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Metaphor and Consciousness: The Path Less Taken

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In attempting to achieve some form of mapping between consciousness (specifically, consciousness$_6$) and cognition, I distinguish between a weak and a strong version of the hypothesis, indicating a change in mode of thinking of a metaphoric–symbolic nature (Glicksohn, 1993). The weak version would claim that metaphors, symbols, analogies and images are used in an attempt to depict the experience, which is not easily translatable into words. The strong version would claim that metaphoric thinking is one of the hallmarks of the experience, and is used both in an attempt to depict the experience and also to convey to the reader, and possibly to induce in the reader, some of the qualities of that experience. My discussion of these two options is preceded by some comments on problems inherent in studying altered or alternate states of consciousness. I also discuss the relationships among physiognomic perception, cognitive dedifferentiation, and symbolic cognition.

How much progress has actually been made in the study of states of consciousness? What would be plausible criteria for assessing such progress? Clearly, the large number of articles addressing this topic published in *The Journal of Mind and Behavior* would be a biased index given the journal's goals and its audience. The fact that a chapter on states of consciousness has appeared in introductory textbooks of psychology over the past thirty years is also uninformative, given the names of some of the authors of these texts. Perhaps more telling is that very little (if any) mention of this material appears in textbooks in cognitive psychology, or in its flagship journals. Even more indicative of the true state of affairs is the fact that the same cardinal question, namely of the relationship between state of consciousness and mode of cognition, has been raised and partially answered over the past fifty years, with very little impact on research.

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Let me briefly review this sorry case of protracted development. Fifty years ago, Rapaport (1951) contributed a chapter to his edited volume, *The Organization and Pathology of Thought*, the book being as much a contribution to the study of cognition as it was to the study of states of consciousness. In that chapter, which serves to sum up the ideas suggested in the other contributions to the volume, Rapaport makes major progress in describing states of consciousness. He suggests (pp. 705–708) that there is a normal state of consciousness, and variants of consciousness (states of consciousness), "such as those of drugging, extreme tiredness, hypnosis and dreams — in which reflective awareness is either absent or limited" (p. 706). He argues that "from the point of view of the theory of thinking, reflective awareness is important because, among other things, it is involved in keeping thinking within a given 'realm of discourse': this is characteristic of ordered thinking, and its absence is striking in the shifts of conceptual level common, for instance, in schizophrenic thinking" (p. 707). He then suggests that there are four "groups of variants" of the state of consciousness: (a) a continuum of normal states of consciousness, ranging from the waking to the dream; (b) special states of normal consciousness, such as absorption, hypnosis, boredom; (c) developmental states of consciousness . . . and (d) pathological states of consciousness" (pp. 707–708).

What distinguishes among the various states of consciousness? As Rapaport suggests, "each of these appears to be characterized by: (a) a specific form of thought organization; (b) specific forms — including absence — of reflective awareness; (c) specific limitations of voluntary effort and/or spontaneity; and (d) underlying the others, a specific quality (degree of binding), quantity, and organization of available cathexes" (p. 708). And yet, Rapaport (1950/1967) was still troubled by the nature of the relationship between the specific form of thought organization and the specific state of consciousness:

> the nature of "consciousness" of hallucinatory images is dynamically radically different from the usual consciousness of ideas. We have no reason to assume that these are the only two kinds of consciousness possible. Observation and experience, on the other hand, suggest that there is a group of such states of consciousness ranging from the hallucinatory consciousness characteristic of the dream and waking consciousness . . . . The difference in cathectic dynamics between these states of consciousness and the forms of the thought processes determined by them are so far unknown. A field of exploration lies wide open here, and a huge gap in our theory of thinking awaits bridging. (pp. 323–324)

Sixteen years later, Neisser's (1967) *Cognitive Psychology* made reference to Rapaport's volume. Neisser's book has been heralded as being one of the decisive texts announcing the (so-called) cognitive revolution in psychology (Gardner, 1985). Indeed, on comparing this text to more recent ones (e.g., Eysenck and Keane, 1990), one notes the consistency in chapter headings

between books (e.g., pattern recognition, attention, memory). But Neisser, in contrast to authors of contemporary textbooks in cognition, was also concerned with problems of consciousness and thinking, and discussed the very same phenomena as did Rapaport (e.g., primary and secondary processes, cognitive structure, dreaming and related states). Neisser quoted Shor (1959/1972) and his conception of a generalized reality orientation (GRO), intricately related to the notion of a state of consciousness. He also cited Silberer's (1951) chapter from Rapaport's volume, noting (as did Silberer) that abstract thought could be concretized in the hypnagogic state of consciousness. Unfortunately, these lines of thought were never followed up in other texts on cognition (with the notable exception of Martindale's 1981 book); these texts have carefully avoided treading into such murky waters, preferring to tread familiar paths.

