

ON THE RELATIONSHIP BETWEEN PRIMARY PROCESS AND THOUGHT DISORDER

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INTRODUCTION

The relationship between primary process and formal thought disorder is conceptually obscure in the psychoanalytic literature. My intent is to briefly review the history of the terms primary process and formal thought disorder, posit two principles of linkage between the terms, and discuss their grounding in the object relations, both actual and fantasied, of the individual.

PRIMARY PROCESS

The concept of "primary process" was first mentioned by Sigmund Freud in his "Project for a Scientific Psychology," originally written in 1895, but not published until 1954. It first appeared in publication in the *Interpretation of Dreams* (Freud, 1955, p. 601), embedded in the dynamic and economic concepts of 19th century science:

I propose to describe the psychical process of which the first unconscious system alone admits as the "primary process," and the process which results from the inhibition imposed by the second preconscious system as the "secondary process."

He went on to specify the fundamentally energetic, rather than structural, basis of the primary process, "not the existence of two systems near the motor end of the apparatus but the existence of two kinds of processes of excitation or modes of its discharge" (Freud, 1955, p. 610).

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Theoretical explanations of the primary process have unfortunately continued to focus upon the nature of its psychic energy. Holt (1967) noted that the “energies” of the primary process were uninhibited, free, and not neutralized; whereas, those of the secondary process were inhibited, bound, and neutralized. Inhibited meant that the energy did not seek discharge; bound meant that the energy remained attached to a specific idea or object representation; and neutralized meant that the energy was socialized, sublimated, or remote from direct expression.

Historically the primary process has conceptually paralleled both the pleasure principle and the vicissitudes of the unconscious. It has served the psychoanalytic model of behavior in describing certain characteristics of thinking, emotion, and activity. These three modes of functioning were subsumed under the category of primary process when they involved the immediate gratification of the organism and the reduction of energetic tension. Rapaport (1951, p. 691) hypothesized the developmental formation of the primary process in the infant: if the object of the drive was not present and therefore immediate gratification did not occur, there was a “diffuse discharge into motor and secretory systems—without direction towards an external object.” This provided the psychodynamic for the development of affects. When the object of the drive was unable to be grasped through activity, there was a discharge of energy into ideation. As this drive cathected memory traces, there came into being a hallucinatory image of the gratification memory (Rapaport, 1967). Thus ideation, the primitive psychodynamic of thought, was born.

Although the focus remained on the tension-reduction model, certain formal characteristics of the primary process needed to be explained to identify the phenomenon. The energy could not be conceptualized without form. Freud (1954, p. 171) noted this in his identification of condensation, displacement, and symbolization as the major formal properties of the primary process:

Condensation is brought about (1) by the total omission of certain latent elements, (2) by only a fragment of some complexes in the latent dream passing over into the manifest one and (3) by latent elements which have something in common being combined and fused into a single unity in the manifest dream.

Displacement, the second major formal structure of the primary process, was defined as “ideas which originally had only a weak charge of energy take over the charge from ideas which were originally intensely cathected” (Freud, 1955, p. 177). He went on to write, “Omission, modification, fresh grouping of the material . . . are the . . . instruments of dream distortion. We are in the habit of combining

concepts of modification and rearrangement under the term displacement'' (Freud, 1965, p. 140). Displacement manifested itself in two ways: a latent element was replaced by something more remote, or different psychic elements were accentuated (Freud, 1954).

The third major characteristic of primary process noted by Freud was symbolization. Gill (1967) systematically argued that symbolization was a form of displacement; and that both condensation and displacement were the genotypic, energetic forms of the primary process from which more specific and phenotypic formal primary process mechanisms were derived and described.

The primary process is an inferred, generic concept that implies psychological energy and form in the realms of thought, affect, and activity. Rapaport (1951) elaborated the energetic basis and formal mechanisms of the primary process in the realm of thought, but it neither existed in isolation nor in a pure form. It was conceptualized as existing on a continuum with secondary process, the mode of organization that operates in congruence with formal laws of logic and the causal, temporal, and spatial constraints of reality (Rapaport, 1967).

