Overview of the Development of Lucid Dream Research in Germany
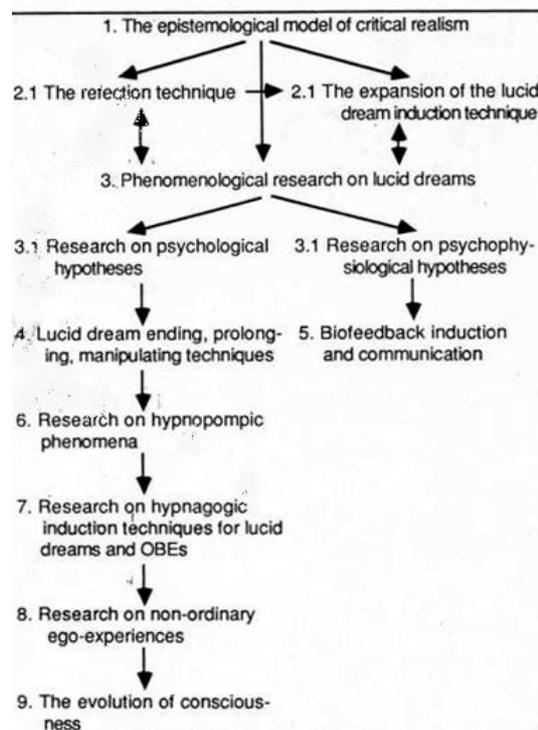
By PAUL THOLEY in Lucidity Letter, 10th Anniversary issue 1991

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Introduction

As in other countries there were various reports of lucid dreams recorded through the centuries by German philosophers, poets and occultists. But these, as well as the investigations carried out by serious researchers, were completely ignored by scientists because they were based on personal experiences (see Schriever, 1935; Moers-Messmer, 1939). It wasn't until 1959 at Johann Wolfgang Goethe University that an effective technique for inducing lucid dreams was developed and the first systematic investigations involving several subjects took place. In this article I will discuss the beginnings of this research as well as its further development. Aside from the purely chronological ordering of the individual steps of the development of the research, I would also like to provide a basic outline of the inner connections of the particular areas within the overall research program. This will require analyzing the development of individual branches of research abstracted from their actual chronological order.

Figure 1
The Development of Lucid Dream Research in Germany[2]

1. The epistemological model of critical realism

2.1 The reflection technique → 2.1 The expansion of the lucid dream induction technique

3. Phenomenological research on lucid dreams

3.1 Research on psychological hypotheses   3.1 Research on psychophysiological hypotheses

4. Lucid dream ending, prolonging, manipulating techniques   5. Biofeedback induction and communication

6. Research on hypnopompic phenomena

7. Research on hypnagogic induction techniques for lucid dreams and OBEs

8. Research on non-ordinary ego-experiences

9. The evolution of consciousness

In Figure 1 the important areas of lucid dream research in their chronological and logical contexts are summarized. Clearly not all individual branches can be listed and many spheres can only be sketched. Those points which I already published

in English will receive only brief mention. In this connection, I would like to point out that a much briefer version of this overview appeared in Lucidity Letter in June, 1988 (Tholey, 1988c). Unfortunately, only the first part of a more comprehensive abstract was translated and published at that time and more recent research was entirely omitted. Here I would like to speak to some of the research themes not mentioned at that time and especially to highlight two of the more current and somewhat related focal points of investigation: the different forms of lucidity and non-ordinary ego-experiences.

Epistemological Model of Critical Realism

First, I would like to treat in some detail the critical realistic model of the perceptual world, given its fundamental significance to the development of our lucid dream research program and the interpretation and application of our findings (see also Tholey, 1986b). This model postulates a distinction between the physical world (physical body and physical environment) and the phenomenal world (phenomenal body ego and phenomenal environment). In the waking state, the physical world is represented—more or less accurately—by sensory and memory processes in the brain. This was illustrated in a somewhat simplified way in the example of perception in my 1986(b) article (p. 45). It was a simplification because I didn't make a strict distinction between the phenomenal facts and the brain correlates. In fact, we are inclined to adopt a view of psychophysical identity, isomorphism or parallelism. This is not a purely philosophical question, rather, it is a matter of working hypotheses which can be subjected to empirical testing and are not dependent on exact phenomenal/brain distinctions (for details see Tholey, 1980a; 1989c).

We most emphatically distinguish ourselves, however, from naïve-realistic conceptions (e.g., Gibson, 1979) and from the idealistic and similar radical constructivist conceptions. The radical constructivists confuse the critical phenomenal conception of the physical world with the physical world itself. The former is constructed on the basis of perception and thought, and frequently changes; whereas the latter obeys unchanging natural laws. A naïve-realistic model has especially negative consequences with respect to research and practice in the field of lucid dreaming and the related field of out-of-body experiences (OBEs). It not only hampers re-search, but for people who misinterpret such experiences it can have very dangerous consequences, possibly leading to serious mental disorders.

Just as the perceived world can provide us with information about physical reality despite the many deceptions and illusions, the dream world can present us with information about our psychological reality (the psychological person and his or her psychological situation), despite symbolic distortions. In general, we take the term "reality" to mean simply anything that has an effect. Accordingly, we under-stand psychological reality to mean the totality of that which can have an effect on our experience and behaviour (see Lewin, 1936). This would especially include the so-called unconscious facts which we can conceptualize as psychological constructs and which can basically be replaced by physiological concepts at a later time.