The seventies saw a series of edited volumes devoted to the study of states of consciousness. Tart's (1972b) book included both Shor's (1959/1972) and Ludwig's (1966) landmark articles on altered states of consciousness (ASCs). In his discussion of general characteristics of ASCs, Ludwig lists alterations in thinking (including a reference to Rapaport), a disturbed time sense, loss of control, change in emotional expression, change in body image, perceptual distortions, change in meaning or significance, sense of the ineffable, feelings of rejuvenation, and hypersuggestibility. I have previously addressed some of these characteristics (Glicksohn, 1993, 1998), but these are not the main focus for present discussion. Rather, it is the troubling fact, as stressed by Rapaport (1950/1967), that "the forms of the thought processes" determined by the various states of consciousness "are so far unknown" (p. 324). Thirty years after this issue was originally raised, Natsoulas (1981) presented his own version of the question, taking the following form: "What is the cognitive mode of function . . . that distinguishes the normal waking state from other general states of consciousness and unconsciousness?" (p. 164).

In order to distinguish among the various meanings of the term *consciousness* (e.g., compare Rapaport's distinction between reflective awareness and state of consciousness, above), Natsoulas has adopted a notation based on the *Oxford English Dictionary* (OED, 1989) in his writings in this area over the past twenty-three years. In accordance with that, I shall be referring to what Natsoulas (1981, 1997) has designated as consciousness$_6$, that is the sixth definition for consciousness given in the OED, which refers to the notion of a "state of consciousness," as well as to consciousness$_4$, that is the fourth definition given in the OED, for what Rapaport refers to as "reflective awareness." Over the past few years, Natsoulas (1997, 1999) and I (Glicksohn, 1993, 1998) have been engaged in a debate regarding the feasibility of achieving some form of mapping between consciousness and cognition. Our common point of departure has been consciousness$_6$. In this paper, I shall be

making a rather strong claim: metaphoric–symbolic thinking is intrinsically related to consciousness$_6$ and its variants, and is used both in an attempt to depict the experience and also to convey to the reader — and possibly to induce in the reader — some of the qualities of that experience. This is a development of some arguments previously raised (Glicksohn, 1993, 1998). Discussing my previous articles, Natsoulas (1999, p. 75) notes that "consciousness$_6$ is, indeed, one among a set of alternate psychological states, but the alternation of such states is a different relation from that between consciousness$_6$ and particular consciousnesses." And in an endnote:

> We speak of "altered states" although, probably, "alternate states" would be better. When we pass from one general state of consciousness (or unconsciousness) to another, the prior state is not so much altered or modified as it is replaced by a different general state. Of course, the mind's functioning is now, ex *hypothesi*, different from what this functioning was before; it is "altered" in that sense. The term *altered state* excludes consciousness$_6$, whereas *alternate state* does not. (p. 85)

I fully agree, and shall employ the abbreviation ASC which conventionally stands for an altered state of consciousness (Ludwig, 1966) but also for an alternate state of consciousness (Zinberg, 1977). Note, however, that in the present context we are, indeed, discussing *alternate states of consciousness*$_6$.

In an important sense, consciousness$_6$ probably has a prototypical structure (Kihlstrom, 1984), with ASCs comprising exemplars of the same general category, though of sufficient deviance to constitute alternate states (Aaronson, 1973). I stress the fact that consciousness$_6$ is a *gestalt* notion: (1) it is an emergent property of a psychophysiological state (Glicksohn, 1998) and has its own emergent properties (Natsoulas, 1994–1995); (2) it is a field of consciousness in both a Jamesian (Bash, 1949; Natsoulas, 1992–1993b, 1999) and a Wernerian (Glicksohn, 1998) sense; and (3) its characteristic cognitive mode of function will change, as will the experience, with a shift in consciousness$_6$ (Glicksohn, 1998). Given this, there is a natural analogy to such a change in consciousness$_6$, taken from the physico–chemical world. Consider the change in state of water from above to 0° C: as liquid water cools, it becomes more dense (at 3.98° C); it then expands (approaching 0° C) and then turns to ice (Uvarov, Chapman, and Isaacs, 1971). If a change in consciousness$_6$ is analogous to a change in physical state, then one would expect to see a marked change in characteristic cognitive mode of function from one state to another, perhaps best modeled using catastrophe or chaos theory (see Winquist and Winzenz, 1977, for such an early proposal; for more recent work looking at the utility of chaos theory for understanding subjective experience, see Combs, Winkler, and Daley, 1994; Gottschalk, Bauer, and Whybrow, 1995; Sabelli, Carlson–Sabelli, Patel, and Sugarman, 1997).

