There's no one answer at this level. … This [work with depressives] is more of an art of being, an art of trusting, an art of attunement, than it is a particular tool. In particular, the therapist needs to assist patients in developing and trusting their own intuition and inner guidance." [VY]*

> *"Other opportunities for assistance include teaching, in the most simple ways, the awareness that the total self cannot be annihilated, and that the desire to hurt others only hurts one's self." [MG]*

> *"They must learn that one may have these deep feelings [of mania and depression] without being harmed by them…." [JF]*

> *"As the depressive state begins, the task of the therapist is one of not believing and not accepting the preceding frenzied activity as being useful, productive or enjoyable; not being fooled by the façade, but rather by looking deeper and*

speaking more honestly when regarding the situation. The therapist can also help to set firm limits as the mania starts to recede; e.g., no legal decisions, no driving…..'' [MG]

The intuitive insights into the psychotherapy of BD are consonant with many ideas that have recently appeared in the literature on the use of psychotherapeutic approaches in the treatment of BD (e.g. Frank, 2005) but were not accepted when the intuitive inquiry was taking place. Around 1980 the conviction about the biological provenience of BD prevailed in psychiatry and therefore a systematic psychotherapy was considered redundant.

Discussion

A review of the intuitive insights generated more than two decades earlier have since yielded a number of interesting verifications and support. The subsequently verified insights related to both the nature and the treatment of bipolar disorders. Particularly striking was for example the intuitive understanding of the complexity of genetic factors, of the importance of bipolar subtypes, of nutritional imbalances and of the giftedness of bipolar offspring. Important treatment recommendations included for instance nutritional supplementation and environmental modifications. The stress of intuitives on using lithium treatment in lower dosage and intermittently resonates well with a recently reported high frequency of side effects after years-long, uninterrupted lithium treatment.

The subsequent verification of intuitive insights is particularly striking when we consider that none of the intuitives had any medical or psychiatric education, or particular interest in the subject of inquiry, and that the posed questions were formulated according to the concepts prevailing at that time, and by now mostly outdated.

Much additional intuitive information from the earlier study, though not yet verified, would appear to offer valuable perspective and useful hypotheses that could be explored in future BD research.

These observations suggest that the intuitive method, particularly in the form of intuitive consensus, could be useful for speeding up development in future BD research, and probably in other scientific fields as well.

The importance of posing correct, specific questions to the intuitives became particularly obvious when they dealt with specific tasks related to individual patients, for the issues were then clearly defined and the questions were not tainted by the prevailing abstract concepts influencing the questions and the interviewer. On several occasions one or two intuitives responded beyond the general research questions, to comment on specific patients. Once given the patient's identification and location, they provided at times highly detailed information about the individual, offered helpful suggestions about the nature of his particular disorder and described possible therapeutic

interventions, including treatments ranging from the pharmacological and physiological to psychological. For example, for one particular patient an intuitive expert [NT] provided several exact laboratory values (for example, thyroid stimulating hormone) that were later verified in the laboratory. She also described the clinical course of another patient's depression over the previous five years with such detail that the psychiatrist [PG] had to check the dates and details from his own notes. The intuitively provided information was correct and accurate.

This precise information about individual patients was in contrast to occasional vagueness of the general inquiry. When the questions arose from attempts to extend existing models and theories, or were broad "why" and "how" questions heavily rooted in the prevailing paradigm, the responses were often not specific. When they dealt with a particular patient, the intuitive insights were clear and definite.

This finding is consistent with prior experience when employing the same intuitive experts to provide information about both technical matters and individual issues. Precision and specificity of questions generate the greatest clarity and the results may be reported according to professional standards. This striking feature has been confirmed by hundreds of personal inquiry sessions and dozens of technical inquiries, conducted or arranged by one of the authors (Kautz, 2005). The personal assistance provided was abundant and often perceptive and profound. This facet of our study certainly merits deeper investigation.

Careful study of the intuitives' responses showed that when we encountered ambiguity and disagreement, either among the intuitives or between the intuitives' statements and existing knowledge, we could often trace the problem to limitations in our questioning or weaknesses in the underlying knowledge base. Again, well founded, specific questioning turned out to be one of the essential requirements for successful intuitive inquiries on specific subject matter (Kautz, 2005).

Thus, in addition to verifying some of the intuitives' responses, this review provided a useful lesson for the potential and correct use of intuitive inquiry in future explorations of any research area which is deemed to be humanly important and beneficial, and in which clear questions can be formulated and the answers understood. A positive motivation by the participants and users may also be required for success.

Notes

[1] The term *intuitive* does not mean the same as *psychic*, but refers rather to the underlying mental capacity that makes genuine psychic performance possible.

[2] For example, the annual conferences from the University of Arizona, Tucson, "Toward a Science of Consciousness"; from the Message Company, Santa Fe, "The International Conference on Science and Consciousness"; and from the Association for the Scientific Study of Consciousness.

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[3] The bracketed initials [XX] designate the expert intuitives who participated in the study; their full names are given in the Acknowledgment at the end of this paper. The intuitive excerpts presented here are illustrative samples only; fuller responses are included in Grof & Kautz (1990).

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Appendix: The Questions

These are the basic set of questions that were posed to expert intuitives in the original study. These questions reflected the interests and aspirations of our team of researchers at that particular time (around 1980):

Could you help us with understanding better and treating more effectively a common condition called bipolar depression? People suffering from bipolar depressions experience episodes of depression which may last for weeks or months and alternate with periods of complete well being or periods of manic overactivity:

(1) What are the major causes of bipolar depression?
(2) Which of the following directions of research is the most fruitful one to pursue, in order to improve the treatment of patients with bipolar depression?
    (a) Hormones
    (b) Neurotransmitters
    (c) Erythrocyte membrane transport
    (d) Genetics
    (e) Characteristics of body water/fluids
    (f) Any other area

(3) Which of the following directions of research is the most fruitful one to follow, in order to improve the long-term, preventative treatment of bipolar depression?
    (a) Hormones
    (b) Neurotransmitters
    (c) Erythrocyte membrane transport

(d) Genetics
(e) Characteristics of body water/fluids
(f) Any other area

(4) How does lithium exert its effect (on the mind and body) in preventing episodes of depression or mania?
(5) How can one measure the concentration of lithium in the blood from outside of the human body, without obtaining a blood sample? Can you describe a simple technique which would allow us to obtain a rough estimate of lithium blood levels above 1.0 mEq and below 0.5mEq of lithium?
(6) Can you describe similarly noninvasive techniques for the measurement of cortisol, growth hormone, prolactin and melatonin?
(7) Do bipolar depressions have roots in the transpersonal (spiritual) life of those affected by them? Are there any past-life experiences which are shared by people with bipolar depression?

In addition to these questions posed to all intuitives, in some sessions further questions were added on with selected topics. These additional questions about bipolar depression concerned issues such as the prediction and prevention of future episodes, nutritional factors, seasonal effects, potential of color therapy, prevalence of the disorder, innovative treatments of acute depression, the potential therapeutic as well as disruptive effects of magnetic fields and the likely modes of action of lithium.

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