Here we are in agreement with Freud that dreams are the "royal road" to the unconscious. But this is of little help when, in the orthodox psychoanalytic sense, normal dreams are experienced with a hazy consciousness and the absence of an

ability to act. Or after waking when we report to a biased psychotherapist about our even more hazy and distorted observations and the associations connected to them.

In order to gain insight into our psychological problems and resolve them, it is much more important to interact with the symbolic world in a way enabled by lucid consciousness and the consequent greater freedom of action. Just as we can interact with physical reality in a waking state by means of the sensory-motor feedback system, we are capable of taking action in the psychological reality of lucid dreams due to the reciprocal reactions between the symbolic events and the underlying psychological processes. These fundamental principles have provided the basic underpinnings guiding our investigations into lucid dreaming. The results of the research have shown them to be extremely sound in practice.

But now let's turn to the epistemological considerations described in the article written for Lucidity Letter in 1986, in which I focused exclusively on the process of perception. I also emphasized that it was an understanding of the critical realistic model which first brought me to the idea of developing a method for inducing lucid dreams, a method I will only briefly describe.

Techniques for Lucid Dream Induction

The Reflection Technique

When I recognized that the objective- and inter-subjective-appearing perceptual world was merely a phenomenal world, it occurred to me to compare this phenomenal waking world with the dream world through systematic observation. The dream world is, in fact, a phenomenal world. But, being less dependent on sensory stimulation, it is possible for events to transpire which are not possible with normal perception in a waking state. Such unusual events made it possible for me to recognize the dreaming state.

On the basis of these ideas, I developed my first technique for inducing lucid dreams in 1959. I called it the "Reflection Technique." Using this technique, the subject asks him or herself several times during the course of the day: "Am I awake, or am I dreaming?" The purpose is to achieve a generally critical attitude towards one's state of consciousness. When confronted with unusual experiences, this facilitates recognition of the dreaming state.

After four weeks I had my first lucid dream. I recognized that I was dreaming because I saw an aunt whom I knew to have been dead for some time. Since I wasn't at all acquainted with such phenomena at that time, I was at first fascinated by this new experience. Later, however, I was seized by a kind of claustrophobic feeling because I didn't know how or whether I would be able to get out of this dream world. I finally woke up after staring at a flower in the dream environment until the flower and the entire surroundings became blurred.

Price and Cohen (1988), who refer to only one of my articles translated into English, have referred to the reflection technique as the development of an active attitude. With respect to the early application of the technique this is correct. A process of active questioning, however, ultimately gives rise to a

passively receptive focus on current experience which, in turn, makes the posing of critical questions a superfluous matter. In other words, increased practice helps develop the disposition making it possible to recognize the dreaming state when triggered by unusual events.

A first important goal in improving the effectiveness of the reflection technique was finding the appropriate criteria for recognizing the dreaming state. These criteria make it possible to spontaneously recognize that one is dreaming: particularities of dreamlike perception and/or the contradiction between knowledge of events in a waking state and momentarily experienced dream events. It is also possible to test whether one is awake or dreaming through a series of physical and mental activities. For example, the subject turns himself approximately 180 degrees and then attempts to stand still. In a dream state, as a rule, the body continues to turn in the same direction or the surroundings begin to revolve in the opposite direction. However, the subject may hesitate to conduct such a test in the presence of other people because of the possibility that he/she is awake. After all most of us shy away from carrying out such unusual activities in front of potential onlookers. Thus mental tests may be preferable.

One of the most effective tests is trying to remember what has happened during the immediately preceding period of time. Should one experience bizarre events or a lapse of memory, this may indicate that one is dreaming. However, this test is useless if the subject wakes up, since it could be a "false awakening." Therefore, turning a light on, for example, is recommended upon waking up. If the light does not go on, this may signify a dream state.

We have found countless examples that suggest the apparent existence of various forms of psychological resistance which appear to hinder or prematurely end dream lucidity (Tholey, 1981; 1988b).

For instance during one of my own dreams I saw houses, trees and other objects all standing upside down. I immediately thought that I was dreaming. Shortly there-after it seemed as if I had a pair of glasses on. It occurred to me that the glasses might have been equipped with reversing lenses such as those used in psychological experiments dealing with perception. When I proceeded to take off the glasses I saw my surroundings in a normal, upright position and I no longer believed I was dreaming. We have collected hundreds of such examples suggesting that various forms of psychological resistance apparently seek to hinder lucidity during dreaming.

The Expansion of the Lucid Dream Induction Technique

The expansion of the original reflection technique, resulting in the combined technique, was accomplished by incorporating elements of intention and auto-suggestion (Tholey, 1982; 1983b). Several researchers outside of our group have shown the effectiveness of our methods (Bouchet & Ripert, 1986; Levitan, 1989). Relatedly, a new combined technique developed by Klippstein (1988) should also be mentioned. We have recently attempted to isolate and investigate the effectiveness of certain factors within the overall technique (Utecht, 1987; Schlag, in preparation).

To understand the further development of our induction technique, it is important to point out that the actual clarity about one's state of consciousness is not by itself a sufficient criterion for defining a lucid dream. Additional factors also have to be distinguished. To illustrate this we have listed six different criteria in Table 1 which are not only relevant to the dream state, but (all other conditions being equal) also to the waking state and various intermediate states as well—above all, the "state of imagery." Consequently, during the further development of our induction technique, we have placed a high value on practicing as many aspects of lucidity as possible during the waking state so that they will be ready for application in the dream state.