Unfortunately, the problems in studying ASCs are graver than those associated with lowering water temperature.

Problems in Studying ASCs

Studies employing ASC-induction techniques (such as exposure to an altered sensory environment) are not successful in inducing an ASC in all participants. Based on a review of the relevant literature, Glicksohn (1991) noted that 20–40% of naive, unselected participants exposed to an altered sensory environment may be assumed to have experienced an ASC. While context is important in itself, it is the trait-context interaction which is decisive (Glicksohn, 1987). Thus in one study conducted by Glicksohn (1991), the percentage found was 21% (Experiment 1); but when participants were selected on the basis of their scores (low, or high) on the Experience Seeking (ES) subscale of Sensation Seeking (Zuckerman, 1994), the percentage rose to 28% in general, and 40% of those scoring high on ES (Experiment 2). Indeed, 85% of high ES participants exposed to perceptual deprivation (*Ganzfeld* coupled with white noise) experienced an ASC. In studies employing unscreened, volunteer participants (who tend to score high on ES; cf. Zuckerman, 1994), it is hard to disentangle the contribution of personality from that of context in determining the efficacy of the ASC-induction technique. Furthermore, if one adopts the position that "trait conceptions are themselves *inherently interactive*" (Tellegen, 1981, p. 218), then perhaps one should not even attempt to separate the two in studies like this. For example, reviewers of the effects of drugs on consciousness$_6$ cannot avoid the nature of individual differences in susceptibility to drug effects, nor individual differences in susceptibility to suggestion associated with the administration of drugs (placebo effect), and their possible interactive effect on verbal reports of the subjective experience (e.g., Barber, 1970). Trait–context interactions are all too well acknowledged in current research practice (see, e.g., Cott, Pavloski, and Goldman, 1981, for a good example of such a study, actively assessing such interactions). Since consciousness$_6$ is a *gestalt* notion its study must also be conducted in a *field*-appropriate manner, taking into consideration both personality and context (Lewin, 1951).

If one wishes to increase the probability of inducing an ASC, then it would be advisable to use participants who score high on ES (for a review, see Zuckerman, 1994) and/or high on the trait of absorption (Tellegen, 1981; Tellegen and Atkinson, 1974). Regarding the latter, there is an extensive literature (for a review, see Roche and McConkey, 1990) showing to what extent this trait is inherently involved in ASC in general (Glicksohn and Avnon, 1997–1998), hypnosis in particular (e.g., Glisky, Tataryn, Tobias,

Kihlstrom, and McConkey, 1991; Kumar and Pekala, 1988) and related phenomena such as eideticism and synaesthesia (Glicksohn, Steinbach, and Elimalach–Malmilyan, 1999) and imaginal involvement (Crawford, Brown, and Moon, 1993; Glicksohn, Tsur, and Goodblatt, 1991; Wild, Kuiken, and Schopflocher, 1995). But even then, not all participants will experience an ASC, presumably because the context is not apt. For example, in a recent study (Glicksohn and Avnon, 1997–1998), one group of 6 participants was given a particular metaphoric–symbolic set on entering a virtual reality (VR) situation (i.e., to become sensitive to the various symbolic qualities of their experience, to try to immerse themselves within such a symbolic environment, and not to think in terms of conventional categories of experience). This was deemed a priori to be a valid way of testing the relationship between the ASC and metaphoric thinking (Glicksohn, 1993). Nevertheless, only two of these participants (33%) experienced an ASC, one of whom gave evidence for a shift to a metaphoric–symbolic mode of thinking contingent on such ASC induction. Natsoulas (1999, p. 94) questions why this was the case: "Did the instructions not work well enough to induce a metaphoric–symbolic mode of cognition . . . ? Or were the disappointing results owed to the fact that the metaphoric–symbolic mode of cognition also may take place while a subject is in a consciousness$_6$ state?"

The first option suggested by Natsoulas refers to the efficacy of the cognitive set, that is, a methodological inadequacy. This is a sticky issue. Yet, I would argue that the question, whether or not the instructions were effective (cognitive set), cannot be divorced from a second question, relating to individual differences in susceptibility (absorption). I am, of course, assuming that absorption is an interactive trait (Tellegen, 1981). Building on the discussion above, it is a two-way interaction which should be critical in determining whether the hypothesized shift to a metaphoric–symbolic mode of cognition will be revealed: individual differences in trait absorption coupled with cognitive set. Some contexts will not be conducive to absorption. As reported in Glicksohn and Avnon (1997–1998), the majority of our participants had only negative things to say about the content and violence of the VR game itself. Given this, set cannot be disentangled from context, and one is left in the end with an inadequate test of the hypothesis.

