

## Mental Imagery in Psychoanalytic Treatment

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Mental imagery techniques may facilitate the therapeutic process by stimulating patients' insight into unconscious dynamics, by helping them uncover and master warded-off affect, and by enhancing the clinician's empathic contact and access to countertransference. The history of imagery techniques in the psychoanalytic movement and the effect of these techniques on the traditional psychoanalytic method are reviewed. A conceptual framework based on the theory of primary and secondary process suggests spontaneity, experiential scope, associative elaboration, and object impact as four dimensions for the clinical evaluation of imagery experience.

Mental images are sensory-perceptual experiences in the absence of environmental stimulation. Typically they refer to visualizations, the so-called "pictures in the mind's eye," although, technically, imagery also includes experiences in other sensory modalities, including auditory, tactile, kinesthetic, and olfactory sensations. Psychological research on imagery currently is flourishing, and over the past 20 years, imagery techniques have been developed in various forms of psychotherapy.

This article explores psychoanalytic concepts about imagery and the use of imagery techniques in psychoanalysis and psychoanalytic psychotherapy. Although dreams also are imagistic phenomena, they are not the focus of this article. The primary objective is to evaluate the contribution to the therapeutic process of techniques that work with images experienced during the therapy hour. In the first section of this article, I examine the historical background of imagery techniques. In the second section, I focus on the various theoretical and technical issues that have emerged in the literature—particularly those issues concerning how imagery methods affect the traditional psychoanalytic process. Finally, I propose a conceptual model for

understanding imagery phenomena and techniques that is based on the psychoanalytic theory of primary and secondary process.

## HISTORICAL BACKGROUND

### Freud's Early Work

Early in his pioneering studies of psychopathology Freud realized the importance of mental imagery. No doubt the structuralist zeitgeist at the turn of the century sensitized his theory to the role of imagery in mental functioning. But Freud's interpretation of imagery processes was decisively psychodynamic rather than structuralist, and his early work foreshadowed many practical and theoretical issues concerning imagery that emerged later in the history of the psychoanalytic movement.

The intrapsychic function of imagery was first explored by Freud and Breuer in *Studies on Hysteria* (Breuer & Freud, 1895). As a result of hypnotic induction, their hysterical patients experienced vivid memory images, sometimes almost hallucinatory in quality. Freud and Breuer believed these images corresponded to traumatic childhood experiences that had not been sufficiently assimilated into the intrapsychic system; they "*have been denied the normal wearing-away processes by means of abreaction and reproduction in states of uninhibited association*" (p. 11). When the patient verbally described and explored the imagery, its vividness would fade, as if the patient were "*getting rid of it by turning it into words*" (p. 280). Freud and Breuer believed that the dissipating of the image paralleled symptom alleviation. They maintained that if an entire image or one aspect of it refused banishment, if it obstinately remained before the patient's inward eye despite initial subjugation to verbal analysis, then some latent meaning had not been fully exposed and interpreted. "As soon as this has been done," they stated, "the picture vanishes, like a ghost that has been laid [to rest]" (pp. 280-281).

In his *Project for a Scientific Psychology* (1895), where Freud proposed a neurophysiological basis for thought and emotion, he described such vivid images as "untamed" memories that encapsulate highly charged affect. When a line of thought reaches such a memory, the sensory-perceptual experience of the "mnemic" image is triggered, accompanied by a feeling of displeasure and the inclination to discharge the affective content. Freud believed that the image and the affect stored in it are altered neither by the passage of time nor by the simple repetition of the image in consciousness. The image, once triggered, can only be tamed when it is subjected to and bound by the verbal evaluations of the ego.

In their work with hysterical patients, Breuer and Freud (1895) developed their "concentration" technique based on these ideas about the intrapsychic function of mental images. The method actually was derived from Bernheim

who demonstrated that memories of events during hypnotic trance, which usually are forgotten in the waking state, can be revived by a command and hand pressure to the forehead. Freud and Breuer used the technique to retrieve childhood memories pertaining to the origin of hysterical symptoms. They assumed their patients knew, at some level, about the genetic roots of their sickness, but that the associations leading to this material were blocked by their not wanting to remember. The concentration technique was designed to overcome this resistance by stimulating visual images; it was a "trick" (p. 278) for temporarily circumventing an ego which is ready for defense.

Once an image was retrieved, Freud encouraged patients to verbally explore its meaning. He instructed them to focus on the image until the last detail had been explained. If they claimed that they saw nothing, Freud dismissed this as an impossibility. He insisted that they had rejected the image, either because they deemed the memory irrelevant or were afraid to describe it, hoping that it could not be true. He told them that he was prepared to repeat the procedure as often as they liked, and that they would see the same image again and again.

In Warren's (1961) discussion of this technique, he described Freud as the "conquistador" (p. 504)—an insistent, authoritative figure pressing his way into unknown areas of mental life. Apparently, Freud found the role worthwhile. He was delighted with the method's success, commenting: "It has scarcely ever left me in the lurch" (Breuer & Freud, 1895, p. 111) and "To-day I can no longer do without it" (p. 270).

But there were complications. The image that appeared was not always the specific, warded-off memory that Freud expected. Sometimes it was an intermediate link in a chain of associations leading to the pathogenic material, a mediating image that pointed the way to the true source of the hysterical symptoms. Sometimes it seemed unrelated to what was being discussed in the analysis at the time, which surprised the patient. Freud interpreted these findings as evidence of an intelligence outside awareness that organizes psychic material and has a fixed plan for its return to consciousness. Also, as described earlier, the patients would sometimes disavow the image, or in their descriptions distort, rearrange, and filter it—which for Freud indicated a process of defense, a mental strategy for "turning a strong idea into a weak one, [for] robbing it of its affect" (Breuer & Freud, 1895, p. 280).

### The Abandonment of Imagery Techniques

Freud abandoned the concentration technique sometime before 1900. His reasons were never made clear. Kris (1950) suggested that it marked an intermediate stage in Freud's historically important transition from the hypnotic method to the method of free association. Correlated with this transition was an implicit shift in focus from visual to verbal processes. Although free association was first conducted with eyes closed (a remnant of the hypnotic

method), Freud later advised against this. By doing so, he suppressed the visual elements of free association in favor of verbal processes. In the hopes of completely freeing himself from the hypnotic method, Freud may have discarded the baby with the bathwater.

The de-emphasis of the visual elements in free association did not mean a complete abandonment of mental imagery in Freud's theory. *The Interpretation of Dreams* (1900) immediately followed the discarding of the concentration method. Freud's (1899) description of screen memories was essentially an account of how the interaction of intrapsychic defenses and genetic material can crystalize in the form of a confabulated memory image that is part disguise, part revelation. In the appendix to his paper on the unconscious, Freud (1915) presented a diagram illustrating the role of various types of imagery in the cognitive network linking object-associations and word-meanings. As late as 1923, he wrote:

We must not be led, in the interests of simplification perhaps, to forget the importance of optical mnemonic residues. . . or to deny that it is possible for thought-processes to become conscious through a reversion to visual residues, and that in many people this seems to be the favoured method. (p. 21)

Despite the implicit assumptions about the intrapsychic importance of imagery, Freud, after 1900, rarely mentioned the concentration technique or the use of imagery in the analytic process. The transition from hypnosis to free association, accompanied by the shift to verbal processes, pointed the evolution of psychoanalysis in a direction that precluded an emphasis on mental imagery. It was a shift in focus from altered states of consciousness to waking consciousness, from primary process to secondary process, from the simple abreaction of unconscious affect to the analysis of the complex intrapsychic processes that block, disguise, and convert that affect. The complications Freud encountered with the concentration technique predicted the necessity of this transition. Rather than attempting to extract genetic material directly by therapeutic "tricks," the analyst listened for the faint echoes of repressed conflicts that reverberated through the patient's free associations. Ultimately, the analysis of transference became the primary therapeutic objective, and to achieve this goal the ego functions of reason and rationality were heralded. Pursuing mental images, especially imaginative visualizations in the mind's eye, would have been considered resistance—a distraction from the systematic, rational exploration of the patient's transference reactions to the analyst. Even dream interpretation tended to focus on verbal associations to the dream elements. Consequently, between the World Wars, there were very few references to mental imagery in the psychoanalytic literature.