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Table 1 From Lucidity to the Evolution of Consciousness
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I. General Aspects of Lucidity

(a) in Dream   (b) in Imagery   (c) in Waking Life

1. lucidity about one's state of consciousness (I`m sure that I'm in dream, imagery, or waking life),

2. lucidity about individual freedom in decision and action,

3. lucidity of consciousness (wakefulness in contrast to consciousness   disturbances, eg. narrow or cloudy awareness),

4. lucidity of perception (in a phenomenological sense),

5. lucidity about one's own person, situation and activity, and

6. lucidity about what the dream or the imagined world symbolizes, respectively lucidity about the distortions of defence mechanism in the waking world.

II. Full Lucidity in Sleep

7. lucidity of all dream characters, and

8. lucidity during total sleeping state.

III. Evolution of Consciousness

(a) in Dream   (b) in Imagery   (c) in Waking Life
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Next we want to bring to the readers attention the second criterion of lucidity, "lucidity about individual freedom in decision and action." We consider this aspect to be especially important because it is indispensable for experimentation in lucid dreaming and because the fulfilment of this criterion completely changes the quality of the dream. That is with the second aspect the other aspects of lucidity simultaneously appear, with the exception of the sixth aspect. The sixth aspect of lucidity can be practiced more easily in a "state of imagery" or in a state of waking fantasy (see also Malamud, 1979) than in a waking state, which is usually characterized by a lack of symbolic facts.

Our techniques are somewhat aimed at the same goal as Charles Tart in his book Waking Up (1986). Tart's book is based on the teachings of Gurdjieff and assumes the validity of the hypothesis found in many older spiritual teachings that we are in a kind of psychological sleep or dream state, even during our waking hours. In metaphorical terms, Tart says that we have to pull up the weeds (transform unconsciousness into consciousness) in order to be able to enjoy the flowers. The techniques described by him are in reference to the waking state and include some which are similar to our methods (e.g., "self-observation" and "self-remembering").

Our method, however, is more involved. As noted, we also begin with waking techniques. But, we want to arrive at lucidity in a dream state as quickly as possible because it is there that we can come face to face with Tart's "weeds" in unadulterated forms. In this way we can directly confront the unconscious and thus free our-selves from it by a continuous feedback processes. Eventually, we hope to reach ever higher levels of lucidity in various states of consciousness.

Phenomenological Research on Lucid Dreams

Since, according to the critical realistic model, the phenomenal (waking or dream) world is the only immediately accessible world, empirical phenomenology (in the sense of the observation and description of phenomena) is indispensable for all sciences. The criteria of objectivity and inter-subjectivity, which are often used to characterize a science, cannot be maintained, in a strict sense, by the critical realists because they can ultimately be established only through subjective means and thus one can be fundamentally in error. This can be confirmed by anyone who has considered himself to be in a waking state, while, in fact, he was dreaming. This is because the world in a dream state can have the same objective and inter-subjective appearance as in a waking state. The possibility of making such a fundamental error, however, does not mean that we have to adopt a completely sceptical position. Conviction does not always lead to objectively and inter-subjectively valid observations, but it does so as a rule. Given that empirical phenomenology, by definition, does not seek to investigate objective facts, we demand only inter-subjectivity as a criterion for something's scientific character. Indeed, no single particular fact can be tested (e.g., that someone has dreamed in colour at a particular time). But more general facts, such as the actual occurrence of dreaming in colour, for example, can be sub-jected to testing (for details see Tholey, 1980b).

Experimental phenomenology was the basic and most often used method in our lucid dream research (for details see Tholey, 1986a). With this method, the researcher instructs the subjects or groups of subjects to carry out various specific activities during lucid dreaming, to observe their effects and record their observations independently of each other immediately upon awakening. For judging the subjects' memory capabilities, it is important that they remember not only immediate phenomenal facts, but also the conclusions and judgements made about these facts (see Tholey, 1981). An interview technique developed by Reis (1989b), which is based on a detailed recording of dream experiences, allows for even more reliable and valid information on dream content than one normally finds with the usual analytical methods. With the help of phenomenological experiments, it is possible to test psychological hypotheses about functional dependencies on phenomenal facts, as well as psycho-

physiological hypotheses about the relationships between phenomenal and physiological facts.

Objections to the control of dreams have recently emerged in the lucid dream literature. To these objections we can only reply that in our research and clinical work, we have obtained numerous results through the control of dreams making it possible for us to help many people. The subjects of pilot studies always participate voluntarily in our investigations and were always made aware of potential dangers. It is also understandable that the content of our subjects' lucid dreams would differ extensively from the reports of spontaneous lucid dreamers. Above all, our experimental-phenomenological findings are distinguished from the results obtained by an analysis of spontaneous lucid dreams by a significantly greater diversity of experiential possibilities.

Phenomenological Research in Dream Perception and Cognition

In these experiments we tested a vast number of hypotheses in the area of perception and cognition during lucid dreaming which I have lectured on in detail since 1973 and which, in part, are only to be found in the unpublished reports and dissertations of my students. From among my German publications, I would highlight my review article of 1981.

