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Francesco Gazzillo, George Silberschatz, Ramona Fimiani, Emma De Luca, and Marshall Bush  
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# Dreaming and Adaptation: The Perspective of Control-Mastery Theory

Francesco Gazzillo, PhD  
Sapienza University of Rome

George Silberschatz, PhD  
University California, San Francisco

Ramona Fimiani, MS, and Emma De Luca, PhD  
Sapienza University of Rome

Marshall Bush, PhD  
San Francisco Psychotherapy Research Group, San Francisco,  
California

The aim of this paper is to illustrate the meaning and functions of dreams according to control-mastery theory (CMT), a cognitive-dynamic relational theory developed and empirically validated in the last 40 years by the San Francisco Psychotherapy Research Group (Gazzillo, 2016; Silberschatz, 2005; Weiss, 1993a; Weiss, Sampson, & the Mount Zion Psychotherapy Research Group, 1986). CMT stresses how dreams reflect the person's efforts to adapt to reality; their production is regulated by a safety principle and is an expression of human unconscious higher adaptive functions. According to this model, dreams represent our unconscious attempts to find solutions to emotionally relevant problems. In dreams people think about their main concerns, particularly those concerns that they have been unable to solve by conscious thought alone, and they try to develop and test plans and policies for dealing with them. After having introduced the reader to the main concepts of CMT, we will illustrate the different facets of the CMT model of dreams with several clinical examples. Finally, we will describe the core elements of recently developed models of dream functions and meanings based on empirical research on sleep and dreams, and we will show their substantial compatibility with hypotheses proposed by CMT.

*Keywords:* dreams, control-mastery theory, adaptation, emotional concern, policies

Philosophical, psychological, and scientific views on dreams run the gamut from according special status to dreams (e.g., “the royal road to the unconscious mind”) to treating them as completely random and meaningless mental events. However, there is a considerable and reasonably cohesive body of recent research suggesting that dreams may serve important adaptive functions.

In this paper we aim to integrate this recent research with control-mastery theory (CMT), a cognitive-dynamic relational theory developed and empirically validated in the last 40 years by the San Francisco Psychotherapy Research Group (Gazzillo, 2016; Silberschatz, 2005; Weiss, 1993a; Weiss et al., 1986). After a brief introduction about the basic concepts of CMT, we will describe and illustrate with several clinical examples its hypotheses about dreams, their meaning, and their functions. In the last part of the paper, we will integrate CMT hypotheses about dreams with recent empirical findings and models about dreaming.

## The Basic Concepts of CMT

CMT is an integrated psychodynamic-cognitive-relational theory of how the mind works, how psychopathology develops, and how psychotherapy works (Gazzillo, 2016; Silberschatz, 2005, 2017; Weiss, 1993a; Weiss et al., 1986). The theory derives its name from two foundational premises: people have considerable control over their conscious and unconscious mental functioning, and they are highly motivated to achieve mastery over their conflicts, problems, and traumas (Sampson, 1976). Consistent with Darwin's work and contemporary biology, CMT proposes that humans are prewired by evolution to adapt to reality and to pursue developmentally adaptive goals (Liotti, Fassone, & Monticelli, 2017). Psychotherapy research studies of CMT (e.g., Gassner, Sampson, Brumer, & Weiss, 1986; Weiss, 1990; for reviews see Silberschatz, 2005, 2017) are closely aligned with recent findings in experimental psychology showing that people unconsciously perform many of the same functions that they perform consciously (Bargh, 2017; Dijksterhuis & Aarts, 2010; Evans, 2008; Gawronski, Sherman, & Trope, 2014; Lewicki, 1986; Lewicki & Hill, 1989). They unconsciously assess reality, make decisions, develop and test plans, and pursue their goals. They unconsciously ward off disturbing feelings, memories, and ideas when these are perceived as dangerous, and they allow such contents into awareness when they decide (consciously or unconsciously) that it is safe to experience them. Weiss (1986b) pointed out that these conscious and unconscious regulatory mechanisms are based on several of Freud's hypotheses (e.g., Freud, 1920, 1925, 1938), and he de-

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Francesco Gazzillo, PhD, Department of Clinical and Dynamic Psychology, Sapienza University of Rome; George Silberschatz, PhD, School of Medicine, University California, San Francisco; Ramona Fimiani, MS, and Emma De Luca, PhD, Department of Clinical and Dynamic Psychology, Sapienza University of Rome; Marshall Bush, PhD, San Francisco Psychotherapy Research Group, San Francisco, California.

Correspondence concerning this article should be addressed to Francesco Gazzillo, PhD, Department of Clinical and Dynamic Psychology, Sapienza University of Rome, Via degli Apuli, 00185 Rome, Italy. E-mail: francesco.gazzillo@uniroma1.it

scribes these as the higher mental functioning (HMF) paradigm in psychoanalytic theory.

The primary way that humans adapt to their physical and interpersonal environment is to develop a reliable set of beliefs about their environment (reality) and how s/he should behave (morality) in order to adapt to it. Forming such beliefs is essentially a mental map-making process that continues throughout life (Gopnik, Meltzoff, & Kuhl, 1999; Stern, 1985; Silberschatz, 2005; Weiss, 1993a). These beliefs may be implicit or explicit and can be formulated according to an “If . . . then . . .” format; they store the contingencies—the relationship between events, and between a given action and a certain outcome—detected or inferred from experience (Tarabulsky, Tessier, & Kappas, 1996). Beliefs are shaped by, and, in turn, they shape, affects (Silberschatz & Sampson, 1991); individuals’ decisions and behaviors are influenced by the implicit and explicit emotional assessment of people, things, and events, and of the consequences of one’s actions, and the memory of the consequences of past actions reactivate the physical and the affective states associated with those actions. Individuals are guided in their decision-making process by these affective memories or “somatic markers.” When a negative somatic marker is juxtaposed to a particular future outcome this combination works as an early warning signal that says “pay attention to the danger that awaits you if you choose the option that leads to that outcome” (Damasio, 1994).

Adverse or traumatic experiences, particularly those that occur during childhood development, may give rise to beliefs that associate the achievement of healthy and pleasurable goals with a perception of danger for the person, significant others, or important relationships. According to CMT, such beliefs are the core of psychopathology, and for this reason they are called pathogenic beliefs. Children develop pathogenic beliefs in the attempt to understand how those traumatic events have occurred, how they may have contributed to them, and how they can avoid or prevent similar traumas in the future. In other words, pathogenic beliefs are developed by inference and as part of an effort to cope with traumas.