A wider historical perspective helps explain this transition. As Holt (1964) noted in his historical analysis, academic psychology in the early 1900s began to abandon structuralism and its emphasis on mental events. Prompted by

Watson's behaviorism, the study of images was regarded as unproductive, impractical, and unempirical. Instead, words and language, which appeared more amenable to objective, scientific investigation, became the focus of academic interest. A bias quickly settled in: Verbal linguistic processes connoted sensible rationality and thinking, whereas mental images suggested unrealistic, quixotic imaginings. Though psychoanalysis was a far cry from behaviorism, the general shift in science from images to words perhaps influenced the similar transition in psychoanalysis.

### The Rebirth of Imagery Techniques

After World War II the tide began to turn. As a result of Penfield's work on brain stimulation, memory research in cognitive psychology, and, ironically, behaviorism's creation of systematic desensitization, interest in mental imagery was revived. A parallel change occurred in psychoanalysis. Ferenczi (1950) proposed a "forced fantasy" procedure similar to the concentration method. Other analysts began to study how spontaneous images intruded into the patient's verbal free associations. Early reports of these phenomena (Kanzer, 1958; Kepecs, 1954; Lewin, 1955; Warren, 1961) seemed to struggle over whether images facilitated or hindered the analytic process: Were they important vehicles, like dreams, for exploring the unconscious, or were they a manifestation of resistance, a topographical regression to a primitive mode of psychic expression to evade the verbal connection to the analyst? Within the interpersonal school, Tauber and Green (1959) emphasized the communicative function of imagistic fantasies, while Sullivan (1956) seemed to ignore imagery in favor of analyzing interpersonal interactions. The courtship between psychoanalysis and the study of mental imagery was budding, though hesitantly and with some skepticism.

By comparison, European psychology had welcomed mental imagery with open arms. Distanced from and uninhibited by American scientific empiricism, the broadening of the psychodynamic movement in Europe included a flourishing of imagery theories and techniques, as exemplified in the work of Jung, Desoille, Assagioli, Fretigny, Virel, and Bachelard. Early articles in the United States (e.g., Jellinek, 1949) reflected these European styles, but it was not until the 1960s that the transplanting of imagery theories firmly took root, particularly in the influential works of Ahsen (1968, 1977), Leuner (1969, 1977), and Desoille (1965). What has followed has been an explosion of interest in mental imagery (see Klinger, 1980; Sheikh, 1983, 1984, 1985; Shorr, 1972, 1974; Shorr, Connella, Robin, & Sobel, 1979; Singer, 1966, 1971a, 1971b, 1974; Singer & Pope, 1978). Many of the new theories and techniques fell into the rather loose category of "psychodynamic" or "insight" therapies rather than into the mainstream of psychoanalytic thinking. The growing interest in imagery as a structured, directive method of altering intrapsychic processes and personality, sometimes without accom-

panying insight, deflected and held the imagery movement at the periphery of the psychoanalytic world.

But basic themes that surfaced again and again would bear directly on the psychoanalytic purpose, and, therefore, could not be ignored. A universally accepted premise underlying imagery techniques was that imagery is a special language of the unconscious, a link or way-station between the conscious and unconscious realms. The structure of the image, albeit disguised or symbolic, was conceptualized as a fully packed condensation of ideas and emotion. By working with images therapists claimed they could skirt defenses and gain more direct access to unconscious affective and ideational processes than by working strictly with verbal communications. For an increasing number of psychoanalytic clinicians, the potential gains seemed so great that they experimented with modifying traditional methods. The liberalization of psychoanalytic treatment over the past decade—including the introduction of “parameters” (Eissler, 1953), the search for short-term treatments, and the strategies based on self psychological and object relations theories—encouraged this exploration of imagery techniques.

### IMAGERY TECHNIQUES: THEORETICAL AND PRACTICAL ISSUES

Using imagery in psychoanalysis raises a variety of theoretical and technical issues about therapeutic change. In this section, I examine these issues in three contexts: the level of directiveness of various imagery techniques, the implications of these techniques for traditional psychoanalytic principles, and the application of imagery methods based on individual differences in imagery ability and psychopathological structure.

#### Level of Directiveness

There are a wide variety of imagery procedures based on psychodynamic tenets. These techniques fall into four general categories: (a) spontaneous image focus, (b) cued image associations, (c) imagistic free associations, and (d) structured imagery exercises. Given traditional psychoanalytic theory's adherence to the principle of a neutral, nondirective analyst, these techniques can be evaluated according to their *level of directiveness*: How actively they modify, structure, or guide the patient's stream of thought and experience.

At the lowest level of directiveness are methods that focus, sometimes subtly, on images that occur spontaneously in the therapeutic session. The assumption underlying this *spontaneous image focus* is that these images, like dreams, reveal a fruitful path to unconscious dynamics. For example, early analysts (Kanner, 1958; Kepecs, 1954; Lewin, 1955; Warren, 1961) worked with images that intruded into the patient's verbal free associations without being delib-

erately activated by the analyst. Because imagery is an internal experience that is sometimes overlooked by patients, or diluted by their verbalizations, the analyst must be sensitized to the cues that indicate images are occurring—for instance, periods of silence or interrupted verbalizations, often accompanied by upward eye movements and shifts to imagistic or metaphorical language. To draw out the image, the analyst may need to inquire whether patients have experienced a “picture” or “seen something” in their mind. The reclined body posture and mild sensory deprivation created by the use of the analytic couch increase the probability that these spontaneous images will occur (Singer, 1974).

At a higher level of directiveness, the analyst may deliberately influence or specifically instruct the patient to generate associations using imagery. A particular issue or conflict being analyzed at the time, or elements of dreams, may serve as the point of departure for these *cued image associations*. These associations can be used to deepen a previously attained insight, or, similar to Freud’s concentration technique and Kepecs’s (1954) work with intrapsychic “barriers,” they may be applied to bypass the defenses that block the patient at some point in the analytic process. However, in lieu of Freud’s conquistador style, the analyst may employ more subtle suggestions that patients, in response to the issue at hand, “imagine something” or “allow a picture to come to mind.” As compared to the traditional “What comes to mind?” the simple inquiry “What *images* come to mind?” may shift associations closer to unconscious ideation. Metaphorical and imagistic comments and interpretations by the analyst also may subtly prompt image associations. Therapists report that patients often are surprised and impressed by the relevance of the resulting image.