The second option suggested by Natsoulas refers to the proposed relationship between cognitive mode and consciousness$_6$. If the same cognitive mode (metaphoric–symbolic cognition) is apparent in consciousness$_6$ and its variants, then this cannot be the cognitive mode implicated by a shift to an ASC. I agree. There might well be a problem here: one needs to propose both a necessary and sufficient condition for distinguishing among the different variants of consciousness$_6$ (cf. Natsoulas, 1999, p. 84). But in my previous article (Glicksohn, 1998), I did suggest a refinement of the original

hypothesis: that such a shift to a metaphoric–symbolic mode of cognition would be dependent on trance or a trance-like quality of the ASC. Thus, a shift to a metaphoric–symbolic mode of cognition is a necessary condition; when trance is discerned, this results in a sufficient condition.

The trance-like quality that I am referring to is, on the one hand, implicated by the notion of absorption (Tellegen and Atkinson, 1974), as discussed above. On the other hand, this same quality implies a shift in consciousness$_4$ (reflective awareness); recall that Rapaport (1951) had suggested that a change in consciousness$_6$ is indexed by a change in reflective awareness, which is " . . . involved in keeping thinking within a given 'realm of discussion'" (p. 707). Now, my working hypothesis is that the various techniques used to induce an ASC produce comparable results in subjective experience (e.g., Glicksohn, 1991; Schuman, 1980; Winkelman, 1986, 2000). That is to say, either the induced ASC realized by the various techniques is essentially the very same (e.g., the ASCs induced by relaxation and meditation — cf. Benson, Kotch, Crassweller, and Greenwood, 1977; Pagano and Warrenburg, 1983), or the induced ASCs are similar to each other (e.g., along the sleep–wakefulness continuum — cf. Glicksohn, 1989; Hunt and Ogilvie, 1988), or perhaps one ASC unfolds from another (e.g., the meditative state unfolding into a mystical one — cf. Brown, 1977; West, 1987). This means that one can assume an essential change in what Natsoulas (1981, 1999) has referred to as the "operating mode of the mind," as being common to any such ASC, and further that the qualities noted for one ASC should reflect on the others.

Taking the hypnagogic or hypnagogic-like state (for reviews, see Mavromatis, 1987; Schacter, 1976) as a reference point, this ASC is characterized by (among other qualities) a change in consciousness$_4$, hypersuggestibility (trance-like quality) and autosymbolic thinking (metaphoric–symbolic mode of cognition). What I am suggesting, therefore, is that when the metaphoric–symbolic mode of cognition is coupled with trance, then one can posit the transition to a hypnagogic-like ASC. When the trance-like quality is absent, then as Natsoulas (1999) suggests, a metaphoric–symbolic mode of cognition can take place while the subject is in the normal variant of consciousness$_6$.

Clearly, then, one has to first establish the transition to an ASC, which is no easy task. There are methodological problems to be considered. These include a consideration of cognitive set, an assessment of the demand characteristics of the study, and a solution for experimenter effects (Barber, 1976). Recall also Shor's (1959/1972) conception of the generalized reality orientation (GRO) which fades into the background when a subject enters an ASC. Following Aaronson (1973), one may propose that a basic element in ASC is that of trance, which Shor (1959/1972) suggested is induced by this shift in GRO. One therefore has to consider the participant's general

suggestibility (Schacter, 1976; Suedfeld, 1980) and baseline susceptibility (Suedfeld, 1969). Another problem invariably faced by researchers in this domain is that the very act of data collection is inherently disruptive of whatever ASC is being explored (see Suedfeld, 1980, pp. 67–68, for a relevant discussion). Drawing another analogy from the physico–chemical world, it would seem that Heisenberg's uncertainty principle is applicable here; as Bohm (1998, p. 33) remarks, "one may compare this situation to a psychological observation, which can likewise 'disturb' the people being studied, and thus take part in the process that one wants to learn about, as well as 'create' some of the very phenomena that can be observed." Thus, the very act of studying consciousness$_6$ results in a change in consciousness$_6$. It is therefore perhaps quite understandable why progress in this domain is elusive.