The phenomenological experiments on perception were first modelled on the usual perceptual experiments in the waking state. We determined if double images, after images and reversible phenomena appeared during lucid dreams under appropriate conditions. These experiments also helped in identifying criterion for distinguishing between a waking and a dream state (see above). We found that all of these phenomena were sometimes, if not always, observed. Although we can frequently recognize the fact that we are dreaming, thirty years of research has still not given us an absolutely reliable test for determining this. This applies especially to the most effective dream criteria discussed earlier.

During lucid dreaming we can sometimes consciously produce perceptual phenomena which differ completely from perception in a waking state—for example, a panoramic field of vision extending 360 degrees in both horizontal and vertical directions. In general, this has occurred only when the dream-ego was in an asomatic or disembodied state (see below). We also succeeded in deliberately defying gravity and slowing down or speeding up time through the use of various techniques (see Tholey & Utecht, 1989).

In the area of memory, we discovered that subjects in a lucid dream state could not only remember their waking state but also their previous dreams. We were able to establish this by comparing the notes recorded after their earlier dreams. The latter is most assuredly connected to the problem of state-specific memory. Long-term memory appears to function somewhat better than short-term memory during lucid dreaming.

In the sphere of logical thinking, we found that the dream-ego was capable of solving double-digit multiplication tasks. In addition, some subjects were able to solve problems of logic which they had unsuccessfully attempted prior to going to sleep. Artistic creative ability was also shown in varying areas, especially during hypnagogic dream phases (Lirzer, 1981).

The abilities of other dream characters were also examined in a way similar to the abilities of the dream-ego. We saw that the cognitive and artistic performance of other dream figures equalled or surpassed that of the dream-ego, but were less capable of solving arithmetic problems (Krist, 1981; Tholey, 1985; 1989a).

Phenomenological Research on Dream Figure Interactions

We devoted a great deal of attention to the "internal" (emotional and motivational) and "external" (verbal and behavioural) activities of the dream-ego during interaction with other dream figures (Tholey, 1981; 1982; 1984; 1988b). We found that in general, positive effects on both the dream and waking life of the dreamer accompanied interactions of a peaceful nature. With regard to this, we mainly want to make some comments which supplement already published material (see especially the English article, Tholey, 1988b).

We have indicated that some of the dream characters form sub-systems of the personality. Even though exact distinctions are not necessarily possible, these sub-systems can be of a more inner-personal or psycho-social nature, on the one hand, or of a more habitual or immediate nature, on the other. We have previously pointed out that dream characters can be altered through changes in our emotional attitude and that we can even create other dream characters.

For example, when I am angry or afraid in a dream, I can blow out the anger or fear through my mouth and thereby create a dream character which takes on an appearance corresponding to the emotion. An indirect way of creating dream characters consists in taking certain actions which trigger strong emotions, such as a guilty conscience. Aggressive actions in dreams are frequently met with punishment meted out by avenging figures. One of my own dreams illustrates this:

I knocked down a dream figure in an enclosed room in order to see if I would be punished. I was seized by the feeling that I would be confronted with something un-pleasant, as had happened in previous cases. Tense, but calm, I waited a moment. But nothing happened. Inwardly triumphant, I then wanted to leave the room. There, before the door, stood a huge person with a hood over his head who immediately lunged at me causing [me] great fear.

Whether such figures appear or not (above all, in response to socially taboo actions of an aggressive or sexual nature), varies from subject to subject. This seems to offer proof that the appearance and possible changes of the other dream characters is dependent on the dreamer's current emotional state, while this emotional state, however, is dependent on the habitual attitudes or sub-systems of the personality.

Learning processes probably play a large role in communication with other dream characters. Inexperienced lucid dreamers frequently have difficulty con-ducting a rational dialogue with other dream figures. This is because most of these figures play word games involving hidden or multiple meanings which the dream-ego can not initially understand. Thus, it is not surprising that the dream-ego considers the other dream figures speech to be pure nonsense—although it can later often be shown to have a logical meaning.

Phenomenological Research on the Lucidity of Dream Characters

In addition to the lucidity of the dream-ego, the "lucidity" of the other dream characters also plays an important role in their communication. In order to avoid misunderstanding, we can never empirically prove whether or not other dream characters are lucid, only that they speak and behave as if they were. Elsewhere I have argued that many dream figures seem to perform with a "consciousness" of what they are doing (Tholey, 1985; 1989a). Some of our unpublished work on the lucidity of other dream figures (in the sense just described) includes examples which seem to indicate that the dream-ego becomes lucid first. This is followed by the other dream figures attaining lucidity. On the other hand, we have many examples of reverse order. We can illustrate this by means of an example in which another dream character not only becomes lucid before the dream-ego, he also possesses a higher degree of lucidity than the dream-ego later achieves. This abbreviated form of the dream was reported by a woman and can be found in Reis (1989b):

I dreamed that I had forced myself through a grey and slimy mass. I didn't know then and I still don't know what it was. It was unpleasant, but for some reason I had to force myself through it in order to advance further. Then, in the midst of this grey slime, I came to a brightly lit place with a person standing in the center. I could see that it was Mr. Spock, the scientist of the Enterprise (the spaceship of the television series Star Trek). He told me, "There is no reason to worry because you are dreaming!" I did not believe him and I asked him what it was that I had just passed through. He answered that I had just passed through my own brain, or my own mind. I did not believe him, but he knew so much more than I did and he told me he would jump up and then remain in mid-air, just so that I would be able to see that we were part of a dream. Only after this actually took place was I convinced that I was in a dream. Then I said that I would never have found out by myself that I was dreaming. He replied that he knew that and that was why he was there. He also said that he knew much more than me anyway and that was the way it should be right then. He explained the meaning of my path in a very plausible manner. . . . He also explained why it was not necessary to know all this right from the start and that he only explained it later on so that I wouldn't be afraid anymore. Anyway, he told me all kinds of things and showed me things that I did not believe right away. I think it was great to have someone acting in a dream who knew much more than I did.