Obviously, there are many gradations in the level of directiveness for these cueing techniques, that is, in how actively the analyst stimulates and guides imagistic associations. Leuner (1969, 1977) used 10 standard scenes as cues, each designed to tap a distinct psychodynamic issue—for example, “climbing a mountain” to reveal conflicts about success and failure. Other analysts (Clark, 1925; Kubie, 1943) derived special methods for enhancing image associations, such as inducing hypnagogic states by relaxation and breathing techniques. Instructions to image, like the concentration method, simply may cue the patient to produce a single imagery scene, or, more in the tradition of verbal free association, they may encourage the patient to produce a continuous stream of visual ideation, usually with eyes closed. For example, Goldberger (1957) required his psychosomatic patients to visually associate to verbal cues pertaining to bodily sensations, aches and pains, motor actions, and pleasurable and unpleasurable affect such as rage, anxiety, depression, and happiness. By facilitating the stream of associations with occasional open-ended inquiries and interpreting the emerging images, Goldberger enabled patients to discharge repressed affect, thereby alleviating the psychosomatic symptoms.

Patients may be instructed to generate *imagistic free associations* without any specific cue for departure. Although this approach appears less directive due to the absence of an explicit cue, the method often requires strategies to retain the patient in the imagistic mode. An excellent example is Reyher's (1963, 1977, 1978) "emergent uncovering." Patients are asked to lean back, close their eyes, and report only images and accompanying feelings or physical sensations. Because imagery experiences are the primary focus of the therapy, the therapist's role is to gently but firmly encourage patients to continue imaging. If strong resistance arises, the therapist addresses it and then asks the patient to return to the imagery mode. Reyher emphasized that the therapist remains absolutely silent while the patient images, with the exception of occasional comments designed to enhance the imagery and clarify what patients are experiencing; or, when patients' associations seem unproductive, to help them focus their imagery on a dynamically meaningful area. He claimed that although the initial images may be vague, trivial, or devoid of affect, the continued pursuit of the visual stream leads to extremely vivid fantasies dominated by primary process and constructed by a process comparable to dreamwork—ideation that in other contexts would be labeled psychotic. This imagery may trigger the release of repressed material with intense abreactions and regressive behavior. Typically, the therapist allows these reactions to run their course without interfering or providing reassurance. Reyher stated that the patient's experience can be so clear and compelling that interpretations by the therapist are often unnecessary, though the therapist may support the patient's integrative activities. Similar free association techniques have been suggested by Leuner (1969, 1977) and Jellinek (1949).

At the highest level of directiveness are *structured imagery exercises* that are intended to therapeutically correct, rather than simply uncover, intrapsychic dynamics (Ahsen, 1968; Desoille, 1965; Leuner, 1969, 1977; Shorr, 1972, 1974; Singer, 1971a, 1971b, 1974). Most recently, from a decisively psychoanalytic perspective, Silverman (1987) proposed imagery as an aid in working through unconscious conflicts. Utilizing the principles of implosive therapy (Stampfl & Levis, 1967), Silverman suggested that patients, with the assistance of the analyst, can create and rehearse an emotionally arousing imagery scene that pertains to a critical psychodynamic issue uncovered in the course of the treatment (e.g., primitive wishes related to oral incorporation, incest, or patricide). The assumption is that insight into unconscious dynamics, as achieved by traditional techniques, is not always sufficient for symptom alleviation and analytic progress. By repeating the imagery scenes—both during and outside the therapy hour—the patient accesses and masters previously warded-off affect that is associated with unconscious conflicts. Silverman emphasized that a crucial "dosage factor" mandates that the imagery be repeated in order to master it. In addition to the structured exercises, he also suggested techniques at a lower level of directiveness which immerse patients into affective imagery—such as cued imagery associations that the analyst vivifies

with the comment "Could you let it continue and get even worse?" and imagistic interpretations that encapsulate unconscious conflict in a lengthy, affectively expressed, and richly described scene. Although insight per se is not the aim of these techniques, Silverman claimed, they can lead to insights when patients discover new leads into unconscious dynamics while immersing themselves in their imagery.

### Implications for Psychoanalytic Treatment

We must carefully examine the criticisms about how imagery techniques might affect traditional psychoanalytic treatment, especially when such techniques are more directive attempts to uncover and influence unconscious processes. These techniques should be evaluated in the context of the fundamental principles of psychoanalytic therapy, including the lifting of repression, the analysis of defenses and resistance, and transference and countertransference.

The frequently cited rationale for imagery techniques is that they efficiently tap and release ward-off affect. This raises an important question: Would the direct access and discharge of affect by such techniques be a reversion to Freud's abreactive method, which he eventually dismissed as unsuccessful? In defense of his use of implosive imagery in psychoanalytic treatment, Silverman (1987) stated that Freud's early work with the abreactive method assumed the pathogenic importance of ward-off traumatic events, but had not yet fully recognized the role of unconscious wishes in psychopathology. Though Silverman's technique may be used to implode childhood trauma, its primary goal is uncovering the ward-off affects associated with unconscious wishes and fears. The same is true for many imagery techniques. Silverman also suggested that Freud's abreactive method may have been unsuccessful because it produced a "one-shot" implosion instead of the necessary repetition of the image to attain the crucial dosage necessary for mastery.

An important related issue is whether steering imagery into the direct access of affect would neglect the analysis of defenses and resistance as emphasized in ego psychology. Though an overly eager pursuit of images may result in this error, imagery techniques are not inherently incompatible with ego-analytic methods. Using them does not mean defensive structures are necessarily ignored, just as the use of verbal free association to tap unconscious derivatives need not negate the analysis of defenses. As discussed earlier, Freud was the first to recognize that patients resisted, impugned, and distorted the results of the concentration method. Reyher (1963, 1977, 1978) also described how the obvious attempts of patients to avoid or dispute emergent uncovering magnified their defenses and resistance for analytic inspection. Of course, any resistance to an imagery technique can and generally should be discussed between analyst and patient. The appearance of defenses and resistance also can serve as cues for generating association imagery to unravel their meaning. For example, Kepecs (1954) asked patients to create images in response

to mental states they described as blankness, a void, or by the expression "There is nothing on my mind." The image association to "blankness" or "nothing" was often a blurred psychic field that contained visual memories and associations that had lost their outlines and distinctiveness—such as memories of the breast which served to exclude frustrating reality, or the door which shut out the child from the anxiety-provoking primal scene. These intrapsychic fields or barriers function internally as they once functioned externally, to exclude painful or conflicted ideation from consciousness. Also, analyzing defenses and resistance after, rather than before, the discovery of warded-off affect may be more effective because the patient will be less likely to experience the interpretation as a criticism or narcissistic blow (Silverman, 1987).

Some analysts have suggested that image formation itself may be a form of resistance (Deri, 1984; Goldberger, 1957; Kanzer, 1958; Lewin, 1955; Warren, 1961). Because spontaneous images often occur at times of verbal blockage, they may be viewed as a shift to a primitive, more regressive mode of thinking that evades a mature form of communication. Goldberger (1957, p. 132) stated that they are "plastic visualizations" of what is ultimately verbal thought. Kanzer (1958) suggested that images are "secret islands of resistance" (p. 466) that simultaneously evade and fulfill the demands of free association; they are innocuous end-products resulting from the transformation and discharge of negatively loaded impulses, and, similar to symptoms, serve both to gratify and conceal the impulse. These explanations often are based on Freud's description of the infant's visualization of a memory associated with a state of satiation (e.g., the breast) in order to achieve partial gratification of an impulse.

These criticisms assume the primacy and developmental superiority of verbal processes—which is a historically rooted bias that has been challenged by research in cognitive psychology (Paivio, 1971). If images are analogous to symptoms, then analyzing their meaning can clarify unconscious dynamics. Only the undetected, unanalyzed image would function as a resistance to the therapeutic process. Whether spontaneous images are a form of resistance or a special language of the unconscious depends on how (or if) the therapist works with them. Singer (1974) also noted that the interpersonal theorists, rejecting the classic concept of daydreams as wish fulfillment, believed that patients' fantasy images were rehearsals for action (Sullivan, 1956) or efforts to communicate to the therapist ideas about their self-concept (Tauber & Green, 1959).