Even when one assumes that an ASC has been induced, there is still the problem of discerning such an experience by objective judges. There are a number of problems here. First, judges can disagree regarding the verbal report, quite likely due to their own differences in trait absorption (Glicksohn, 1993–1994). They can also disagree regarding the ASC induced (Kirsch, Mobayed, Council, and Kenny, 1992). The means for generating such a verbal report are also influential on the outcome of the study (Morrison and Hunt, 1996). When these reports are then compared, it is hard to separate out the experience, the participant's views about the experience, and its antecedents (see Martindale, 1978–1979; Oxman, Rosenberg, Schnurr, Tucker, and Gala, 1988; Rhoades, Dowker, and Claridge, 1995, for such analyses). Nevertheless, one can glean some insight into the noetic quality of the ASC, as discussed in the next section.

Physiognomic Perception, Metaphoric Thinking, and Consciousness$_6$

Various authors have singled out a change in time perception as being a major manifestation of the shift to an ASC (Glicksohn, 2001; Ludwig, 1966; Melges, 1982). But, if one accepts the notion that consciousness$_6$ is a *gestalt* phenomenon, then one would expect to see a *marked* change in characteristic cognitive mode of function on moving from one state of consciousness$_6$ to another, as indicated earlier. A change in time perception does not seem to be a strong enough change in cognition entailed by the shift to an ASC (though the experience of timelessness should deserve closer scrutiny; cf. Glicksohn, 2001). That there is an intrinsic relationship between consciousness$_6$ and time perception, going back to William James (James, 1890/1950; Natsoulas, 1992–1993a, 1992–1993b), is worth mentioning. And as a number of authors have noted, there is a keen affinity between James's thinking (especially his later work) and that of Gestalt psychology (Bash, 1949; Crosby and Viney, 1992; Woody, 1999). Thus, it is to James (1902/1958)

that I turn in looking for the required radical change in cognition, using that major ASC, the mystical state (Underhill, 1955), as target.

The two qualities of the mystical state, taken from James (1902/1958, pp. 292–293), that will be stressed here are ineffability (James notes that the experience defies expression) and noetics (James refers to a noetic quality, stressing knowledge, illumination, revelation and insight). These have also been suggested by Ludwig (1966), termed by him as "sense of the ineffable" and "change in meaning or significance." James's (1902/1958) own words suggest the path:

> In mystical literature such self-contradictory phrases as "dazzling obscurity," "whispering silence," "teeming desert," are continually met with. They prove that not conceptual speech, but music rather, is the element through which we are best spoken to by mystical truth. Many mystical scriptures are indeed little more than musical compositions. (p. 322)

James designates these phrases somewhat poetically as being "music." One does detect the family resemblance with synaesthetic (Hunt, 1989a), imagistic (Masters and Houston, 1966), autosymbolic (Silberer, 1951) and physiognomic (Werner, 1948) instances of nonverbal thought, associated by the latter authors with ASCs. All of these are indicative of the concretization of abstract thought, whereby knowledge (noetics) is imparted, with the resulting image remaining linguistically clusive (ineffable). But, these phrases are also oxymora, the oxymoron being one form of figurative language (Fogelin, 1988; Gibbs and Kearney, 1994), which suggests the general case of metaphorical thinking (see Beardsley, 1962, for such a view, relating the oxymoron to the metaphor). Let me also note here, that in discussing the mystical literature, one has to consider that the use of such figurative language is sanctioned by literary conventions (Moore, 1978). But, if language is indeed reflective of experience (Werner and Kaplan, 1963), then one should not be too hesitant in striving to make progress along this less-treaded path.

Following is part of a verbal report of a subject undergoing a mescaline-induced ASC (from Osmond, 1970, p. 24):

> . . . a sense of special significance began to invest everything in the room; objects which I would normally accept as being there began to assume some strange importance. A plain wooden chair was invested with a "chairliness" which no chair ever had for me before. In the many thousand stitches of a well-worn carpet, I saw the footprints of mankind plodding wearily down the ages. Barbed wire on a fence outside was sharp and bitter, a crown of thorns, man's eternal cruelty to man. It hurt me.

The "chairliness" of the chair is an intensified awareness of that chair's affordance for sitting (Gibson, 1979). Gibson has suggested that "what we perceive when we look at objects are their affordances, not their qualities. We can discriminate the dimensions of difference if required to do so in an

experiment, but what the object affords us is what we normally pay attention to. The special combination of qualities into which an object can be analyzed is ordinarily not noticed" (1979, p. 134). In the blocked quotation above from Osmond, the perception of the barbed wire is a *physiognomic* one. Gibson (1979, pp. 138–139) noted the affinity of his concept of affordance with that of the Gestalt notion of physiognomic perception, though he argues that as opposed to the latter, affordances do not change in line with subjective factors. Granted this (see, also, Liu and Kennedy, 1993), there is a second, and arguably more critical difference between the two: Gibson's affordance is a functional quality while physiognomic perception is inherently tied to direct perception of emotional qualities (cf. Blocker, 1969). But as an anonymous reviewer questions, are emotional qualities ultimately separable from functional ones?