The shifts along this primary-secondary process dimension were continuous for each individual. The formal and content characteristics of the shifting were used to identify a particular point on the continuum; likewise, various states of consciousness were used to identify particular segments of the continuum. Rapaport (1951), in his own personal experience and clinical observations, identified five thought experiences, ranging from dreams to hypnagogic hallucinations, reveries, daydreams, and ordered waking thoughts. He also hypothesized three criteria with which to differentiate points along this continuum: the kind and extent of reflective awareness possible, the extent of voluntary effort possible, and the form of the thought organization. The closer the state was to dreaming, the more pictorial and implicative thought became; the closer to waking, the more verbal and explicit it was. The emphasis also shifted from syntactic to psychological importance as thought moved toward the dream state. The role of the subject became much more diffuse in the progression from waking to dreaming (Rapaport, 1951).

Schafer (1954) conceptualized the existence of an arbitrary four-level continuum that was specifically relevant to the Rorschach response process: dreaming, daydreaming, purposeful visualizing, and visual perceiving. It closely paralleled both the secondary process continuum and the states of consciousness theory of Rapaport (1951). Other authors addressed this formal thought and consciousness continuum (Varendonck, 1921; Froeschels, 1949; Schroetter, 1951; Silberer, 1951).

FORMAL THOUGHT DISORDER

Thought disorder was originally described by the associationist psychologists as an impaired association of ideas. Both Kraepelin (1919) and Bleuler (1950) stressed the fragmented and separated quality of thought disorder. Other theorists, including Werner (1940), described thought disorder as akin to the primitive language of children and the syncretic quality of certain thinking in other cultures. The description of thought disorder as difficulties in the appropriate categorization of relevant aspects of a situation led to the development of both concrete and abstract theories of impairment. Goldstein (1944) and Arieti (1974) described abstraction difficulties as both a loss of function and a protective, regressive shift for the individual. Cameron (1944) stressed, however, the overly abstract, overinclusive quality of thought disorder. Broga and Neufeld (1977) demonstrated in two groups of process and reactive schizophrenics the tendency for the process schizophrenics to score high on concreteness and the reactive schizophrenics to score high on overinclusiveness. Concreteness was also implicated in the diagnosis of organic involvement in schizophrenia (Craig and Verinis, 1979). Although the abstracting and concretizing theories quite readily diverged, they both emphasized the conceptual and associative difficulties inherent in disordered thought.

The relationship between formal thought disorder and primary process is linked by an understanding of paleologic thinking, also known as prelogical and paralogical thought. Arieti noted that paleologic, or ancient, thinking occurred in all subtypes of schizophrenia (Arieti, 1974). The formal characteristics of paleological thought are quite stable and are structured by the genotypic processes of condensation and displacement.

CONDENSATION

Von Domarus (1925, 1944), in his studies of schizophrenic thinking, formulated a principle that stated, "whereas the normal person accepts identity only upon the basis of identical subjects, the paleologist accepts identity based upon identical predicates" (Arieti, 1974, p. 230). Predicates were defined as something that concerned the subject, rather than the subject itself, such as descriptive adjectives or adverbs. This principle became the first rule of paleologic thinking and the guideline for condensation. A patient, diagnosed as hebephrenic, commented to me "Queen Elizabeth," when handed a twelve-inch ruler. Upon my exploration of her comment, the following pa-

leologic was revealed: the twelve-inch ruler was a ruler. Queen Elizabeth was a ruler. Therefore, the ruler was Queen Elizabeth. Identification was made on the basis of the predicate, ruler, rather than the two subjects. A logical attempt to find either identification or similarity between the two subjects would be difficult; therefore, a new logic needed to be created. Arieti (1974) noted the presence of such logic in both mythology and other cultures, as well as in the hallucinations and drawings of schizophrenics. Von Domarus' principle became more difficult to recognize when the identity of the subject was completely based on one of several predicates used to describe a person. Both condensation and identification in dreams also illustrates this principle. *A* having a certain characteristic of *B* may appear in the dream as *B* (identification); or as *A* and *B* (condensation). Both symbolism and condensation, as primary process mechanisms, follow this line of paralogic. The patient dreams of his wife with the face of both his wife and his mother; the cigar may not always be just a cigar in the dream. Responses to the Similarities subtest of the WAIS will often yield paleologic responses as a result of condensation in borderline or schizophrenic patients. This subtest, in fact, pulls for condensation since it demands abstraction yet implicitly prohibits identification, for example, "In what way is an egg and a seed alike?" Answer: "They're the same because they both have ovaries." Sometimes a prepsychotic patient will be frightened by this subtest and will respond in the following way as a defensive denial of his or her inability to modulate the condensing process in an acceptable, secondary process abstracting manner: "In what way is an apple and a banana alike?" Answer: "They're not."