One could raise similar questions about the potentially detrimental effects of imagery techniques on transference. One may claim that verbalizations are object-directed, whereas images are private, narcissistic experiences. Therefore, spontaneous images may sever the verbal connection to the analyst, thus dampening the emergence of object transference. Warren (1961), in fact, suggested that spontaneous images may serve the economic function of escap-

ing transference by discharging impulses which the patient fears to express verbally. In addition, introducing more directive imagery techniques into an ongoing analysis may stimulate unconscious wishes and fantasies that contaminate the interpersonal field (e.g., ideas of being seduced, impregnated, sexually violated, or privileged with a special treatment). Generally speaking, is there a danger that the use of imagery methods, especially those that are very directive, might damage the posture of analytic neutrality that catalyzes transference?

No doubt, a single-minded focus on imagery could provide an escape for both patient and analyst from their relationship. However, using imagery techniques need not thwart the development and analysis of transference, and in many circumstances can facilitate it. Similar to spontaneous images that occur in service of resistance, only the undetected, unanalyzed image would interfere with the exploration of transference, whereas unshrouding that image could enhance it. Although therapists sometimes guide the stream of cued and free imagery associations, some clinicians (e.g., Leuner, 1969; Reyher, 1963) suggested that these techniques are most effective when the analyst remains silent and nondirective in accordance with the tradition of analytic neutrality. Being deprived of visual and verbal cues from the therapist during these eyes-closed imagery associations may stimulate unconscious, object-directed affect that manifests itself in the imagistic stream. Imagery actually may be an important cognitive vehicle for the expression of transference because it efficiently depicts self and object relations (Horowitz, 1972b) and organized sets of anticipatory fantasies about the nature of relationships (Singer, 1974). The patient's reactions to the introduction of an imagery technique will often highlight transference (Reyher, 1963), thus making it more accessible for analysis. These reactions, including the genetic roots of the unconscious fantasies about the technique, become "grist for the mill," and their meaning can be explored further by imagery associations. The most problematic scenario—the introduction of an imagery technique into ongoing and otherwise traditional analytic work—may require a strong therapeutic alliance. For the purpose of retrieving genetic material, especially preverbal memories that are not readily accessed by words, combining work with imagery and transference can be synergistically powerful. Clark (1925) believed that narcissistic patients may require imagery techniques to prompt childhood memories that otherwise did not surface in the transference relationship.

The analyst's own imagery also can be used to enrich the therapeutic process. Conscious attempts to visualize the patient's experience can be a constructive, creative method for establishing empathic contact, to vicariously introspect with the patient to collect and comprehend analytic data (Beres & Arlow, 1974; Schafer, 1959).

In a sense, we dream along with our patients, supplying at first data from our own store of images in order to objectify the patient's memory into some sort

of picture. We then furnish the picture to the analysand who responds with further memories, associations, and fantasies . . . We stimulate him to respond with a picture of his own. (Arlow, 1969, p. 49)

However, the analyst's spontaneous images in response to the patient's associations may contain unexpected and sometimes hidden elements of countertransference which disrupt empathy (Ross & Kapp, 1962). Kern (1978) described how the almost unnoticed, backdrop details of his images contained transferred fragments of conflictual early object relations and projected self-representations. Similar to screen memories, the image served a dual function: Its overt appearance enlightened him in his analytic work with his patient, whereas the seemingly inconsequential details in the "woodwork" of the image protected the repression of genetic material. Kern's self-analysis of these image fragments helped him overcome the countertransferential distortions and restore empathy. In addition to analyzing images which arise spontaneously during the therapeutic session, analysts could use cued association imagery to detect and explore any countertransference issue.

### Patient Characteristics

If imagery techniques are used as an adjunct to traditional psychoanalytic methods, as a parameter in Eisler's (1953) sense, the analyst must assess their suitability according to the characteristics of the patient. We cannot assume that these techniques would have an equivalent effect on everyone, or that for all patients they would be a significant improvement on traditional methods. The level of psychopathology, symptom formation, and character structure all may be relevant variables. Imagery ability also may be important.

Research evidence over the past 80 years clearly indicates significant individual differences in the ability to experience, utilize, and control imagery during states of normal and altered consciousness (Betts, 1909; Galton, 1919; Paivio, 1971; Singer, 1974). Some people are fluent, vivid imagers; others experience weak, fleeting imagery; some are devoid of these internal experiences and even skeptical about their existence. Richardson (1969) endorsed the distinction between "visualizers" who frequently rely on imagery to process experiences in an idiosyncratic, personal, and subjective way, and "verbalizers" who have weak imagery and instead process information using language structures that are more abstract and socially universal in meaning. Based on Paivio's (1971) theory of imagery and verbal processes as separate cognitive systems, it makes conceptual sense to postulate individual differences in the extent to which these systems are utilized.

Unfortunately, how these individual differences in imagery ability relate to psychopathological types and the psychotherapeutic process has not been studied systematically. The literature, however, is peppered with observations and hypotheses about this relationship. Schizoids often have a rich fantasy

life, but their "split ego" causes this imagery to be experienced from a detached, impersonal stance (Guntrip, 1969). Images in lieu of verbalization occur in patients having pronounced sadomasochistic character structures, who are highly narcissistic, experience repetitive humiliation fantasies, and express a great need for love and approval (Warren, 1961). Acting out in hysterical patients may take the form of frozen, framed images that are exhibited as proof of their claims about parents and significant others (Deri, 1984), while introverted patients' fantasy images become increasingly elaborate over time as compared to the original childhood fantasy (Sullivan, 1956). Whereas psychosomatic patients may have a lack of fantasy production, obsessional patients may experience hostile impulses that surface in consciousness as images stripped of affect and denied or undone by verbalizations (Horowitz, 1967). Shorr (1974) suggested that obsessive-compulsive patients can be helped to avoid meandering and repetitious verbalizations by attending to imagery, and Reyher (1963) stated that patients who masquerade under a false pretense of strength and motivation are rapidly identified by their anxious resistance to his emergent uncovering technique.

Although many therapists who work with imagery claim that even poor imagers can improve their ability with training and practice, such individual differences should not be ignored. How the patient reacts to an imagery technique and the characteristics of the imagery produced (vividness, complexity, symbolization, etc.) all may be important diagnostic variables. Leuner (1969) analyzed patients' responses to the 10 standard imagery cues (e.g., "climbing a mountain") in a process analogous to projective testing. Horowitz (1970, 1972b) suggested that early in therapy analysts should inquire about the patient's cognitive style so that they can think, talk, and make interpretations concordant with how the patient visually and lexically processes information.

We could make some good theoretical guesses about the meaning of low and high imagery ability. Poor imagers may be blocked from unconscious ideation by rigid defenses, whereas fluent, vivid imagers may be more adept at exploring unconscious processes and tapping warded-off affect. Research evidence suggests that high imagers free associating to cue words experience greater affect than low imagers (Suler, 1985). Individuals who report high levels of imagery at sleep onset and during relaxed wakefulness also tend to show greater cognitive flexibility and fewer signs of emotional disturbance (Foulkes & Fleisher, 1975; Foulkes, Spear, & Symonds, 1966; Vogel, Foulkes, & Trossman, 1966). However, as discussed earlier, patients who dwell on their imagery may be resisting the analytic process or attempting to escape contact with the analyst. Excessively intense and uncontrolled imagery—hallucinations being the most extreme example—may indicate ego defect or immaturity. The ability to control and objectively evaluate imagery may be a more important variable revealing psychopathological level than simply the clarity of the image. Imagery vividness, affective intensity, and controllabil-

ity can be conceptualized as continua, with both the low and high poles associated with psychopathology.