Indeed, an integration of emotional or expressive qualities with functional ones can be seen in the interaction of personality and social context. As Baron and Boudreau (1987) suggest,

> from an affordance perspective, personality and the environment are related in complementary fashion, similar to the relationship between keys and locks. Personality, in this metaphor, is a key in the search of the "right" lock, whereas the environment, including other people, is the lock waiting to be opened so that its affordances can be realized. Viewed in this manner, personality and environment are interactive in that each is incomplete without the other. Moreover, this view of personality allows one to treat personality as being emergent without emergent becoming a mystical concept. (p. 1227)

Furthermore, to cite Marks (1996, p. 60), "if, following Gibson (e.g., 1979), the perception of a chair includes the functional affordance it provides of 'sittingness,' then, following Werner . . . does not the perception of a dark cloud include the physiognomic affordance of its 'threateningness'?"

Physiognomic perception entails a fusion of perception and feeling (Barten, 1983; Marks, 1996; Werner and Kaplan, 1963), and is one class of syncretic experience (Werner, 1948). According to Werner (1948; Werner and Kaplan, 1963), metaphoric thinking develops out of physiognomic perception. On the other hand, Wallach and Kogan (1965) argue that "to respond to the physiognomic properties of things and events involves an act of metaphor, an act of simile, or an act of signification" (p. 144). There is, indeed, an intrinsic relationship between metaphoric thinking and physiognomic perception (Glicksohn and Yafe, 1998), though for present purposes it might be counterproductive to argue for one particular developmental sequence (again, in the Wernerian sense of development). In fact, a change in consciousness$_6$ is probably reflected in a general dedifferentiation of cognition (Hunt, 1985), such that physiognomic perception and metaphoric thinking are conjoined. In the quotation from Osmond (1970), the percep-

tion of the carpet seems to reflect some fusion of physiognomic perception and metaphoric thinking.

A change in consciousness$_6$ is manifested as a general dedifferentiation in cognition, where perception, thought and feeling are all entwined. Alternatively, one can view this as reflecting a "breakdown in modularity" as seen in synaesthesia (Baron–Cohen, Harrison, Goldstein, and Wyke, 1993), itself being a syncretic experience (Glicksohn, Steinbach, and Elimalach–Malmilyan, 1999). Regarding the latter, note that Cytowic (1989, p. 27) argues that synaesthesia has an ineffable quality. Could these characteristics be equated with the trancelike element of ASC (Glicksohn, 1998)? Natsoulas (1999, pp. 82, 84–85) has these reservations: in meditational experiences and mystical states, there does not seem to be thought of any kind. If these be ASCs, then how could they possibly involve metaphoric–symbolic thinking? Furthermore, would these qualify as being states of trance?

First, let us assume that there is an intrinsic relationship between meditation, the meditative states and the mystical state (see Goodblatt and Glicksohn, 1986, 1989–1990, for a discussion and references). These all are ASCs (e.g., James, 1902/1958; Shapiro, 1980), and while it is certainly debatable whether they involve thought of any kind (e.g., Stace, 1961), nevertheless thought is apparent, presenting itself as unbidden, symbolic imagery (Horowitz, 1978), especially during the practice of mindfulness meditation (Owens, 1975). Given the fact that meditation requires absorption (Goleman, 1975; Owens, 1975), meditative and mystical states certainly qualify as being trancelike (Delmonte, 1987; Ludwig, 1966). In such a state, physiognomic perception is found, at least in certain meditative texts (catalogs). For example, Goodblatt and Glicksohn (1989–1990) discuss a number of Whitmanian catalogs which abound with examples of physiognomic perception and language during mindfulness (e.g., "half-voluptuous silence"). Werner (1948) himself made reference to "trance language":

> In the language of the hysterical, ecstatic "trance" (*Zungenreden*), the holophrastic form again appears as the expression of a syncretic and diffuse process of name construction. The "Seer of Prevorst" . . . had a peculiar type of ecstatic language. The names of persons and things were so fashioned that they "contained both the value and the property of the thing, which is not true of ordinary words." For example, the name "Emelachan" means: "Your spirit is peaceful and quiet, your soul is delicate, your flesh and blood are strong. Steadily both (flesh and blood) roar like the waves of the sea, and then the tenderness in you speaks and says: 'Come and calm yourself.'" (p. 281)

How strong can one make the claim for matching physiognomic perception or synaesthesia with trance? Sargant (1975, p. 74) reminds us that in such states " . . . the individual finds it extremely difficult, and sometimes quite

impossible, to explain in ordinary language what he has been experiencing . . . . He uses paradoxical phrases, such as 'a brilliant darkness' or a 'white darkness' . . . . " The paradoxical nature of the mystical state (James, 1902/1958; Stace, 1961) is manifested in oxymoron, physiognomic perception, synaesthesia and metaphoric–symbolic thought in general.