Children’s theories about traumatic experiences are influenced by their attachment to their parents, their egocentrism, feelings of impotence/omnipotence, lack of experience, and cognitive and emotional immaturity. Consequently, children are particularly vulnerable to feelings of responsibility and guilt even for problems and bad events they have not caused (Bush, 2005; Shilkret & Silberschatz, 2005; Zahn-Waxler & Kochanska, 1990). CMT (Gazzillo et al., 2017, 2018) describes five main interpersonal kinds of guilt: survivor guilt (being or feeling better off than important others makes them suffer); separation-disloyalty guilt (being independent or different from important others makes them suffer); omnipotent responsibility guilt (having the power and the duty to make loved ones happy and healthy, so that putting one’s own needs in the foreground is regarded as selfish or egotistical); burdening guilt (expressing one’s own needs means burdening other people); and self-hate (feeling that one is bad or inadequate and undeserving of protection, love, and happiness). Unconscious pathogenic beliefs related to guilt (Bush, 2005; O’Connor, Berry, Lewis, & Stiver, 2011) originate from feelings of concern for the well-being of significant others and from the need to preserve the relationship with them. Inhibitions, symptoms, dysfunctional behavior, and affects, therefore, may be understood as ways in which

we attempt to prevent traumatic events from reoccurring and to avoid or atone for the unconscious guilt evoked by the belief of having hurt loved ones.

Because of the painful, constricting, and grim nature of pathogenic beliefs (Silberschatz & Sampson, 1991), patients who seek therapy are highly motivated, both consciously and unconsciously, to disconfirm them and get better, and the principle way in which they try to disconfirm their pathogenic beliefs is by testing them in the relationship with the therapist. By testing (Gazzillo et al., 2019), patients seek actively, albeit generally unconsciously, experiences that will help them to disprove their pathogenic beliefs. For this reason, we can define tests as (unconsciously) devised actions aimed at disproving one’s pathogenic beliefs.<sup>1</sup> Testing is a risky activity because there is no guarantee that the therapist will pass the patient’s tests, and there is no way of knowing whether pathogenic beliefs will be confirmed or disconfirmed. Consequently, patients tend to be more anxious while testing because they expose themselves to the risk of having their pathogenic beliefs confirmed and being retraumatized. Thus, in the early phases of therapy as well as in other crucial periods of the treatment, patients may coach their therapists directly or indirectly: they may provide specific information or guidance on how to pass their tests, how to help them reach their goals, and how they hope the therapist will behave to help them feel safe (Bugas & Silberschatz, 2000). Other than coaching their therapists, most patients tend to adapt their way of testing to the peculiarities of their therapists’ way of working and relating with them, so that testing is a basically intersubjective activity.

Patients have a more or less articulated unconscious plan for disconfirming their pathogenic beliefs in therapy and reaching their goals (Curtis & Silberschatz, 2007; Weiss, 1998). A clinical formulation of a patient’s plan includes the healthy and pleasurable goals that the patient wants to achieve, the pathogenic beliefs that have obstructed them and that the patient wants to disprove, the traumas from which these beliefs originated and that the patient needs to master, how patients are likely to test their beliefs in therapy and insights that will help the patient achieve his or her goals for therapy.

In summary, the CMT model emphasizes the value of viewing patients’ behaviors as an expression of their overarching motivation to adapt to reality, pursue healthy goals, and to overcome problems and conflicts that interfere with their adaptive efforts.

CMT is compatible with cognitive approaches because it stresses the relevance of the beliefs and schemas developed by each person in order to adapt to reality. Its dynamic nature is revealed by the centrality it gives to the unconscious quality of most of our core beliefs, pathogenic or not, and to the unconscious nature of the motivations of many of our actions; to the sophisticated functions that human psyche is able to perform unconsciously, which were stressed for the first time in Freud’s later writings (Freud, 1925, 1938); to the centrality it attributes to motivations such as attachment and care; and to feelings such as safety, anxiety, guilt and shame, in regulating psychic functioning. Finally, CMT can be thought of as a relational theory because it

<sup>1</sup> With the concept of test, CMT explains many clinical phenomena which in other dynamic models may be explained with concepts such as resistances, acting outs, enactments, and so on.

stresses how pathogenic beliefs and schemas are developed mainly within early traumatic relationships, and their modification is possible only within other intimate relationships, first of all the therapeutic relationship, thought as potentially corrective emotional experiences.

We turn now to how CMT sheds light on understanding dreams.

### **Adaptation and Problem Solving Are the Overarching Aims of Dreaming According to CMT**

The theory of dreams proposed by CMT derives from the assumptions about mental functioning and motivation presented above. According to CMT, dreams reflect the person's efforts to adapt to reality and their production is regulated by the safety principle. A dream is an unconscious attempt to find a solution to an emotionally relevant concern. In dreams people think about their main concerns, particularly those concerns that they have been unable to solve by conscious thought alone, and try to develop and test plans and policies for dealing with them.

There are several reasons why a person may be unable to consciously develop a policy or plan to deal successfully with certain problems. These concerns may derive from problems that the person cannot solve, that are too emotionally overwhelming, or whose solution makes the person feel in danger because of his or her pathogenic beliefs and guilty feelings. In other cases, a person may simply not have had enough time to solve those problems in waking life and may keep thinking about them in dreams in order to find a solution. "In either case, a person who cannot deal successfully with a crucial problem consciously may attempt to deal with it in his dreams" (Weiss 1986a, p. 130) and "may sometimes reveal more self-knowledge and may see things more clearly in his dreams than in his waking life" (Weiss, 1993b, p. 142).

So, according to CMT, dreams express the dreamer's plans and policies for solving emotionally relevant unresolved problems; dreams serve this function whether the dreamer remembers them or not,<sup>2</sup> and whether the dreamer is able consciously to understand their meaning or not. From this perspective, dreams may be considered as "embodied simulations" and "rehearsals" aimed at solving unresolved emotionally relevant concerns (see also Domhoff & Fox, 2015; Revonsuo, Tuominen, & Valli, 2015).

An excellent example of the adaptive function of dreams comes from the study conducted by Balson, Horowitz, and Erikson (1975) about the dreams of five soldiers who had been interned in prison camps in Vietnam. Balson and colleagues noted that when they were exposed to the danger of capture, soldiers typically produced nightmares that depicted their own capture. These dreams may be described as warning dreams because their function was to prepare and warn the dreamer of the danger of being captured, which was their main concern. Moreover, by preventing the soldiers from sleeping too deeply, these dreams helped them to react promptly in case of danger. After a long period of imprisonment, soldiers typically started to produce blissful dreams of gratification, power, and serenity. The adaptive function of these dreams was to offer the dreamers a corrective emotional experience, to give them consolation and hope to cope with the despair and helplessness of the situation in which they were living. Moreover, these blissful dreams, with their vividness and closeness to experience, stirred up feelings of pleasure, satisfaction, and safety

in prisoners and allowed them to relax and indulge in a deeper restorative sleep. They could indulge in these pleasant dreams (even though they were clearly based on denial) because they recognized there was nothing they could do in order to change the reality of the situation in which they were living.<sup>3</sup> Finally, after they were released and out of danger, soldiers typically produced posttraumatic dreams, in which they relived the frightening experiences of their life in prison camp. The adaptive function of these dreams was to master the traumatic experiences<sup>4</sup> they endured and the emotions connected with them and disprove the pathogenic beliefs inferred from them. In such dreams, the dreamers were not simply planning to remember and master their traumatic experiences, but they were also beginning to carry out this plan (for a similar perspective on nightmares, see Hartmann, 1998).