Generally speaking, the literature suggests that imagery techniques are most applicable to therapy with neurotic patients where the primary goal is to break through defenses. That imagery techniques rapidly uncover unconscious material would seem to contraindicate their use for more pathological conditions. However, some reports suggest that the immersion into affect-laden imagery may be therapeutic for a wide range of psychopathology (Stampfl & Levis, 1967). Because object and self-representations are encompassed efficiently in the holistic fabric of the image (Horowitz, 1972b), diagnostic and therapeutic work with imagery may be productive for patients with disturbances in object relations. The powerful empathic contact established by imagistic interpretations and concordant imagery experiences between patient and analyst may facilitate the creation of a symbiotic tie and holding environment for reconstituting defects in ego functions and the sense of self (Suler, in press). When empathically guided by the therapist, imagistic interpretations and structured exercises that immerse the patient in strong affect may provide a vehicle for the patient to experience and internalize the therapist's ego functions, especially the ability to tolerate and master warded-off affect.

### A CONCEPTUAL MODEL

In this section, I propose a model for understanding the role of mental imagery in psychodynamic processes and the issues about its use as a therapeutic technique. Its primary focus, much in the tradition of dream theory, is the conceptualization of imagery in terms of the interaction between primary and secondary process. Other comprehensive theories, most notably those of Horowitz (1967, 1968, 1970, 1972a, 1972b) and Singer (1966, 1971a, 1971b, 1974) are consistent with this model. A strength of the conceptual framework proposed here is its rooting in the rich psychoanalytic literature about mental functions and its congruity with current theory and research in cognitive, clinical, and physiological psychology.

The theory of primary and secondary process originated with Freud (1895, 1900, 1911) and was later modified and expanded (Hilgard, 1962; Holt, 1967; Rapaport, 1950, 1951). According to Freud, primary process is unconscious, more primitive than secondary process, and operates in accordance with the pleasure principle; its aim is the release of drive tension through the manipulation of large quantities of psychic energy. Rapaport (1950) in fact described it as a drive organization of memory because all objects and experiences are ordered according to their relationship to some intrapsychic tension generated by the drives. Therefore, primary process may be conceptualized as the mental function responsible for the regulation of unconscious wishes, needs, and affect. In addition to this affect-charged component—traditionally called *con-*

*tent* primary process—there are also operations designated as *formal* primary process. Ideas are freely mobile; memories and experiences are fluently interchangeable. This results in the various cognitive operations assumed under formal primary process, including the symbolization of one object by another, the whole by the part or the part by the whole; the displacement of affect from one object to another; the condensation of affects or meanings into one symbol; and loose associations and deviant forms of reasoning typical of autistic logic.

Secondary process thinking is a conceptual organization of memory. Ideas and experiences are interrelated independently of their relationship to subjective wishes and emotional states. This alternate memory structure has its origin in early development when the reality principle supplants the pleasure principle in guiding behavior and thinking becomes logical, practical, and realistic. Affect is controlled and restricted. Ideas are more restrained, differentiated.

The traditional ideas about the developmental primitivity of primary process as compared to secondary process have been challenged (Holt, 1967; Noy, 1969). A distinction can be made between unconscious content primary process consisting of repressed affects and ideas locked into an infantile pattern of organization, and other unconscious functions, including formal primary process, that evolve over time. Primary process may not be a primitive or infantile mode of thought that is gradually replaced by secondary process, but may, like secondary process, change and develop in response to the infant's need to organize its world. The critical difference is that primary process integrates all perceptual input and memories around subjective criteria because they are assigned meaning according to their relation to the states of need, wishes, and affect that constitute the sense of self. Noy suggested that primary process assimilates experience into "self-nuclei" organization units that may contradict reality, but maintain the sense of self-identity and self-continuity in the face of an ever-changing environment. Primary process, therefore, can be characterized as an egocentric or narcissistic organizational mode that regulates self and object representations and plays an important synthetic function in the development of identity.

The psychoanalytic theory of primary and secondary process as the two basic modes of mental functioning corresponds to theories in cognitive psychology, most notably Paivio's (1971) dual coding theory, which describe mental imagery and verbal processes as the two fundamental cognitive systems for encoding experience and processing information. Whereas primary process expresses itself more readily in the form of imagery, as indicated in dream theory (Freud, 1900), secondary process expresses itself more easily in language. Imagery is often unrealistic, symbolic, and affect-laden, reflecting the influence of formal and content primary process; verbal processes involve more abstract encodings and more efficiently communicate ideas to others, which reflect the conceptual and reality-oriented qualities of secondary pro-

cess. Whereas the verbal system manipulates representations in a linear sequence, the imagery system involves holistic constructions of information that concurrently depict the relations among objects (Horowitz, 1972b), thus making it a more efficient system for expressing the primary process function of organizing self and object representations and creating the subjective reality of self-identity. Imagery's holistic, concurrent activation of the sensory modalities (auditory, tactile, kinesthetic, as well as visual) provides the vehicle for the expression of the repressed affect encompassed by content primary process. The correspondence of primary and secondary process to imagery and verbal processes is also supported by research on hemispheric cerebral lateralization (Galen, 1974). The left hemisphere, which contains the speech and language centers, tends to be more analytic and logical in its functions, more oriented towards problem-solving through the linear manipulation of abstractions, and, therefore, more rooted in secondary process. The right hemisphere operates more on a gestalt, nonlinear principle: information is processed by multiple converging determinants and represented in the nonverbal, sensory form of mental images—it is the seat of primary process.

Theory and research on cognition and psychophysiology strongly corroborate the idea that imagery is intimately linked to formal and content primary process. For example, Foulkes and his colleagues (Foulkes & Fleisher, 1975; Foulkes, Spear, & Symonds, 1966; Vogel, Foulkes, & Trossman, 1966) demonstrated that during relaxed wakefulness and at sleep onset, imagery readily taps ideation that is regressive, narcissistic, and at times hallucinatory. Because imagery involves a neural reactivation of former sensory, perceptual, and somatovisceral patterns in the absence of environmental stimuli (Bugelski, 1970; Hebb, 1968; Lang, 1978), it also plays an important role in the arousal and organizing of emotion. Psychophysiological studies have demonstrated the similarity in physiological responses during the actual experiencing of stressful stimuli and during imaging of those stimuli (Craig, 1968; Grossberg & Wilson, 1968). In an experiment involving emergent uncovering, Reyher and Smeltzer (1968) asked subjects in one condition to free associate to conflict-related words using mental imagery and in a control condition to free associate using verbal responses. Electrodermal activity recorded during the free associations and objective scorings of the response protocols revealed higher physiological arousal and more direct expression of drive-related primary process in the imagery condition than in the verbal condition. A similar experiment by Suler (1985) confirmed some of these results.