The Weak and the Strong Hypotheses

Let us distinguish between a weak and a strong version of the hypothesis relating metaphoric thinking to consciousness$_6$ (Glicksohn, 1993, 1998). The weak version (i.e., treading the path more often taken) would claim that metaphors, symbols, analogies and images are used in an attempt to depict the experience, which is not easily translatable into words. That is to say, ineffability sets up tension within the cognitive system, which needs to be released (Lewin, 1938). Some makeshift mode of communication is therefore used to express the inexpressible. As Underhill (1955) writes:

> All kinds of symbolic language come naturally to the articulate mystic, who is often a literary artist as well: so naturally, that he sometimes forgets to explain that his utterance is but symbolic — a desperate attempt to translate the truth of that world into the beauty of this . . . . Symbol — the clothing which the spiritual borrows from the material plane — is a form of artistic expression. That is to say, it is not literal but suggestive: though the artist who uses it may sometimes lose sight of this distinction. (p. 80)

The strong version (i.e., treading the path less taken), which I endorse, would claim that metaphoric thinking is one of the hallmarks of the experience, and is used both in an attempt to depict the experience, but more importantly to convey to the reader (or listener), and possibly to induce in the reader, some of the qualities of that experience. I present both the weak and the strong hypotheses, in the hope that these will foster both future research attention and theoretical elaboration.

The weak version of the hypothesis would be based on a number of interrelated propositions. Firstly, that the shift in consciousness$_6$ to an ASC results in pseudo-hallucinatory imagery (e.g., the dream) over which there is (usually) no control (Horowitz, 1978; Mavromatis, 1987; Ohayon, Priest, Caulet, and Guilleminault, 1996; Schacter, 1976). There is an inherent problem in making the transition back from a pictorial to a verbal format of thought (Haskell, 1986; Nielsen, 1995; Tolaas, 1986). The experience itself probably results from a change in hemispheric dominance, such that the right cerebral hemisphere, commonly characterized as being languageless (wrongly so, cf. Bottini, Corcoran, Sterzi, Paulesu, Schenone, Scarpa, Frackowiak, and Frith, 1994; Winner and Gardner, 1977), is more active during the experience (Davidson, 1976; Reed, 1979; Suedfeld, Steel, Wallbaum, Bluck, Livesey, and

Capozzi, 1994). This would naturally result in a problem of literal communication. Given the pictorial format of the imagery, and the coupling of emotion with a nonverbal mode of processing, the subjective experience would be characterized by ineffability (James, 1902/1958; Stace, 1961). When trying to convey what is in actuality ineffable, one would have to use a makeshift mode of communication, that is, metaphoric–symbolic language (Katz, 1992; Moore, 1978; Stace, 1961). In this respect, figurative language has both a communicative function ("as-if"; McKellar, 1968; Taylor, 1982; Vaihinger, 1935) and an ornamental (decorative) one (Hawkes, 1972; Nielsen, 1995). But this cannot be the type of operating mode of cognition that Natsoulas (1997, 1999) is interested in describing. Rather, this is just a case of poetic license, and should be accepted as such. In any event, this is a retrospective depiction of the experience, which does not necessarily reflect on the form of thinking (if there is such a thing) during the experience (Stace, 1961).

In contrast, the strong version of the hypothesis would be based on these interrelated propositions. Firstly, that the shift in consciousness$_6$ to an ASC results in a basic shift in the general operating mode of the mind (Glicksohn, 1993, 1998). This means that a different mode of processing is brought into play (be this manifested in perception and/or in thought). Developmentally (i.e., in the Wernerian sense of development; cf. Werner, 1948, 1957/1978), the "primitive," syncretic experience of the ASC is expressed by one of the syncretic forms of cognition: synaesthesia (Werner, 1937/1978), eideticism or physiognomic perception (Werner and Kaplan, 1963). In particular, physiognomic perception is the key component underlying the metaphoric–symbolic thought expressed in the ASC. While the experience might entail a concomitant change in hemispheric dominance, there is no problem of literal communication, rather a problem of expressing metaphoric–symbolic thought (e.g., Hunt, 1985; Hunt and Popham, 1987; Laffal, 1974; Masters and Houston, 1966). Others have termed this a shift toward using primary-process thinking (Condon, 1987; Fromm, 1977; Suler, 1980). The subjective experience would be characterized by ineffability, but this could derive from one or both of the following factors: (1) the state-dependent nature of the experience (Fischer, 1971; Fischer and Landon, 1972; Tart, 1972a); (2) the nonverbal, and possibly "lower-level" operating mode (i.e., prior to conceptualization and categorization, and closer to perception and affect) entailed by the fusion of perception and thought in such a state (e.g., Brown, 1977; Deikman, 1977; Flavell and Draguns, 1957; Glicksohn, 1995; Haskell, 1989; Hunt, 1989a, 1989b; James, 1902/1958; Schilder, 1942; Smith and Westerlundh, 1980; Werner and Kaplan, 1963). This is not a makeshift mode of communication, rather, the use of metaphoric–symbolic language reflects underlying metaphoric–symbolic cognition. The ASC itself is experienced