As illustrated by the dreams of war veterans, dreams reflect the main concerns and the policies and plans the dreamer is considering for dealing with them. Moreover, these dreams point out the adaptive function of dreams because they clearly helped these soldiers to adapt to the different phases of their imprisonment, and their production was regulated by a safety/danger principle.

### **Dreams can Be Read as Messages We Send to Our Selves**

In dreams a person may warn himself or herself of a problem that has not yet been solved. By a dream a person may soothe and console herself or himself and work to master traumas. In dreams, a person may prepare for an upcoming task by encouraging him or her or by reprimanding her or him for a misdeed (self-punishment dreams). And finally, dreams can help a person muse on a particular problem, develop insight regarding possible solutions, and so forth. Quoting Barrett (2015), also according to CMT dreaming is "thinking in a different biochemical state" (p. 80).

From this perspective, dreams may be viewed as simple but important messages that dreamers send themselves. In a dream, it is as if the dreamer tries to explore the consequences of her/his choices and its content may be expressed through a sentence such as: "If I do X, Y will happen." The fact that dreams are expressed in visual imagery and closer to lived experience than abstract verbal thoughts (dream experience is a hallucinatorylike experience) helps to make their message more affectively powerful.

The following dream, told by a patient in his thirties who was dealing with the impending death of his father, played a very important role in several decisions he took the year after he dreamt it. He was trying to understand if he should have followed his father's recurring advice about the centrality of status in life, or if

<sup>2</sup> According to CMT, not only the production of dreams is regulated in accordance with the motivation to adapt to reality and the criteria of safety, but also the memory and the oblivion of the dreams may follow the same principle. We would tend to remember the dreams that are useful to remember, and to forget the dreams whose memory is not essential or make the person feel too threatened.

<sup>3</sup> In everyday life blissful dreams are quite rare just because we permit ourselves to carry out a policy of denial and to lull ourselves into a false sense of security only when we believe that we cannot change our situation and fate, or when we feel so safe and confident that we feel free to lose touch with reality for a while.

<sup>4</sup> To master a traumatic experience implies connecting it with the network of previous experiences stored in memory and to downregulate the emotions associated to it.

he should have followed what he thought to be important and true. At the same time, he was trying to understand if he should have complied with the requests of a couple of friends who could have been useful to him in terms of status and appearance, or if he should have ended the relationship with them because they led him astray, far away from his true goals.

I was with those friends near the walls of a very old town, probably a town from the ancient Roman period or from the Middle Ages. We had to go to a bookshop but following one of these friends we lost our way and had not been able to find the bookshop. I quickly realized that the bookshop was in the center of this town, while my friends thought that it was in the outermost part of town. At that point I saw some broken keys on the ground, and I thought that they had been broken by my two friends' carelessness.

The basic message of this dream—structured like a prophecy and expressed by metaphors—is that if he had kept on complying with the teachings of his father and his two friends about the relevance of status and appearance (the “outer” part of him), he would have never found his “center,” the “key” of his future. With this dream, the patient was encouraging himself to ignore those teachings and to end the relationship with those friends, which he in fact subsequently did.

The next example is a self-punishment dream produced by a patient in her twenties several days before graduating from university:

I was crossing the streets of the city with my bike. At one point I lost the hair from one side of my head. When I realized what had happened I felt terrified, but a man ran toward me to give my hair back to me.

This dream shows that the patient thought that if she had felt a greater sense of mastery in her life (she felt safe and self-confident in cycling through the city), she would have been punished both for this self-confidence and her upcoming success (the graduation). The patient grew up with a very critical mother who never missed an opportunity to reproach her; she felt that her mother needed to see her as needy and incapable, and consequently she developed the (unconscious) pathogenic belief that if she was satisfied with herself her mother would have felt humiliated and useless. For this reason, in the dream the patient punishes herself out of powerful feelings of survivor guilt: she lost her mental abilities symbolized by her hair. The intervention of the man (the analyst) that gave the hair back to her represents her hope that the analyst could help her in protecting herself from the painful consequences of her guilty feelings.

A clear example of a dream aimed at reassuring oneself is reported by Weiss (1993b, p. 156). Its message is that the dreamer's fear of rejection was unfounded:

... the patient was driving his car when suddenly it was hit by a rock thrown by a young man driving in an adjoining lane. The patient decided to confront the young man and followed him to his house. There the young man jumped out of his car and quickly entered the house through the front door. The patient followed, rang the doorbell, and was greeted by the young man's mother. The patient introduced himself as a social worker and told the mother about the incident. He expected her to be angry and defend her son; however, she surprised the patient by being pleased and welcoming him into the house. She stated that she had been worried about her son's behavior and would like to discuss it with the patient.

Before producing this dream, the patient had been considering calling up his new girlfriend but feared she would be annoyed. As it became clear during the therapy, the patient's fear of rejection from women stemmed from his relationships with his mother, who often reacted with annoyance when he tried to get her attention. The dream relied on a metaphor to convey the very important message: that rejection by a maternal figure was not inevitable.

In other cases, a person may muse on relevant issues or problems in their dreams and assess different ways of seeing and dealing with the problem. A middle-aged patient, for example, was conflicted about the attitude he should adopt toward his boss at work. On the one hand, he needed her help to advance his career, and he admired her because he thought that she was a very effective organizer; on the other hand, however, he was disturbed by her moodiness. So, in his waking life he was trying to decide how to behave with her. Then he dreamt:

I was trying to take care of my boss' son, who seemed emotionally disturbed. I thought that the cause of his problems was his mother's personality. At that point I started to be afraid that becoming closer to my boss would have been risky for my emotional balance. And I woke up.

Soon after this dream, he decided not to try to get closer to his boss. Her behavior in the following months proved that he was right: the boss became quite angry with all of the office staff that had been closer to her. So, in this dream the patient mused about a possible strategy to get closer to his boss (being caring), tested this strategy, and realized that it was too risky. It was a warning dream.

In still other cases, the person may use a dream to reach, or remind her/himself of, a new insight—as in the following dream of a young woman who had been unable to feel satisfied with herself and to make autonomous decisions because of intense survivor guilt. After having diligently worked on this problem in therapy, she reported the following dream:

I was at an important convention with my university colleagues and we were talking about future plans and job opportunities. In the following scene, I was with my sister and we were walking through narrow streets with no exits. We were looking for a bar because my sister wanted a coffee but around us there were only closed doors. At one point a boy pointed to a door behind which there was a bar. The bar was about to close but we managed to get inside. When we entered, my sister looked around unsatisfied and did not want the coffee anymore. I got intensely angry. We left the bar and the perspective of the street ahead of me had become very large and all the space was immersed in a golden light. I met my analyst who laughed ironically at my reaction in that situation as we had talked about experiences like this one with my sister hundreds of times. He reminded me that what I was feeling was just guilt. Immediately I stopped being angry; those rageful feelings were no longer threatening, and I was not frightened by them anymore.