Of course it would be oversimplifying to exclusively identify imagery with primary process and verbal responses with secondary process. Images may serve secondary process, as in problem solving, and primary process may appear in language, as in poetry. Hilgard (1962) and Rapaport (1957) suggested that primary and secondary process are best conceptualized as ideal types that never exist in pure form, and that various cognitive processes consist of different fusions of primary and secondary process characteristics. Similar

to dreams, imagery is heavily influenced by primary process but is structured or modified to some extent by the logical and reality-oriented demands of secondary process. These ideas are consistent with cognitive research that reveals imagery as the product of the interaction between "molecular" processes, which are endowed with irreducible sensory and affective qualities carried by analogue structures, and "molar" processes, which involve image elaboration and appraisal mechanisms on a more conscious level (Anderson, 1978; Kosslyn & Swartz, 1977; Strosahl & Ascough, 1981). Although imagery sometimes is described simply as pictures before the mind's eye, its structure is the culmination of complex interactions between primary and secondary process. We may call these interactions *imagework*.

The successful application of imagery techniques in psychoanalytic treatment can be conceptualized as a regression in service of the ego, also known as adaptive regression (Kris, 1952; Schafer, 1958). Imaging facilitates what Kris called the "inspirational" phase of this regression in which the barriers that restrain unconscious ideation are withdrawn, resulting in the surfacing of the affects, symbols, and fantasies of primary process. However, this regression of the ego is, by itself, not sufficient. During the "elaborational" phase the barrier against unconscious ideation is restored to its former position of strength. The reality principle is reinstated to subject the accessed primary process to the rational scrutiny, evaluation, and synthesis of secondary process, a task accomplished with the aid of verbal description and exploration. In this way, primary process material can be meaningfully assimilated for therapeutic gain. In their comprehensive review of clinical research, Strosahl and Ascough (1981) concluded that the uniting of verbal and imagery operations is essential for therapeutic effectiveness. The processes underlying techniques that successfully integrate the imagery and verbal systems, thereby coordinating primary and secondary process, right and left hemisphere activities, are similar to the processes underlying creativity (Suler, 1980).

Although some therapists emphasize the experience of affective imagery and underplay the importance of its verbalization, all imagery procedures implicitly or explicitly shape and give meaning to that experience through secondary process. Freud identified this issue when he noted that just repeating an image in consciousness did not seem to be therapeutically effective; taming it required verbal exploration. With many contemporary imagery methods, in order simply to describe imagery to the therapist, the patient must necessarily filter the images through the constructs of the verbal system. Structured exercises that tap and release affect without requiring verbal discussion often are designed by or with therapists, and therefore are created with the aid of their secondary process. The shaping and assimilation of the image by the patient's secondary process, including verbal operations, may also occur on a "silent" level. Freud (1923) believed that attaching words to "thing-representations" raised them to the level of consciousness; but it is also possible that verbal operations and secondary process in general operate preconsciously.

Of course, many factors can enhance or obstruct the harmonizing of primary and secondary process in adaptive regression. Horowitz (1972b) described defense mechanisms in terms of their functions at the boundary between the imagery and verbal systems where they alter or block the communication of information; and he defined working-through as the cross-translation of information between the systems without censorship or distortion. Individual differences in imagery ability, as discussed earlier, can be viewed as personality variables that hinder, facilitate, or exaggerate the regression to primary process. Flexible defenses, interpersonal trust, a tolerance of cognitive complexity, and openness to experience will enhance adaptive regression; while rigid defenses, conflicts about passivity and feminine receptiveness, and a fear of a loss of control will dampen it (Schafer, 1958). The unregulated submergence into primary process imagery, without adequate secondary process control and appraisal, may uncover highly bizarre and affect-charged material without therapeutic gain. In the psychoanalytic context, the therapist's role is to overcome these difficulties by structuring and regulating the adaptive regression. By assessing the patient's level of psychopathology, maintaining empathic contact via concordant imagery experiences, and pacing their own adaptive regressions, therapists can balance the patient's integration of primary and secondary process.

### Imagery Dimensions

There are wide variations in the characteristics of imagery phenomena, and several topologies have been proposed (e.g., Holt, 1967; Horowitz, 1967; Richardson, 1969). By conceptualizing imagery according to the principles of primary and secondary process, I suggest four dimensions that reflect the underlying psychodynamics of imagework and can serve as diagnostic guidelines for clinical practice. These dimensions are spontaneity, experiential scope, associative elaboration, and object impact.

**Spontaneity.** All images vary in the degree to which they unexpectedly intrude into consciousness, are repetitious, and can be consciously controlled. Research in cognitive psychology has emphasized controllability as one of the most important features of imagery (Gordon, 1949; Richardson, 1969). The greater the spontaneity of the image, the more forceful the unconscious emotional conflict that produced it. The intensity of the need to express and master this conflict reflects the *affective imperative* of the underlying content primary process. Horowitz (1972a) described these phenomena as "unbidden" images that are representations of traumatic experiences which have not been worked through. His experimental research (Horowitz, 1969; Horowitz & Becker, 1972) suggested that these images, similar to Freud's untamed memories, spontaneously and repetitively intrude into consciousness as a form of repetition compulsion. Their etched features remain fixed for

days, weeks, or even years. In one study (Horowitz, 1969), subjects who viewed an emotionally neutral film experienced few images afterwards, whereas subjects who viewed an anthropological film about circumcision rituals later experienced intrusive images that corresponded to the affectively intense scenes in the film. That these images became less frequent over a 2 week follow-up indicated that the affect was being mastered. In psychopathology, the mechanism of repression may lock traumatic experiences as content primary process in the imagery system without being sufficiently assimilated by verbal, secondary process functions. However, the affective imperative of spontaneous images may also reflect unconscious fantasy as well as traumatic experience. The structured imagery exercises that immerse patients into emotionally charged imagery are designed to tap this affect.

*Experiential scope.* Images are the simultaneous activation of cognitive and physiological patterns, in their most intense form creating a lifelike experience consisting of visual, auditory, tactile, olfactory, and kinesthetic components. Yet not all images are so robust: Some lack sensory clarity, some are not accompanied by physiological changes, some are devoid of affect. Omissions in the scope of the imagery experience, including the restriction of formal and content primary process manifestations, reflect the influence of defense mechanisms and the reality-oriented demands of secondary process. As in dreams, what is missing or vague indicates censorship at the point most vulnerable to the exposure of unconscious material. Signal anxiety triggered by the threatening aspects of an image may serve as cognitive noise that in turn disrupts the image's integrity. Research evidence suggests that the anxiety which disrupts the imaging of stimuli related to one's fears cannot always be detected by self-report and conventional psychophysiological measures (Suler & Katkin, 1988). When imagery is experienced as intensely lifelike, as if the events were actually occurring, the observing ego and reality demands of secondary process have relinquished control to the subjective organization of primary process. If adequately assimilated by secondary process, these robust images may be powerful therapeutic events. Grossly impaired appraisal of these images may culminate in hallucinations.

*Associative elaboration.* Images vary in the extent to which they are an imaginative fabrication or the recollection of a specific past event. Richardson (1969), in fact, made a distinction between imagination and memory images. However, all imagery, including imaginative fantasy, synthesizes elements derived from specific, though perhaps separate, memory traces (Bugelski, 1970). The more unusual, imaginative, or fantastic the image, the more formal primary process functions of symbolization, condensation, and displacement have sorted and juggled the past percepts into a new image structure. Content primary process encapsulating trauma may emerge as pure memory images, as in Freud's concentration method; warded-off affect stemming from

unconscious fantasy tend to occur as imaginative images, as in implosive techniques. More often, imagework produces a complex combination of memory and imagination, primary and secondary process, revelation and defense. Screen memories (Freud, 1899) are an excellent example of imagery that is a compromise amalgamation of displaced memories and fantasy. Some theorists might claim that pure remembrances do not exist at all: Every memory is synthesized according to the self-organizing principles of primary process and the reality demands of secondary process. Any image that clearly leans in the direction of imaginative fabrication will require more interpretative work to unravel the multiple meanings and affects infused into it by primary process.