The dream character of Mr. Spock may be characterized as standing for the so-called internal self-helper (ISH) who gives important advice to the dreamer for her dream and daily lives. Our previous findings suggest that one can arrange a meeting with an ISH by means of a suitable pre-sleep suggestion. While lucid dreaming, one can also arrange meetings with the ISH for a dream in the future.

One often finds an ISH at a place which is difficult to reach and which can be brightly lit (as in the example with Mr. Spock), or which is situated high up. There are examples in which one has to climb to the top of a mountain where one meets an ISH who calls himself a monk, a guru, or possibly a psychotherapist. Others pass themselves off as guardian angels or helpful ghosts

(for an example, see Tholey 1984). We also have examples of cases where an ISH knows certain things from the dreamers past - things which the dreamer himself is not aware of even after waking up, but which further investigation has shown to be true. Suitable phenomenological experiments are necessary to achieve further clarification concerning this important component of lucid dreaming.

In view of the fact that literature in the field of lucid dreaming almost exclusively refers to the lucidity of the dream ego, we have, in fact, consciously chosen an example in which the other dream character becomes lucid earlier than the dream-ego and is superior to it. Naturally, there are many other examples in which the reverse is true. In such cases it is helpful if the dream-ego tries to convince the other dream characters that they are in a dream. The quality of the dream can then change completely and communication between the dream characters can take place which may lead to much greater insight than is found in the typical lucid dream. For this reason we consider the "lucidity" of all dream characters (see item II.7 in Table 1) to be a higher form of lucidity. The verbal, or possibly even "telepathic," communication no longer takes place on a symbolic, but rather on a direct level. It has already been possible to confirm this in preliminary phenomenological experiments. I have recently (Tholey, 1989a) indicated that it was possible to enter the body of another dream character with the ego-core and, in this way, gain more information than was possible with normal verbal communication.

Techniques for Ending, Prolonging and Manipulating Lucid Dreams

We can draw a whole series of practical conclusions about the ending, prolonging and manipulation of lucid dreams from the results of our phenomenological experiments. Just as a dream can be ended by fixing a gaze, a lucid dream can be prolonged when it threatens to end by rapid eye or body movements. As we have already dealt extensively with the possibilities and limits of manipulating lucid dreams (Tholey, 1988), we will only briefly comment.

The control of a dream through the dream-ego's action in the dream world (similar to the waking-ego's actions in the waking world) is not what we mean by manipulation. Rather, we mean intervention in the dream world which would more likely be considered a supernatural occurrence in a waking state; e.g., journeys into the past, transformation of the dream-ego or dream scenery, etc. Just as lucid dreaming has been associated with defence mechanisms, so too has dream manipulation been thought to be a kind of defence mechanism. Lucidity can, indeed, be used in the sense of a defence mechanism for escaping problems and conflicts. But, on the other hand, it also offers the unique opportunity (not possible in normal dreams) to face personal problems and conflicts, to confront threatening people and situations and even to seek them out, rather than fleeing from them (see Tholey, 1988b).

Phenomenological Research on Hypnopompic Phenomena

The fact that lucid dreams can usually be ended by fixing one's vision on a stationary spot makes it possible to closely observe the phenomena which appear during the transition to a waking state. Given that we have already dealt with such phenomena in an earlier article (1981), we will limit our remarks here

to a few observations connected with bodily experiences which provide some important background for the remainder of this article.

Only one body was experienced during the transition from the dreaming to the waking state. Of special interest to us here was how the transition took place from an upright, standing dream body to a horizontally lying waking body. This transition is never experienced as the dream body falling into a horizontal position. Instead, there is a sudden change of the spatial reference system. This is comparable, while awake, to when a person wants to go to the door of a completely dark room and suddenly discovers he is at the opposite side of the room. In this case, it is only the sudden change of the spatial reference system (constituted by the room) which is experienced, not the changing of the position of the body through turning and shifting. In further experiments, we tested to see what happens during the transition from a dream to a waking state when the dream body is consciously situated in a way not common during sleeping, e.g., the head and torso bent forward and almost touching the knees, or the arms and legs extended in a spread eagle fashion. Neither a straightening of the body in the first case, nor the drawing in of the limbs in the second case, is actually experienced during waking. Rather, before waking, the body loses its clear contours and sometimes its solid character. We have applied the metaphorical term "cloud-like ego" to such an occurrence. Upon fully awakening this "cloud-like ego" stabilizes into a solid body ego with definitely defined con-tours and is experienced as lying in bed.

A dream ego and a waking ego have also been experienced simultaneously. For example, the dream body gradually faded out (as in a film), while the waking body became more and more clear. The dream body slipping into the waking body was also experienced, particularly during flying dreams. When a cloud-like ego or a disembodied ego was experienced, it also frequently slipped into the waking body. Occasionally the body was not immediately mobile upon waking, a situation which was very unpleasant for inexperienced lucid dreamers. Practiced dreamers, on the other hand, use this condition to return to a lucid dream state (see Tholey, 1989c).