In this realistic dream the patient reminded herself about the meaning of some of her emotional experiences and behaviors: whenever she felt satisfied with herself (e.g., attending a convention with her colleagues), the patient ended up identifying with her less fortunate sister (they walked together through narrow streets with no exits) or reversing their roles and making her sister the more powerful one (the sister dictated where they went and what was suitable). However, this dream indicates that the patient had

acquired significant insight and a greater ability to manage her feelings of guilt and to be less involved in her sister's emotional situation (the perspective of the street ahead of her had become very large, all the space was immersed in a golden light and she said to herself: "this feeling is just guilt"). The patient showed awareness of the triggers of her guilt and of its manifestations, and this self-awareness allowed her to be less overwhelmed by guilty feelings and less prone to self-punishing behaviors.

### Formal Features, Narrative Styles, and Rhetorical Figures

As illustrated in the dreams described above, the messages conveyed by a dream's formal features and the comments of the dreamers about her/his dream often may be as relevant as its content because they may reveal the attitude that the dreamer has toward the dream and thus suggest a "caption" for the dream images. Moreover, the dreamer may use different narrative styles and rhetorical figures to embody or strengthen the message carried by the dream: the dream may tell a story realistically, or look like sitcoms, farces, black comedies, grotesque novels and so forth. It may express its message via metaphors, allegories, hyperboles, metonymies, and so on.

The previously described prophetic dream of the man who was about to lose his father, for example, conveyed what really would have happened the following year. Another good example of the relevance of the formal features of a dream and the dreamer's comments on it for understanding its meaning is reported by Weiss (1986a, pp. 134–135): it was produced by a young woman who, after beginning an affair, felt disloyal and guilty toward her twin sister. She dreamed that she was married to her sister and they were having a baby. When she woke up she thought "How absurd!" By this dream, based on *reductio ad absurdum*, the patient was telling herself that it was absurd to renounce an affair out of loyalty toward her sister because, however much she loved her sister, she would not be able to achieve with her everything that she wanted in a relationship (a baby). Her comment (How absurd!) can then be taken as the caption explaining the meaning of the dream's images.

In the following example reported by Weiss (1986a, p. 137), the effectiveness of the message that the dreamer sends himself through the dream relies heavily on its realistic novellike quality. This is a consolation dream produced by a desperate patient who killed his wife in a shooting accident while unloading a defective gun. After 8 months of therapy, in which the therapist supported the patient in his struggle not to think of himself as a murderer, the patient attained enough relief from guilt to permit himself to produce this dream:

I accidentally shot my wife. She staggered to where I was sitting, then lay dying in my arms. As she was dying, she told me that she knew that my shooting her was accidental, and she forgave me for it.

This dream was far more consoling than any waking verbal or abstract thoughts because the patient experienced the dream as though it had been a real experience—that is, as though his wife had, in fact, forgiven him. This dream offered a desperate dreamer a corrective emotional experience that he could remember and use to console himself for a long time after he produced it.

Another patient produced a grotesque dream in order to communicate to herself and her therapist how ugly, ridiculous, and burdensome she felt. These feelings were based on messages she received from her mother throughout her childhood, and she came to therapy to work on these troubling beliefs about herself.

I was coming here (to the therapist office) and thought of buying you a present. I went to the market and bought a big transparent bag full of squids. Then my mother saw me and said that it was a disgusting sight and an awful present. After hearing this from my mother I decided not to bring you the present and felt deeply ashamed for thinking of such a "disgusting" present.

The patient told this dream while she was working to disconfirm the pathogenic belief that she was disgusting, hoping that the therapist, unlike her mother, would be able to appreciate her and her good intentions, seeing her as kind and considerate. Moreover, this dream suggested to the therapist that the patient needed to work on her body image, which she saw as "white, too soft and disgusting" (like the squids).

### The Difficulties in Understanding Dreams

The fact that a dream may be seen as a message that a person sends to him/herself in order to solve a problem does not imply that, in order to fulfill its adaptive functions, it must be entirely understandable to the dreamer's awake mind nor that its meaning is always clear; indeed, the meaning of a dream is often not clear at all and remains obscure despite the dreamer being able to associate and reflect on it.

There are several reasons why a dream's message may appear mysterious. First of all, dreams take place in a state of mind, sleep, which is naturally dissociated from the lucid wakefulness state we are in when we try to understand their meaning. Second, the dream uses a language made up of visual images and expressed in metaphoric terms, and people are generally less accustomed to think in this way. Third, it is not always clear to the awakened dreamer which problem or concern is being addressed in the dream, the events and thoughts that gave rise to the dream, and the attitude s/he has toward that problem while dreaming; for example, he may not know during the dream that he is expressing his ideas through the use of irony, *reductio ad absurdum*, and so on. Fourth, dreams may be hard to understand because they may unconsciously be disguised, which can happen for a variety of reasons. One example is when a person wants to warn himself about a danger, while consciously needing to deny that danger. Finally, it often happens that we produce confused dreams precisely because we are having difficulties solving the problem expressed in the dream itself.

### Dreams in Psychotherapy

We have already seen that dreams are always about emotionally relevant concerns that a person has not yet resolved by waking thought, sometimes because s/he felt overwhelmed by them or not ready to face them consciously. This is typically the case of a patient in psychotherapy: the patient's dream often reveals what s/he would like to discuss in therapy. Thus, the therapist may learn from patients' dreams which are the problems they are dealing with, the goals they are trying to pursue,

the pathogenic beliefs they are trying to disprove, the policies they would like to adopt, and the relationship they would like with the therapist. Consider the patient who, soon before the loss of his father, produced the dream by which he alerted himself to the dangers he would have faced if he had followed his father's advice and had complied with the views of his friends. The dream reflected the dreamer's conflicts and concerns about his father's guidance and about his relationships with those friends, and the awareness of those conflicts and concerns favored by that dream served to prepare and encourage the patient. At the same time, by telling that dream the patient unconsciously intended to alert the therapist to his wish to overcome his feelings of disloyalty toward his father in order to live his life in accord with his own authentic values, and to the fact that he thought that to live the life he wanted required him to become less compliant with others' feelings or beliefs. Similarly, the grotesque dream of the patient who was afraid of being seen as ugly and disgusting indicated to the therapist that the patient was working on her feelings of self-hatred and gave him relevant information about the origin of these pathogenic beliefs (her relationship with the mother). By telling her dream to the therapist, this patient was also implicitly requesting or testing to see if the therapist—unlike her critical mother—could see the kindness in her wish to bring the therapist a present. Therefore, dreams are one useful source of information for the therapist about what the patient would like to work on in treatment. During a period of analysis in which the patient is working unconsciously to solve a specific problem, in fact, a patient may produce a specific kind of dream or a series of dreams; after becoming conscious of the problem and achieving some degree of mastery over it, the patient may stop producing that kind of dream.

Moreover, a therapist should pay attention to what happened before and after a dream is told: telling a dream may be, in fact, a way of testing the therapist or may become possible only after some relevant test has been passed by the clinician. It is not rare, for example, that patients who view themselves as burdensome or undeserving of attention tell very long and complex dreams in order to (unconsciously) test how much the therapist is interested in them. And it is well known that a dream may reveal if a previously given interpretation, or a previous therapist's response to a test, was useful or not. Finally, patients may use dreams also to coach the therapist about what they need from them and how they feel about the therapeutic relationship.