and described in terms of culture-specific metaphors (e.g., Cheyne, Rueffer, and Newby–Clark, 1999; Grof, 1975; Locke and Kelly, 1985; Sacks, 1976; Stace, 1961). In this respect, metaphoric thinking serves a transformative function (Haskell, 1986, 1987, 1989; Muscari, 1992; Ricoeur, 1974; Verbrugge, 1980). This is not a case of poetic license (cf. Dann, 1998), but a type of thinking advanced by interactionist theorists of metaphor, closely resembling the type of "aha" experience of creative thought, intuition, inspiration and insight (e.g., Barron, 1988; Black, 1962, 1979; Brown, 1997; Glicksohn and Goodblatt, 1993; Hunt, 1989b; Koestler, 1970; Waggoner, 1990). While this is a retrospective depiction of the experience, the text attempts to recreate the form of thinking during the experience, and to induce in the reader some mild form of that experience (Alston, 1992; Glicksohn, Tsur, and Goodblatt, 1991; Goodblatt and Glicksohn, 1986, 1989–1990).

To my mind, these two options seem to be diametrically opposed. This does not seem to be yet another example of a typological (strong version) versus dimensional (weak version) mode of conceptualization, as for example is found with respect to synaesthesia and eideticism (Glicksohn, Steinbach, and Elimalach–Malmilyan, 1999; Marks, 1996). That is to say, this is not a question of continuity versus discontinuity in experience (Werner, 1957/1978), and/or in theorizing (Allport, 1955, chapter 5; Kuhn, 1970). Rather, this seems to be another example of an interactional (strong version) versus ornamental (weak version) approach to metaphor, thought and language (Glicksohn and Goodblatt, 1993).

The interactional view of metaphor is *Gestalt*-theoretic (Glicksohn and Goodblatt, 1993). As Ricoeur (1979) has stated, this implies that the metaphor

> may be seen as a model for changing our way of looking at things, of perceiving the world. The word "insight," very often applied to the *cognitive* import of metaphor, conveys in a very appropriate manner this move from sense to reference which is no less obvious in poetic discourse than in so-called descriptive discourse. (p. 150)

As an anonymous reviewer astutely suggested, the ASC is in some core sense the felt sense of the metaphor. To cite Hunt (1984):

> James . . . suggested that mystical experience is an exaggeration of the ordinary "sense of significance" — in more recent terms an exteriorization of process constituting what Gendlin . . . has termed "felt meaning." If so, a cognitive psychological approach to altered states offers the closest possible view of the "deep structure" or "semantics" of symbol formation. This approach is of course consistent with the view that metaphor is not epiphenomenal to language but causal, since the complex synaesthesias of these states would constitute the "mechanism" of metaphor . . . .
>
> While not contradicting the notion that altered states of consciousness exteriorize semantics . . . the more modest hypothesis is that they show the processes underlying the "presentational" side of human intellect . . . . altered states of consciousness tell us something about the process of metaphor. (pp. 504–505)

Thus, on the one hand, metaphoric–symbolic cognition might help to actually induce an ASC (Glicksohn and Avnon, 1997–1998); on the other hand, metaphoric–symbolic cognition might be autosymbolic of such an induced ASC (Silberer, 1951). But, this seems to be exactly what is implied by a *gestalt* phenomenon: consciousness$_6$ is an emergent property of a psychophysiological state, which determines and is determined by its cognitive mode of functioning (Glicksohn, 1993, 1998). If "phenomenological experience comes in *gestalten*" (Allport, 1955, p. 113), then surely phenomenological experience should be discussed in *Gestalt*-theoretic terms. The strong version of the hypothesis relating consciousness$_6$ and metaphoric–symbolic cognition paves a path between consciousness and metaphor. In the end, much as in the figure–ground distinction, these just might be two sides of the same coin.

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