Hypnagogic Techniques for Inducing Lucid Dreams and OBEs

The above mentioned hypnopompic experiences were used to develop hypnagogic induction techniques which were then employed in an effort to reverse the above sequence. This sometimes occurs as quickly as with the reversing of a reversible figure. We have already outlined other hypnagogic techniques in some of our earlier articles (Tholey, 1982; 1983a) and later described them in more detail and illustrated them with suitable examples (Tholey, 1989c). In many respects, I personally consider the hypnagogic induction techniques to be more appropriate for advanced subjects than other techniques because they allow lucid dreams to be

1. Attained at a particular time;

2. Prolonged easily; and

3. Resumed after short interruptions.

Finally, only hypnagogic techniques made possible a 24-hour period of lucidity that included the total sleeping state (see item II.8 in Table 1). Indeed, only a few people have succeeded in accomplishing this in our experiments. I have personally twice experienced 24 hours of lucidity with approximately a five-hour period spent in a total sleeping state. EMG measurements showed that my muscular system was completely relaxed during this time. Upon awakening I showed no signs of either physical or mental fatigue. A feedback relationship seems to exist between sleeping state lucidity and waking state lucidity.

So-called OBEs of the most varied sort frequently arise with the application of hypnagogic techniques. In the following section we will deal with them in more detail from both the conceptual and phenomenological points of view.

Phenomenological Research on Non-ordinary Ego Experiences

For the description of non-ordinary ego-experiences we want to explain certain terms in more detail (including some already used), and also introduce some new ones. This is not easy given that many phenomenological distinctions which are made in the German language can only be expressed in English by employing metaphorical language. In addition, many terms are used ambiguously. We are thinking of such terms as "ego," "I," "me," "self," etc. Sometimes the term "ego" indicates a part or sub-system of the personality (e.g., in psychoanalysis). By contrast, we attach a phenomenological meaning to this term, as well as the others, in the fol-lowing discussion.

By the expression "total self" we mean the phenomenal "body-soul unity" of a subject which comprehends the subject's phenomenal body (in our terminology, the body-ego) as well as mental facts (in a narrow sense)—above all, the emotions and motivations of the subject. These mental facts frequently appear to be bound up with the body in a fuzzy way as a kind of vessel. They can also transcend the phenomenal body. One thinks, for example, of love or hate with their characteristic connections to other subjects.

There is a particular point within the total-self, however, which is sometimes referred to as the "centre of the self," "centre of consciousness," or "centre of the ego." "Ego in a narrower sense" or something similar is also used (for details see Kohler, 1938, p. 188) Due to the ambiguity of these terms, we prefer the expression "ego-core," in accordance with the German term "Ichkern". The ego-core is less an extended part of the phenomenal field than it is a place or point in the phenomenal world determined by its position and functions. Let's first consider its position in the usual waking condition.

This point can be localized surprisingly well during normal observing or think-ing. It is located within the phenomenal body, namely in the frontal area of the phenomenal head, a short distance behind the bridge of the nose. Many authors claim that the ego-core (or whatever term they prefer for this concept) is located behind the eyes. But in the phenomenological sense this is wrong because in the phenomenal world we only see by means of a single eye. (The physiologist Hering had described it as the "cyclopean eye" in the 19th century.) This eye includes the frontal area of the phenomenal head. Based on that, we can also say that the ego-core is located behind the centre of this cyclopean eye. To avoid any misunderstanding, it should be emphasized that this localization of the ego-core only concerns the phenomenal head, not the physical head of the physical

organism. Beyond that, the ego-core should not be confused with either a fictitious homunculus (which suggests information), or with an idealistic epistemological subject which creates or constructs the world. The terms "homunculus" and "epistemological ego" are metaphysical concepts which have no meaning from the standpoint of critical realism (see earlier discussion). The ego-core can experience phenomenal objects and participate in phenomenal events, above all through visual perception (in a phenomenological sense), imagination, memory and thought. As a rule, the ego-core is also the phenomenal origin of voluntary activities, including voluntarily focusing attention.

We would consider all experiences which deviate from the described phenomenal facts to be non-ordinary ego-experiences. In such situations, for example, the ego-core can change its position in the phenomenal body or leave the phenomenal body (as with so-called OBEs), slip into other phenomenal bodies, duplicate itself, or completely disappear. In addition, the described functions of the ego-core can distribute themselves in various places. There are so many non-usual ego-experiences that we can only consider a few of them.

During lucid dreaming, it is possible to experience one's own body or the body-ego in extremely diverse ways—especially OBEs. We consider OBEs to be experiences during which a second body or a disembodied ego (in our terminology: the ego-point) leaves the first (experienced as physical) phenomenal body (Tholey, 1966c). The first body is frequently experienced as immobile or rigid; the second as mobile. As a rule, the ego-core is to be found in the latter. The second body can have the same distinct contours as the first, or it can be a "cloud-like body." The second body can also usually pass through solid objects, such as walls. In rarer cases, the second body is tied to the first body by a kind of cord. What we have described here is interpreted differently and described in other terms by occultist literature. Table 2 shows a rough outline of the differences between the anthroposophical concepts of Rudolf Steiner and our own.