Consider, for example, a recently retired patient who came to therapy because she was looking forward to enjoying retirement with her husband but felt impeded by her demanding, self-absorbed older sister. The patient grew up in a family that taught her to always be polite, kind, and to take care of others before thinking about herself. Her parents also emphasized that she was never to challenge, disagree with, or criticize others. As a result, she was easily and frequently taken advantage of by others, particularly by her older sister. In seeking therapy, she hoped that the therapist could help her become less compliant with her sister's demands so that she would be free to enjoy more time with her husband. The therapist seemed to be far more interested in other aspects of the patient's life: her marriage, career, her relationship with a younger brother, her adult

children, and so forth. The patient grew increasingly frustrated with therapy (because it did not seem to address what she wanted), but she was unable to express her dissatisfaction overtly. Instead, she shared a series of dreams of dissatisfaction. In one dream, which recurred over a period of weeks, she hired a gardener to prune some ornamental trees but instead of working on the trees he focused on the many weeds in the garden. These were followed by dreams in which she called a plumber to fix a clogged toilet but he tried to fix a leaky faucet instead. And finally, she reported dreaming about going to a doctor because of a chronic cough but the doctor told her she needed to have an x-ray of her knee. This series of dreams clearly reflected the patient's feelings that her therapist was not helping her with the problem she most needed help with. Although the patient was unable to express her frustration and dissatisfaction with the therapist consciously (due to her pathogenic belief that one should never risk offending someone), she was able to do so unconsciously in her dreams. In the doctor dream, she was finally able to refuse the x-ray and insisted on medication for her chronic cough. And shortly after reporting the doctor dream she tentatively began telling the therapist that she would like to focus more of their effort on her problems with her sister.

In order to understand the meaning of a dream it is helpful to consider its immediate context—what the patient was talking about before telling the dream, what is happening in therapy, and the events of the patient's life—and the broader context of the patient's plan—that is, goals, pathogenic beliefs, traumas, and testing strategies. It is also helpful to solicit the patient's associations and comments to various elements of the dream and to the affects evoked in the dream or in recounting it. Finally, it is possible to think about interpreting a dream as a task similar to giving a caption to a cartoon. The patient's comments and reflections about the dream will often point to a relevant caption, as illustrated in the case of the patient who felt disloyal toward her sister and called having a romantic relationship with her (instead of the affair that she wanted) "absurd."

Although working with dreams can be a very useful component of psychotherapy, it should be noted that dream interpretation is just one part of the process. Dream interpretation should not be privileged or given special status because many patients do not report dreams and they are not always the most relevant aspect of the patient's communications. Moreover, it is often impossible to understand and interpret a dream in all its components. In many cases, in fact, the most one can achieve in understanding dreams are partial insights about the meaning of some of the dream scenes or elements.

### Recent Empirical Findings and Models on Dreaming Compared With CMT

In the following section we will compare the main assumptions of CMT about dreams with several recent empirical findings on these phenomena and several recently proposed models of dreaming based on clinical and empirical findings (for a complete overview, see Hoss, Valli, & Gongloff, 2019).

## Dreaming Is an Orderly Phenomenon Connected to the Dreamer's Psychic Life and Emotional Concerns

Many of the contemporary cognitive-neuroscientific theories on dreaming (Domhoff, 2003; Flanagan, 1995; Foulkes, 1985; Hobson, 2009) claim that dreaming as a conscious experience does not play any useful biological or psychological function. According to these theories, dreaming is viewed as epiphenomenal, that is, as noise generated by the sleeping brain (Hobson & McCarley, 1977) or as "cognitive simulations" of a "wandering mind" (Domhoff & Fox, 2015), and only the neurophysiological underpinnings of sleep are assumed to be biologically functional.

By contrast, psychological and evolutionary theories about dreaming (e.g., Cartwright, 1991; Franklin & Zyphur, 2005; Kramer, 2006; Revonsuo, 2000; Walker, 2017) argue that the specification of the functions that neurophysiological mechanisms serve during sleep does not constitute a specification of the function that the realization of dreams serves (Revonsuo, 2000, p. 878). The main function of dreams should be understood in light of their intrinsic adaptive nature. In particular, these theories assume that (a) dreams are orderly and not random experiences; (b) dreams are meaningful, that is, the content of dreams is overtly or covertly related to the waking life of the dreamers; and (c) dreams play some important psychological function.

In order to have some kind of meaning, dreams cannot be seen as random but rather orderly events. Empirical research reveals that the dream content reflects psychological differences at the group level in both normal and psychopathological populations. The content of dreams varies within the general population as a function of psychologically relevant demographic variables—such as gender, age, social class, marital status, and race (Hall & Van de Castle, 1966; Winget, Kramer, & Whitman, 1972)—and between different clinical populations, such as schizophrenic versus depressed patients (Kramer & Nuhic, 2007; Kramer & Roth, 1978a; Schredl & Engelhardt, 2001; Skancke, Holsen, & Schredl, 2014). Moreover, empirical research on dream content reveals both trait and state psychological differences at the individual level. Not only are the dreams of individuals distinguishable one from the other, whether the person is mentally healthy or psychiatrically ill (Hartmann, Rosen, & Rand, 1998; Kramer, Roth, & Palmer, 1976; Schredl, Kleinfurchner, & Gell, 1996), but also the dreams of an individual are distinguishable night to night (Kramer, Hlasny, Jacobs, & Roth, 1976), even though their content is correlated (Kramer & Roth, 1978b). These results suggest that the content of the dream reflects both enduring aspects of the dreamer's personality and the state changes that occur day by day in waking life, pointing to the relationship between the dream and the previous day's experiences of the dreamer. Moreover, dream content is not randomly displayed across the night. There is an orderly development of dream content across rapid eye movement (REM) periods (Kramer, McQuarrie, & Bonnet, 1980) and within a single REM period (Kramer, Roth, & Czaya, 1975), suggesting that the content of a REM dream depends on its position in the series of dreams during a particular night.

Taken together, these findings are in line with the CMT, according to which dreams reflect the reality of the dreamers: their personality, their personality schema, the problems they experience during waking life, and an attempt to deal with them (dreaming as an orderly process occurring during the night).

The empirical data collected so far about dreams suggest also that dream content shows a significant bias toward representing unpleasant and threatening events rather than pleasant ones. The emotions experienced in dreams are much more likely to be negative than positive (Hall & Van de Castle, 1966; Snyder, 1970; Strauch & Meier, 1996)<sup>5</sup> and very likely to be appropriate to the dreamed situation (Revonsuo & Salmivalli, 1995). Misfortune in dreams are seven times more frequent than good fortune, and aggression is the most frequent type of social interaction (Hall & Van de Castle, 1966). Moreover, the most frequent typical dreams found in normative samples concern being in a risky situation (a person is hurt, in danger, or dead), falling through space, and being chased or pursued (Kramer, 2006; Valli & Revonsuo, 2006). So these data seem to support the idea that, in dreams, we try to deal with threats, difficulties and problems.