*Object impact.* The images experienced and described by the patient will vary in their capacity to elicit corresponding images in the therapist. By evaluating the therapist's imagery using the three aforementioned dimensions, the impact of the patient's imagery can be determined. When the therapist experiences spontaneous, robust images, the connection to the patient's experience, including unconscious links, may be strong. When the therapist must struggle to form an image or experiences imagery that is limited in scope, the connection may be restricted, perhaps due to defensive processes within the patient. The degree of concordance between the therapist's and patient's imagery—the extent to which the therapist's imagistic experiences accurately correspond to those of the patient—also must be assessed to determine possible areas of distorted empathic contact (Suler, in press). The therapist's inability to image, the sensory and affective qualities of the imagery, and its associative elaboration all may reflect countertransferential processes.

## CONCLUSION

Although mental imagery techniques have been integrated successfully into many forms of psychotherapy, their application in psychoanalytic treatment requires further investigation. In the history of psychoanalysis the introduction of any new procedure has raised questions about the essence of psychoanalytic treatment and the theory of psychopathology. Eissler's (1953) classic article on parameters provided guidelines for introducing noninterpretive interventions. Consider imagery techniques in light of these guidelines: Is their use contingent on clear indications that interpretative interventions are not sufficient? Are they restricted to the "unavoidable minimum"? Can their application lead to their own elimination? The less than clearly affirmative replies to these questions may lead some clinicians to doubt the acceptability of imagery techniques. The level of directiveness of any particular imagery procedure is one factor that must be evaluated to clarify its impact on the psychoanalytic process, especially the analysis of transference. From

a historical perspective, an emphasis on imagery may indeed reflect a shift in balance back towards primary process and hypnotic consciousness—a shift some theorists (e.g., Lewin, 1955) might endorse.

Some issues about imagery strike at the heart of contemporary debates about the role of insight in the psychoanalytic process. Many imagery techniques are used to facilitate the patient's access to and understanding of unconscious material. But for some techniques this is not the primary objective. Procedures that immerse patients in affective imagery may imply that the discharge of warded-off affect is therapeutic in itself. Some clinicians (e.g., Jellinek, 1949) have suggested that imagery methods, rather than relying on insight, create intrapsychic change on a symbolic level. Also, the restoration of defects in self and identity that transpire by empathic imagery contact between patient and therapist may be therapeutic gains achieved outside the effects of insight.

The conceptual model proposed earlier suggests that primary and secondary process interactions can help clarify imagery phenomena and the successful application of imagery techniques. However, several issues require further investigation. What role do insight and conscious processes in general play during imagework and the application of imagery techniques? What is the therapeutic function of overt (spoken) and covert (internal) verbal operations in the secondary processing of imagery? How do primary and secondary process functions vary according to types of psychopathology and individual differences in imagery experiences? An answer to these questions and an evaluation of the effectiveness of imagery techniques, requires a conceptual model that can be supported by empirical research within the psychoanalytic community and from kin disciplines in psychology.

### ACKNOWLEDGMENT

My thanks to Lloyd Silverman and Joseph Masling for their help in preparing this article.

### REFERENCES

- Ahsen, A. (1968). *Basic concepts in eidetic psychotherapy*. New York: Brandon.
- Ahsen, A. (1977). *Psyche: Self-analytic consciousness*. New York: Brandon.
- Anderson, J. (1978). Arguments concerning representations for mental imagery. *Psychological Review*, 85, 249–277.
- Arlow, J. (1969). Fantasy, memory, and reality testing. *Psychoanalytic Quarterly*, 38, 28–51.
- Beres, D., & Arlow, J. (1974). Fantasy and identification in empathy. *Psychoanalytic Quarterly*, 43, 26–50.
- Betts, G. H. (1909). *The distributions and functions of mental imagery*. New York: Columbia University Teachers College Press.

- Breuer, J., & Freud, S. (1895). Studies on hysteria. *S.E.*, 2.
- Bugelski, B. R. (1970). Words and images and things. *American Psychologist*, 25, 1002-1012.
- Clark, P. (1925). The phantasy method of analyzing narcissistic neurosis. *Psychoanalytic Review*, 13, 225-232.
- Craig, K. D. (1968). Physiological arousal as a function of imagined, vicarious and direct stress experiences. *Journal of Abnormal Psychology*, 73, 513-520.
- Deri, S. K. (1984). Acting out and symbolization. In S. Tuttmann, C. Kaye, & M. Zimmerman (Eds.), *Object and self: A developmental approach* (pp. 179-190). New York: International Universities Press.
- Desoille, R. (1965). *The directed daydream*. New York: Psychosynthesis Research Foundation.
- Eissler, K. R. (1953). The effect of the structure of the ego on psychoanalytic technique. *Journal of the American Psychoanalytic Association*, 1, 104-143.
- Ferenczi, S. (1950). *Further contributions to the theory and practice of psychoanalysis*. New York: Basic Books.
- Foulkes, D., & Fleisher, S. (1975). Mental activity in relaxed wakefulness. *Journal of Abnormal Psychology*, 84, 66-75.
- Foulkes, D., Spear, D. S., & Symonds, J. D. (1966). Individual differences in mental activity at sleep onset. *Journal of Abnormal Psychology*, 71, 280-286.
- Freud, S. (1895). Project for a scientific psychology. *S.E.*, 1, 283-397.
- Freud, S. (1899). Screen memories. *S.E.*, 3, 301-322.
- Freud, S. (1900). The interpretation of dreams. *S.E.*, 4 & 5.
- Freud, S. (1911). Formulations on the two principles of mental functioning. *S.E.*, 12, 213-226.
- Freud, S. (1915). The unconscious. *S.E.*, 14, 159-215.
- Freud, S. (1923). The ego and the id. *S.E.*, 19, 12-66.
- Galen, D. (1974). Implications for psychiatry of left and right cerebral specialization. *Archives of General Psychiatry*, 31, 572-583.
- Galton, F. (1919). *Inquiries into human faculty and its development*. New York: Dutton.
- Goldberger, E. (1957). Simple method of producing dreamlike visual images in the waking state. *Psychosomatic Medicine*, 19, 127-133.
- Gordon, R. (1949). An investigation into some of the factors that favour the formation of stereotyped images. *British Journal of Psychology*, 39, 156-167.
- Grossberg, J. R., & Wilson, H. K. (1968). Physiological changes accompanying the visualization of fearful and neutral situations. *Journal of Abnormal Psychology*, 10, 124-133.
- Guntrip, H. (1969). *Schizoid phenomena, object relations and the self*. New York: International Universities Press.
- Hebb, D. O. (1968). Concerning imagery. *Psychological Review*, 75, 466-477.
- Hilgard, E. R. (1962). Impulsive versus realistic thinking: An examination of the distinction between primary and secondary processes in thought. *Psychological Bulletin*, 59, 477-488.
- Holt, R. R. (1964). Imagery: The return of the ostracized. *American Psychologist*, 19, 254-264.
- Holt, R. R. (1967). The development of primary process: A structural view. In R. R. Holt (Ed.), *Motives and thought: Psychoanalytic essays in memory of David Rapaport* (pp. 345-383). New York: International Universities Press.
- Horowitz, M. J. (1967). Visual imagery and cognitive organization. *American Journal of Psychiatry*, 123, 938-946.
- Horowitz, M. J. (1968). Visual thought images in psychotherapy. *American Journal of Psychotherapy*, 22, 55-57.
- Horowitz, M. J. (1969). Psychic trauma: Return of images after a stress film. *Archives of General Psychiatry*, 20, 552-559.
- Horowitz, M. J. (1970). *Image formation and cognition*. New York: Appleton-Century-Crofts.
- Horowitz, M. J. (1972a). Image formation: Clinical observations and a cognitive model. In P. Sheehan (Ed.), *The function and nature of imagery* (pp. 281-309). New York: Academic.