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Table 2   Anthroposophical Versus Critical Realistic Concepts

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Anthroposophical Concepts	Critical Realistic Concepts
1. the physical body	1. the (experienced as body physical) phenomenal
2. the astral body	2. the subtle image of first body
3. the mental body	3. the cloud-like body
4. the ego	4. the ego-core or the ego-point

Naturally, there is also a physical body or organism within the framework of critical realism. It isn't, however, immediately experienced. In occultist literature, the cord between the first and second bodies is also called the silver cord; its destruction is supposed to lead to death (see e.g., Fox 1962).

Research on OBEs

Most investigations of non-ordinary ego-experiences refer to OBEs. We have already pointed out the hypnagogic techniques which were used most of the time in our OBE induction experiments. During lucid dreams we can also induce OBEs in various ways (for details see Tholey, 1989c). Finally, we have also used various mirror techniques for the induction of OBEs which are more or less patterned after magical practices [Editor's Note: More on these in the discussion between Tholey and LaBerge in the June, 1990 issue of Lucidity Letter]. The first successful investigation of a mirror technique in our research at Frankfurt University was by Stich (1983; 1989). A method I developed involving two mirrors has been described by Nossack (1989).

An important goal of our phenomenal experiments was to determine whether the same functional dependencies between phenomenal facts are to be found in an OBE state and in a lucid dream state. Aside from the beginning phase directly following the induction of these states of consciousness, we found no substantial differences. In particular, we tried to find techniques for prolonging, manipulating and ending OBEs which were similar to those used during lucid dreams.

Interestingly enough, it was possible for a subject (as an ego-point) to end a dream by staring at his or her own (experienced as physical) phenomenal body still lying in bed (Stich, 1983). This body would begin to become blurred in the same way as a particular point in the dream scenery of a lucid dream. With regard to manipulation, it was possible for practiced subjects to arbitrarily give the second body (in occultist terminology: the astral body) first a solid quality and then a subtle quality. In this way, the subject could pass through walls at will. The so-called astral body could also be transformed into animals and plants, among other things. The so-called silver cord could be cut (without harmful results), although this was a fairly rare event (see Tholey, 1989c). All of the findings of our phenomenological experiments (especially the blurring of the seemingly physical body and the arbitrary transformation processes of the second body) indicate that OBEs are merely a particular form of lucid dreams, with the possible exception of OBEs occurring during a waking state (e.g., during the practicing of certain sports—see Tholey, 1989c).

And now a final important observation in this area, which was also described by Schriever (1935) vis-à-vis lucid dreaming. If the ego-core is actually a pure point of view from which one's own body can be observed, it is also true that particular exertions and pain in this body can be felt as neutral events without affecting the ego-core. Through practice, some people are able to transfer this ability to a waking state in which the ego-core is found in the phenomenal head, i.e., not

outside the body. It might even be possible for these people to be operated on without anaesthesia.

Entering the Body of Other Dream Characters with the Ego-core

The previously mentioned mirror techniques can be used as a helpful preliminary exercise for entering the body of another dream character with the ego-core. In the hypnagogic state, however, one can use imagined mirrors in order to enter one's own imagine in the mirror (Muldoon & Carrington, 1974; Hillman, 1985). In this state, the "image-ego-point technique" for inducing lucid dreams (Tholey, 1983a, p. 85) can also be used for entering the body of a dream character.

When entering the body of a particular dream character with the ego-core, it is advantageous to look directly at the dream character. The ego-core is often very quickly transported along the line of sight towards and into the body of the dream character. Naturally there are still several phenomenological experiments to be carried out to clarify the effectiveness of particular techniques for this process.

We would like to illustrate this process with two examples. In the first, the subject (an artist) used the above mentioned "image-ego-point technique" for inducing a lucid dream in a hypnagogic state. Even though he had never experienced a lucid dream before, he had the following experience the first night after being instructed in this technique:

I paid attention to visual phenomena while falling asleep. I got to the point where I could see a complete scene even though I was still lying in bed as a spectator, not as an actor. Several Indians were kind of hanging out on the beach. Among them was a friendly boy whom I selected in order to enter his body. I quickly succeeded in "riding on" my line of sight to him. Immediately afterwards I started to see the beach through the boy's eyes; I heard the ocean waves beating against the shore through his ears; I moved with the boy's body. Shortly afterwards, my ego left the boy's body, shot up and then floated above the beach. I thought to myself: 'It did not quite work out yet.' Then my ego slipped into the body lying in bed.

Another example is provided by a student who had already had many experiences with the mentioned mirror technique. His ego-core entered the bodies of several other dream characters, but he became lucid only at the end of the dream:

I am dreaming that I am married and have a daughter (neither of which was actually true). First, I see the kid playing around and I am very proud of her. Later on, I am lying in bed (person A = dreamer) with my wife (person B). She tells me that we have to separate. I am stunned by that. She leaves and my ego enters her (person B) at that moment. After some time has passed, I (still person B) conclude that I (person A) am not that bad a person after all and I (person B) decide to return to myself (person A). I find myself (person A) in bed with a stranger, a man (person C), and I (person B) get extremely mad and

jealous. I (person B) accuse myself (person A) of being a "queer son-of-a-bitch." Then my ego slips out of person B and into person C, and now, being person C, I explain to person B why it is all right this way and succeed in convincing B of this. Finally, all three of us are lying in bed making love. I leave all three of them at the moment I am no longer sure which one of them I actually am and then discover that I am sleeping because everything seems so dreamlike. Seeing that, I explain to them (the three people) that I am dreaming and that they are all parts of myself. They turn around, looking at me sheep-ishly and unbelievingly. Wondering how I manage to talk even though my ego has no body at all, I wake up.