There is also an overwhelming amount of evidence showing that the source of our dreams are our emotionally intense waking-life experiences (Eichenlaub, Cash, & Blagrove, 2017; Nielsen & Stenstrom, 2005; Stickgold, Hobson, Fosse, & Fosse, 2001). There is a continuity between waking life and dreaming life (Schredl, 2003, 2010), both in physiological and psychological aspects. Dreams are influenced by the emotions, experiences, and thoughts that precede them (Strauch & Meier, 2004), and their content influences the subsequent waking life, such as mood and spontaneous thoughts upon awakening (Kramer, Moshiri, & Scharf, 1982; Schredl, 2009). Several research studies reveal that the more intense emotional experiences of the day are more likely to be incorporated into the dreams of the night (Cartwright, Agargun, Kirkby, & Friedman, 2006; Malinowski & Horton, 2014; Schredl, 2006). Quoting Walker (2017): "If there is a red-thread narrative that runs from our waking lives into our dreaming lives, it is that of emotional concerns" (p. 204). The strong effect of "real" stress or trauma on dreaming indicate, in fact, that the emotional intensity of the experience affects the incorporation rate of waking-life events into dreams (Schredl, 2010). Moreover, among the brain areas activated in dreaming, the amygdala and the cingulate cortex, which help generate and process emotions, are 30% more active during REM dreaming compared with when we are awake (Walker, 2017).

These findings support the conclusion that dreams are responsive to and reflect the current emotional concerns of the dreamer, a conclusion which is in line with CMT hypotheses and which was also suggested by Freud (1899), who thought that the dream material is composed of thoughts from the relevant events of the day before the dream (day residues).

## Dreams Serve an Adaptive Function and Are Attempts to Solve Emotional Problems

As previously noted, psychological and evolutionary models of dreaming (e.g., Cartwright, 1991; Cartwright, Young, Mercer, &

<sup>5</sup> Several studies suggest that external raters tend to overestimate the presence of negative emotions in dreams, while when it is the dreamer who assesses the emotional content of her/his dreams, more positive emotions are reported (Schredl & Doll, 1998; Sikka, Valli, Virta, & Revonsuo, 2014). In any case, the emotional intensity of waking life experiences influences their incorporation into the dreams, such as the emotional intensity of a dream influences its probability to be remembered.

Bears, 1998; Franklin & Zyphur, 2005; Hartmann, 1998; Kramer, 1993; Revonsuo, 2000) claim that dreams have adaptive functions.

Most psychological theories assume that dreams function to (a) reprocess relevant emotional memories, (b) help the dreamers cope with their current waking concerns, (c) solve their emotional problems, (d) regulate dreamers' emotions, (e) master their traumatic experiences, (f) reorganizing the self or the schemas of the person, and (g) extract the "gist" from the emotionally relevant events of the previous day (e.g., Breger, 1967; Cartwright & Lamberg, 2000; Greenberg, Katz, Schwartz, & Pearlman, 1992; Stewart & Koulack, 1993; Walker, 2017).

According to Jonathan Winson (1990, 1993), for example, human REM dreams reflect a memory-processing mechanism inherited from lower species (which also show evidence of dreaming) in which information important for survival is reprocessed. In other words, dreams reflect survival strategies and are strongly correlated with the way a person is coping with a particular concern of his waking life (for an empirical study supporting this hypothesis, see Eichenlaub et al., 2018).

Greenberg et al. (1992) suggest that the primary function of the mental activity in dreams is an attempt to adapt to the demands of living. They state "what requires adaptation will be in the dream, if we are to adapt, and what is in the dream is what is important to us" (Greenberg et al., 1992, p. 548). They argue that dreams have the same basic functions of waking cognition, that is, recognition and representation of the waking problems that require adaptation by the dreamer, and trial solution of dilemmas.

The psychologist and sleep-researcher Rosalind Cartwright (1991, 1996, 2010; Cartwright & Lamberg, 2000; Cartwright et al., 1998) empirically investigated the dreams of depressed divorced patients. She proposed that dreams act as natural healers; they attempt to balance our emotional lives by modulating the disturbing emotions stirred up by those waking experiences that threaten the present organization of our identity. This function is performed thanks to the complex ability of unconscious thought to creatively connect new and old experiences and different, loosely related contents. This adaptive function of dreams is most effective when waking negative emotion is within a moderate range—neither too little when no major change is needed nor too overwhelming: "Our dreams *review* and *revise* our concept of who we are, and they *rehearse* where we are going. Moreover, in times of trouble, if they function as they should, dreams provide a fourth R,<sup>6</sup> a mechanism for *repair*" (Cartwright & Lamberg, 2000, p. 5).

In his contemporary theory of the functions of dreaming, the psychiatrist and psychoanalyst Ernest Hartmann (1996, 1998, 2010) argues that REM dreaming has a quasitherapeutic function performed by hyperconnecting and contextualizing the main emotional concern of the dreamer with other broadly and loosely related emotional experiences of the dreamer's life. Through this process of creatively hyperconnecting the dreamer's emotions, the disturbing emotions gradually become less intense or overwhelming and the emotional experience itself disappears from the content of the dreams as it is resolved or integrated. This process of hyperconnection resembles, in part, the "primary process" hypothesized by Freud for explaining how the latent content of a dream is translated into its manifest content. However, according to Hartmann, this way of metaphorically working through the material is guided by emotion,

not by drives, and aims at "waving in" new material and not at fulfilling libidinal or aggressive wishes.

The psychiatrist and psychoanalyst Milton Kramer (2006; Kramer & Glucksman, 2015; Moffitt, Kramer, & Hoffman, 1993), conducted a series of carefully conceived empirical studies and proposes that dreaming has a selective mood-regulatory function. Specifically, he argues that the function of dreaming is to protect the continuity of sleep by attempting to contain the emotional surge that occurs regularly throughout the night in REM sleep. The effectiveness of the dream in carrying out this function seems to depend on the thematic development of the same-night dreams (the progressive-sequential dream pattern), that is, on the ability to create a dream story where the emotional problem is stated and then solved.<sup>7</sup> In suggesting that the aim of the dream is to preserve sleep, Kramer agrees with Freud (1899).

The neuropsychologist Mark Solms also argues that dreams are the guardian of sleep. According to Solms (1997), the more relevant features of dreaming are the relative deactivation of the brain areas connected to the executive functions (dorsolateral prefrontal cortex) and the hyperactivations of the areas connected with the primary emotional/motivational systems. In our opinion, however, stressing the activation of these areas does not necessarily mean that dreams are an attempt to gratify infantile drive derivatives as Freud hypothesized. The dopaminergic mesocortical and mesolimbic system active while we dream is the "seeking-expectancy" system described by Panksepp and Biven (2012), which is involved in virtually any kind of motivated activity, and cannot be assimilated to the concept of drive proposed by Freud. For this reason, the most we can say is that while dreaming we look for something emotionally relevant.