- Horowitz, M. J. (1972b). Modes of representation of thought. *Journal of the American Psychoanalytic Association*, 20, 739-819.
- Horowitz, M. J., & Becker, S. S. (1972). Cognitive response to stress: Experimental studies of a compulsion to repeat trauma. In R. Holt & E. Peterfreund (Eds.), *Psychoanalysis and contemporary science* (Vol I, pp. 258-305). New York: Macmillan.
- Jellinek, A. (1949). Spontaneous imagery: A new psychotherapeutic approach. *American Journal of Psychotherapy*, 3, 372-391.
- Kanzer, M. (1958). Image formation during free association. *Psychoanalytic Quarterly*, 27, 465-484.
- Kepecs, J. (1954). Observations on screens and barriers in the mind. *Psychoanalytic Quarterly*, 23, 62-76.
- Kern, J. W. (1978). Countertransference and spontaneous screens. *Journal of the American Psychoanalytic Association*, 26, 21-47.
- Klinger, E. (Ed). (1980). *Imagery: Concepts, results, and applications*. New York: Plenum.
- Kosslyn, S., & Swartz, S. (1977). A data-driven simulation of visual imagery. *Cognitive Science*, 1, 265-296.
- Kris, E. (1950). The significance of Freud's earliest discoveries. *International Journal of Psychoanalysis*, 31, 108-116.
- Kris, E. (1952). *Psychoanalytic explorations in art*. New York: International Universities Press.
- Kubie, L. (1943). The use of induced hypnotic reveries in the recovery of repressed amnesic data. *Bulletin of the Menninger Clinic*, 7, 172-182.
- Lang, P. T. (1978). A bio-informational theory of emotional imagery. *Psychophysiology*, 16, 495-511.
- Leuner, H. (1969). Guided affective imagery: A method of intensive psychotherapy. *American Journal of Psychotherapy*, 23, 4-22.
- Leuner, H. (1977). Guided affective imagery: An account of its development. *Journal of Mental Imagery*, 1, 73-91.
- Lewin, B. D. (1955). Dream psychology and the analytic situation. *Psychoanalytic Quarterly*, 24, 169-199.
- Noy, P. (1969). A revision of the psychoanalytic theory of primary process. *International Journal of Psychoanalysis*, 50, 155-178.
- Paivio, A. (1971). *Imagery and verbal processes*. New York: Holt.
- Rapaport, D. (1950). On the psychoanalytic theory of thinking. *International Journal of Psychoanalysis*, 31, 161-170.
- Rapaport, D. (1951). *Organization and pathology of thought*. New York: Columbia University Press.
- Rapaport, D. (1957). Cognitive structures. In J. E. Bruner (Ed.), *Contemporary approaches to cognition: A symposium held at the University of Colorado* (pp. 157-200). Cambridge, MA: Harvard University Press.
- Reyher, J. (1963). Free imagery: An uncovering procedure. *Journal of Clinical Psychology*, 19, 454-459.
- Reyher, J. (1977). Spontaneous visual imagery: Implications for psychoanalysis, psychopathology, and psychotherapy. *Journal of Mental Imagery*, 1, 253-273.
- Reyher, J. (1978). Emergent uncovering psychotherapy: The use of imagoic and linguistic vehicles in objectifying psychodynamic processes. In J. L. Singer & K. S. Pope (Eds.), *The power of human imagination* (pp. 51-94). New York: Plenum.
- Reyher, J., & Smeltzer, W. (1968). Uncovering properties of visual imagery and verbal association: A comparative study. *Journal of Abnormal Psychology*, 73, 218-222.
- Richardson, A. (1969). *Mental imagery*. New York: Springer.
- Ross, W., & Kapp, F. (1962). A technique for self-analysis of countertransference. *Journal of the American Psychoanalytic Association*, 10, 643-657.

- Schafer, R. (1958). Regression in the service of the ego: The relevance of a psychoanalytic concept for personality assessment. In G. Lindzey (Ed.), *Assessment of human motives* (pp. 119-148). New York: Rinehart.
- Schafer, R. (1959). Generative empathy in the treatment situation. *Psychoanalytic Quarterly*, 28, 342-373.
- Sheikh, A. (Ed.). (1983). *Imagery: Current theory, research, and application*. New York: Wiley-Interscience.
- Sheikh, A. (Ed.). (1984). *Imagination and healing*. Farmingdale, NY: Baywood.
- Sheikh, A. (Ed.). (1985). *International review of mental imagery* (Vols. I & II). New York: Human Sciences Press.
- Shorr, J. E. (1972). *Psycho-imagination therapy*. New York: Intercontinental Medical Book Corporation.
- Shorr, J. E. (1974). *Psychotherapy through imagery*. New York: Intercontinental Medical Book Corporation.
- Shorr, J. E., Connell, J. A., Robin, P., & Sobel, G. (Eds.). (1979). *Imagery: Its many dimensions and applications*. New York: Plenum.
- Silverman, L. (1987). Imagery as an aid in working through unconscious conflicts: A preliminary report. *Psychoanalytic Psychology*, 4, 45-64.
- Singer, J. L. (1966). *Daydreaming*. New York: Random House.
- Singer, J. L. (1971a). Theoretical implications of imagery and fantasy techniques. *Contemporary Psychoanalysis*, 8, 82-96.
- Singer, J. L. (1971b). The vicissitudes of imagery in research and clinical use. *Contemporary Psychoanalysis*, 7, 163-180.
- Singer, J. L. (1974). *Imagery and daydream methods in psychotherapy and behavior modification*. New York: Random House.
- Singer, J. L., & Pope, K. S. (Eds.). (1978). *The power of human imagination*. New York: Plenum.
- Stampfl, T. G., & Levis, D. J. (1967). Essentials of implosive therapy. *Journal of Abnormal Psychology*, 72, 496-503.
- Strosahl, K. D., & Aschough, J. C. (1981). Clinical uses of mental imagery: Experimental foundation, theoretical misconceptions and research issues. *Psychological Bulletin*, 89, 422-438.
- Suler, J. R. (1980). Primary process thinking and creativity. *Psychological Bulletin*, 88, 144-165.
- Suler, J. R. (1985). Imagery ability and the experience of affect by free associative imagery. *Journal of Mental Imagery*, 9, 101-110.
- Suler, J. R. (in press). Mental imagery in the organization and transformation of the self. *Psychoanalytic Review*.
- Suler, J. R., & Katkin, E. S. (1988). Mental imagery of fear-related stimuli. *Journal of Mental Imagery*, 12, 115-124.
- Sullivan, H. S. (1956). *Clinical studies in psychiatry*. New York: Norton.
- Tauber, E. S., & Green, M. G. (1959). *Prelogical experience*. New York: Basic Books.
- Vogel, G., Foulkes, D., & Trossman, H. (1966). Ego functions and daydreams during sleep onset. *Archives of General Psychiatry*, 14, 238-248.
- Warren, M. (1961). The significance of visual images during the analytic session. *Journal of the American Psychoanalytic Association*, 9, 504-518.