The dreamer interpreted the dream as a psychological conflict in which the ego-core took over the various sub-systems of his personality. While this dream obviously symbolized an internal psychological conflict, we also have examples of psychosocial conflicts being clarified and resolved by entering the body of another dream character (for a detailed example, see Tholey, 1988b, pp. 283–284). Indeed, it is not always possible to make a strict distinction between these two kinds of conflicts because of their closely interrelated nature.

Dream Ego Duplication

The following technique for duplicating the dream ego was developed by psychotherapist Norbert Sattler. He discovered that it is possible to not only pass into another dream character over the line of sight, but that a person can be transported to a different place entirely. The following example from Sattler explains how the dream ego can be duplicated at the same time as this transporting takes place.

Standing in front of a high tower during a lucid dream, I clearly experienced the tower's power. This gave rise to a desire to look down from it. I accomplished this by gliding in desultory fashion to the top of the tower along my line of sight. I then looked downwards and was overcome by a feeling of dizziness. In a similar way as before, I changed my perspective several times until I seemed to be standing on top of the tower and at its base at the same time, while simultaneously looking upwards and downwards. In this way, I experienced the power of the high tower and the dizziness caused by the long vertical drop in one conflicting moment.

A second method, which I developed, for dream ego duplication consisted in cutting one's body into right and left halves (see also the following discussion for the more general method of severing body parts). The two halves can then complete themselves into two dream bodies with differing points of view. As a rule, this method can only be applied successfully by experienced lucid dreamers and the phenomena are generally of an unstable nature. In this connection, it should be noted that the dream-ego, according to Chang (1963), can be "multiplied into millions and billions to fill the entire cosmos" (our terminology: the total dream world).

Movement of the Ego-core Within the Dream Body

The above mentioned technique for dividing the dream body into two halves is patterned after a more general technique developed by Norbert Sattler (see preceding section) for cutting through or cutting off various parts of the dream

body with a knife. With this method, pain can be felt and resistance can be encountered if the subject hasn't learned to transform the solid dream body into a subtle body. The ego-core also becomes mobile by means of cuts made through the head and can be moved arbitrarily within the uninjured dream body with further practice. In this way, it can inspect the entire dream body and internal organs much like the Guided Affective Imagery (GAI) technique described by Leuner (1978). This could ultimately be of great significance for the diagnosis and treatment of psychosomatic illness.

Destruction of the Dream Ego

If a subject not only severs various parts of the body, but also tries to completely cut it up into pieces, burn it up or destroy it by other means, then the dream body as well as the dream ego-core disappear. This is similar to the techniques used by shamans (e.g., see Kalweit, 1984) who are considered by many researchers to be pioneers in consciousness research. The vanishing of the ego-core can lead to different states of consciousness. Relatedly, Dittrich (1985) argues, on the basis of factor analysis of numerous experiments, that there are only three main dimensions (independently of pharmacological and psychological causes) within the various forms of altered states of consciousness:

1. Oceanic self boundlessness;

2. Anxious ego dissolution; and

3. Visionary restructuring.

As a rule, only hallucinatory events take place during a lucid dream. Whether the vanishing of the ego is accompanied by peak experiences of type 1, or unpleasant, fearful experiences of type 2 depends, above all, on the subject's epistemological point of view and the emotional attitude flowing from it. Otherwise, we see no decisive difference between these forms of experience. Those of the first type were the only ones encountered by our experienced lucid dreamers who carried out the experiments without any anxiety or fear. They can sometimes be described as cosmic experiences with a holographic structure in which the self and the (phenomenal) cosmos form a single unit.

The Evolution of Consciousness

A series of phenomenologically differentiated experiences can be distinguished in which the opposition of the ego (or self) to the world is eliminated. This is discussed in chapter 10, "The Evolving Soul," of Gackenbach and Bosveld's Control Your Dreams (1989).

We are of the opinion that such peak experiences, above all in the Indian culture and subsequently in many western cultures, are too dependent on meditation tech-niques and frequently lead to a passive condition marked by withdrawal from the world. But similar states can also be reached while physiologically awake. Numerous Japanese Zen Buddhists, whose outlook is close to German Gestalt theory, are able to reach such states of consciousness by means of the "outer way"; for example, through artistic or physical exercises. Zen Buddhist philosophers (see Izutsu, 1986, p. 35) also speak of a "supra-consciousness." In

both Zen Buddhism and Gestalt theory (which is itself supported by countless empirical investigations), the vanishing of the ego (or at least its receding into the background) is the most important prerequisite for unprejudiced perception, productive thinking, free and creative action. Given, however, that we adopt an egocentric attitude as part of growing up in our western culture, the road to creative freedom is not easy. By eliminating certain impediments in the form of psychological resistance or defence mechanisms, lucid dreaming can provide a key to the successful traversing of this road (for details see Tholey, 1989c). It is not possible to describe this road in more detail within the context of this article; nor the many diverse applications which we have only been able to touch upon.

In conclusion we would like to point out that reaching creative freedom in perception, thinking, and artistic or scientific activity, shares a similarity to "enlightening" or "waking up" from the robot-like sleep of our day to day existence as described by Tart (1986). But we are also of the opinion that there is a lot of investigative work remaining. We have merely made a single excursion from which it is only possible to point out new research perspectives, rather than report final conclusions.

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