The psychoanalyst James Fosshage (1997), putting together his clinical experience as a self-psychologist and empirical research data on dreams, starts from the idea that the primary process can be understood as a mode of mental functioning that uses visual and other sensory images affectively laden for integrative and synthetic purposes (see also Holt, 1967; Noy, 1969, 1979). He hypothesizes that dreams, like waking activity, have an overall organizing function. In particular, according to Fosshage (1997), dreams play three fundamental adaptive functions: (a) to elaborate, organize, and integrate experiences within the memory; (b) to realize the nuclear self (Kohut, 1977), maintaining or reestablishing the cohesion of the self; and (c) to regulate emotions (Kramer, 1993). Through affects and metaphors, dreams reveal what is of immediate importance to the dreamer.

The psychologists Donald Stewart and David Koulack (Stewart & Koulack, 1993) and Richard Coutts (2008) propose that dreams help us adapt to stress by testing mental plans and modifying our concepts and social skills. In particular, the disruptive-avoidance-adaptation model developed and tested by Stewart and Koulack (1993) assumes that adaptation to stress is a dynamic process that begins with the onset of stressful stimulation and continues, at

<sup>6</sup> The four Rs are: review, revise, rehearse, and repair.

<sup>7</sup> According to Kramer, however, there are also dreams whose pattern are merely repetitive and which do not contribute to emotional regulation (the repetitive-traumatic dream pattern).

different levels of consciousness, for some period of time thereafter. The model assumes also that dream content will oscillate between mastery and avoidance processes until adaptation to the stressor has been successful (Stewart & Koulack, 1993, p. 260). Coutts (2008), taking into account the empirical data about different sleep stages and the features of dreams, proposes that while sleeping our mind works to help us adapt our schemas to the social environment. Prevalently during nonrapid eye movement (NREM) sleep, this process executes a first set of dreams with social content that our previously existing schemas try to incorporate by self-modifying. Given that such modifications may introduce accidental, maladaptive conflicts, a second set of dreams is executed, mainly in REM sleep, in the form of test scenarios in order to evaluate the schema modifications effected by the first set of dreams. If prior modifications alleviate negative emotions or seem to be adaptive, they would be selected for retention. If not, they would be abandoned or further modified and tested. In close agreement with these models, the neuroscientist Patrick McNamara (McNamara, Andresen, Arrowood, & Messer, 2002) has suggested that dreams are expressions of counterfactual thought: dreams would function to identify a norm violation recorded in autobiographical memory and then to reinstate normality in memory by generating counterfactuals to the violation.

According to the sleep to forget and sleep to remember (SFSR) hypothesis proposed by Walker and van der Helm (2009), dreaming is an overnight therapy that promotes the emotional resolution of upsetting experiences of the day. The process of REM-sleep dreaming fulfills this function by reactivating the details of those experiences, integrating them with existing knowledge and putting them into autobiographical perspective, and by forgetting (or dissolving) the visceral, painful emotional charge that had previously been wrapped around these memories. During REM sleep, in fact, the brain reprocesses upsetting memory experiences in a neurochemically calm, “safe” dreaming brain environment<sup>8</sup> that is free of noradrenaline, a key stress-related chemical.

Levin and Nielsen (2009) proposed the hypothesis that dreaming frequently serves an important fear-extinction function. They suggest that neurophysiological and neurobiological processes during REM dream states facilitate fear-memory extinction via the activation of memory elements, their subsequent recombination, and the expression of deassociated emotions, allowing a down-regulation of negative arousing affects. This model is consistent with the theories of dreaming proposed by Ernest Hartmann, Milton Kramer, and van der Helm and Walker.

Even according to emotion assimilation theory of sleep and dreaming recently proposed by Malinowski and Horton (2015):

emotional waking life memories are preferentially activated during sleep, thus appearing in dreams in order to assimilate these memories into the wider memory system. This serves several purposes: (i) consolidation, which is the strengthening and stabilization of the memory (. . .); (ii) assimilation into the memory system, which is the integration of new memories with past memories, expectations for the future, and imagination; (iii) the creation of abstractions and generalizations from the memory; (iv) the generation of creativity, insight, novel ideas, and also problem solving; (v) emotion amelioration (p. 9).

Contemporary evolutionary hypotheses claim that dream contents have an adaptive function because they are virtual rehearsal

mechanisms that exert fitness-enhancing benefits for the development of survival and reproduction necessary capacities. The Finnish philosopher and neuroscientist Antti Revonsuo (2000; Revonsuo et al., 2015) has proposed a detailed “threat simulation theory,” which posits that the biological function of dreaming is to provide a virtual reality that simulates threatening events in order to rehearse threat perception, appropriate threat avoidance skills, and threat mastery behavioral programs. Because human evolution took place in very threatening environments, there is an adaptive advantage to simulating real-life threatening events in order to enhance the ability to perceive and avoid threats during wakefulness. The dream state is ideal for this type of practice as it provides a safe environment that the dreamer experiences as real, where various scenarios reflecting threatening events can be repeated and combined.

Finally, psychologists Michael Franklin and Michael Zyphur (Franklin and Zyphur, 2005) have expanded upon Revonsuo’s (2000) threat-simulation theory by adding the notion that dreams allow the imaginative rehearsal of social skills in embodied simulations of social situations. They argue that rehearsing social situations in dreams improves the ability to resolve interpersonal conflicts in waking life, and that in our ancestors this process increased access to resources in a social group such as mates and food.<sup>9</sup> In good agreement with the social simulation theories of dreaming there are also several models which suggest that dreams are a form of play that enable us to rehearse complex social abilities necessary for adaptation (Bulkeley, 2004).

There is considerable convergence among contemporary psychological and evolutionary models about dream functions and CMT: dreams are adaptive, their aim is to solve current emotional problems, and they are a useful resource to master traumas, rehearse abilities, gain insight, and find and test solutions. These aims are pursued through the creative integration of the problem/trauma-related contents and emotions with related memory traces and contents, the deassociation of painful affects from the elements connected to the problematic/traumatic situation, and/or through the embodied simulation, rehearsal, and testing of possible solutions and several abilities.

### **In Dreams We Find Evidence of a Higher (Unconscious) Mental Functioning and Insight Ability**

As we have seen, several studies and authors suggest that the mental activity going on during REM sleep and dreaming plays a key role in the intelligent information processing that inspires creativity and promotes problem solving and insight (Wamsley & Stickgold, 2010). In REM sleep dreaming, memories are fused and

<sup>8</sup> According to some authors, this REM-sleep overnight therapy mechanism breaks down in people suffering from posttraumatic stress disorder (PTSD), thereby failing to help them deal effectively with their trauma memories. According to the theory proposed by Walker (2017), a contributing mechanism underlying the PTSD is the excessively high levels of noradrenaline within the brain that blocks the ability of these patients from entering and maintaining normal REM-sleep dreaming. As a consequence, their brain at night cannot strip away the emotion from the trauma memory, since the stress chemical environment is too high.

<sup>9</sup> The data collected by Kahan and Claudatos (2016), Kahan and LaBerge (2011), and Kahan and Sullivan (2012) demonstrate how in dreams we perform many metacognitive activities.

blended together in abstract and highly novel ways, so that we may awake with a revised “mind wide web” that is capable of divining solutions to previously impenetrable problems. Walker, Liston, Hobson, and Stickgold (2002) found that dreamers’ problem-solving abilities are far greater when they emerged from REM sleep rich in dreams compared with problem-solving abilities showed by people awakened from NREM sleep or during daytime waking activity. Moreover, in the first case, solutions arrived more instantaneously and intuitively. The REM dreaming brain appears to shortcut obvious links and favors very distantly related concepts in order to quickly solve problems (Stickgold, Scott, Rittenhouse, & Hobson, 1999). During REM dreaming the dreamer takes pre-existing memories and, by flexibly interrelating them, builds novel connections between distantly related informational elements and thereby arrives at a completely novel answer to a previous unresolved question.

In a study on relational memory processing (Ellenbogen, Hu, Payne, Titone, & Walker, 2007), an experimenter taught participants a large variety of individual premises that were nested in a large chain of interconnectedness. Only those who had slept and obtained late-morning REM sleep, rich in dreaming, showed evidence of linking the memory elements together, allowing them to make the most distant associative leaps. But more than simply melding information together in creative ways, REM dreaming brain seems capable of creating abstract overarching knowledge and superordinate concepts out of disparate sets of information—the dreamer is able to extract rules, commonalities and “meaning” from memories (Stickgold & Walker, 2013).

The most striking empirical evidence of sleep-inspired insight came from a study conducted by Wagner, Gais, Haider, Verleger, and Born (2004). They taught subjects a tedious method of solving some mathematical problems. The subjects were not told that a much faster and easier means existed. After working on solving the problems during the day, only a few subjects were able to extract the embedded shortcut. Things were very different for those participants who had obtained a full night of sleep. Almost 60% had this epiphany. Although they didn’t assess the subjects’ dreams, the research summarized above suggests that the subjects continued working on solving the problems while sleeping and that their dream states likely facilitated finding solutions. In fact, some studies suggest that it is the content of one’s dreams, more than simply dreaming per se, or even sleeping, that determines problem-solving success. In a study conducted by Wamsley, Tucker, Payne, Benavides, and Stickgold (2010), for example, subjects were asked to navigate a maze using trial and error. After this training session, half of the participants went to sleep. Participants who slept and reported dreaming of elements of the maze, and themes clearly related to it, showed almost 10 times more improvement in their task performance upon awakening than those who slept just as much, and dreamed, but did not dream of maze-related experiences.

Taken together, the findings from these studies suggest that even though our conscious mind is asleep during the night, this is not true for our unconscious higher mental processes, which keep on working in order to help us find solutions to relevant problems (see also Bargh, 2017, Chapter 9 and Corballis, 2015, Chapter 7; for a good review of scientific discoveries and artistic inspirations favored by dream images, see Walker, 2017, Chapter 11).

## The Relevance of Safety in Dream Activity

As previously noted, CMT proposes that the production of dreams is regulated in accordance with the overarching aim to adapt to reality using the criteria of safety/danger. In his early work, Freud assumed that dreams are entirely regulated by the pleasure principle and primary process thought. However, Weiss (1986a) pointed out that in his later work (post-1920) Freud assumed that dreams are regulated to a certain extent by considerations of safety and danger. Indeed, in discussing the production of dreams Freud argues that the dreamer may become conscious of previously repressed impulses because while sleeping the power of motility is turned off, thus creating a greater sense of safety, which can allow the dreamer to gain access to previously repressed impulses without feeling endangered (see also Solms, 1997). Moreover, in 1920 Freud hypothesized that the aim of posttraumatic dreams is to master trauma, and that this was the first real exception to his theory of dreams as attempts to fulfill childhood repressed drives. Dreams aimed at mastering traumas are dreams which try to reestablish a sense of safety.

As we have seen, Hartmann (1995, 2010) gives to the dream a quasitherapeutic function insofar as it would enable the dreamer to make “connections in a safe place”; in other words, the dreamer can associate and integrate traumatic experiences with the rest of her/his life in order to facilitate psychological healing. This idea is substantially compatible with the model of dreaming proposed by Rosalind Cartwright (2010), which stresses how dreams aim at reestablishing the self-organization threatened by emotional “crises.” The model proposed by Milton Kramer (Moffitt et al., 1993) is completely centered on the idea that the dream function is to downregulate negative emotions that increase in the different REM phases of each night by a progressive sequential pattern in which a problem is stated thematically, worked on figuratively, and resolved subjectively.

In addition, Kramer’s model has directly influenced the hypotheses about dreams proposed by Fosshage (1997), who gives a central role to emotional regulation in dreaming. The emotional regulation function of dreaming is also a key feature in the SFSR model proposed by Walker (2017) and in the model proposed by Malinowski and Horton (2015). The task of addressing stressful situations by a strategy of avoidance and mastery is also at the core of the model of dreams developed by Stewart and Koulack (1993), and in a similar vein Levin and Nielsen (2009) argue that a critical task of dreams is the extinction of fear: less stress, less fear, more safety.

Finally, the evolutionary model proposed by Revonsuo (2000) gives to dreaming the evolutionary function of simulating threat and rehearsing possible strategies to deal with these threats in a virtual reality perceived as real but much safer.

## Conclusions

Weiss (1986a) argued that dreams can be understood as an expression of human unconscious HMF, are aimed at adaptation, are regulated by a safety/danger principle, and help the dreamer pursue goals through testing different policies aimed at dealing with emotionally unresolved concerns.

Even if we still do not know if dreams have a meaning or serve some adaptive function, there appears to be growing

consensus among empirical researchers that dreams are centered around the emotional concerns of the waking life of the dreamer (the continuity hypothesis; Bulkeley, 2017).

Moreover, based on our review, almost all the empirically based psychological and evolutionary models of dreams seem highly compatible with the core elements of the control-mastery model.

## 摘要

本文旨在根据控制-掌控理论(CMT)阐明梦的意义和功能,CMT是在过去四十年里由旧金山心理治疗研究小组(Gazzillo, 2016; Silberschatz, 2005; Weiss, 1993a; Weiss et al., 1986) 发展出来的一种认知-动力关系理论。CMT强调梦如何反映出一个人适应现实的努力;梦的制造是受到一个安全原则的制约,也是人的无意识的高级适应功能的表达。根据这个模型,梦代表我们的无意识试图找到解决情感相关问题的方法。在梦中,人们会考虑他们主要的关注点,尤其是那些他们无法仅靠意识思维来解决的问题,他们并会尝试发展和测试处理这些问题的计划方针。在向读者介绍了CMT的主要概念之后,我们将举一些临床例子来说明不同方面的CMT的梦的模型。最后,我们将描述一下最新开发出的梦的功能的模型的核心要素,以及基于对睡眠和梦的实证研究的意义,我们还将展示它们与CMT提出的假设具有实质的兼容性。

关键词: 梦, 控制-掌控理论, 适应, 情感关注, 政策

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