The linkage between Von Domarus' principle and primary process cognition was first noted by Arieti (1974). The predicate provided the identifying link in the primary process and led to identification. Predicates, moreover, could be of quality, temporal contiguity, or spatial contiguity. The construction of similarity on the basis of predicates of quality is familiar to Aristotelian logic, e.g., the cross as a universal symbol of religious belief among Christians. Predicates of temporal and spatial contiguity, however, are based on contiguous relationships according to location or time. When individuals begin to draw similarities, or psychotic identifications, on the basis of temporal or spatial predicates, understanding becomes very difficult because the identifying link may be very specific for that individual's history.

A 24-year-old caucasian male patient was admitted in a paranoid psychotic state to an inpatient unit. He angrily insisted on being called "Bobbie" and that he was a woman and was pregnant. Intensive psychotherapy and chemotherapy over the course of several weeks revealed that the basis for the delu-

sional condensation of the patient as a pregnant woman was partially based on an adolescent history of repeated anal rapes by the patient's father.

Von Domarus' principle disregards the four principles of Aristotelian logic:

1. The law of identity states that *A* cannot be *B*. Von Domarus' principle states that *A* can be *B* if they share a predicate. The girlfriend becomes the mother in the dream, and in conscious experience for the psychotic, because they share the quality of nurturing and warmth.
2. The law of contradiction states that *A* cannot be both *A* and *B* at the same time and place. Von Domarus' principle states that *A* can be both *A* and *B* if a predicate is shared. The inexperienced clinician waits expectantly to see how two patients, both delusionally believing they are the anti-Christ, will react to each other when they realize they share the same delusion: an impossibility in Aristotelian thought. Both patients blandly accept their shared identification, much to the clinician's disappointment and adherence to the law of contradiction.
3. The law of excluded middle states that *A* must be *A* or not be *A*; no intermediate state is allowed. Von Domarus' principle allows the Rorschach percept on Card III to be both man and woman, a contamination.
4. The law of sufficient reason states that one must assume a reason for every event. Von Domarus' principle allows the individual to seek a personal motivation or intention as the cause of the event. Although seeking causality in purpose is common to Aristotelian logic, the paleo-logician uses only teleologic, or purposive, causality to explain all phenomena. *Because* comes to mean "for the purpose of" rather than "on account of." Arieti (1967) notes that teleologic causality requires a lower level of abstraction than does deterministic causality.

A 22-year-old male patient, diagnosed paranoid schizophrenic, had stabbed five people, wounding one seriously, in a movie lobby *for the purpose of* proclaiming publicly that he was the anti-Christ. A year earlier he had been placed on a 72-hour hold because he had attempted to appear on a local television station to declare his identity and had created a disruption. It was not until several months of intensive treatment that he could entertain the possibility that his actions were *caused by* a paranoid schizophrenic disorder that had been steadily growing worse for eight years, and the violence had been *precipitated by* his use of crystal methedrine.

Von Domarus' principle also explains another phenomenon of condensation wherein the part symbolizes the whole ($A = A + B + C$, *pars pro toto*). In this sequence, both sides of the equation have a

part, or predicate, in common. This is evident in the Rorschach DW response where the patient will identify a part of a whole object with adequate form level and then will confabulate the rest of the whole object even though the Rorschach stimulus for the rest of the object is absent.

Although predicates in Aristotelian logic are employed to denote similarity between objects or concepts, in paleologic they denote identification or equivalence. The common element, or predicate, is the dominant focus of attention. Other characteristics of the object become irrelevant and are ignored, particularly ones that would contradict the identification or condensation.

DISPLACEMENT

Displacement can be understood as a primary process phenomenon that finds its thought disorder corollary in the disturbance of the association of ideas: tangential, circumstantial, rambling associations, flight of ideas, incoherence. Arieti (1974) noted two ways in which associations are made: the law of contiguity states that ideas may recur on the basis of the original temporal or spatial juxtaposition of the thoughts; and the law of similarity which states that if two mental representations resemble each other, the occurrence of one will tend to elicit the occurrence of the other.

Understanding the response of the schizophrenic or thought-disordered individual entails a further understanding of the three levels of language: connotation as the meaning or definition of a term, the highest level of concept formation or abstraction; denotation as the object meant, the physical or social entity; and verbalization as the third aspect of language, the word or phoneme itself. Arieti (1974, p. 250) more simply stated that "the connotation is a thought, the denotation a thing, and the verbalization a word." Ogden and Richards (1947) used the terms reference, referent, and symbol, respectively. The thought-disordered individual experiences an impairment in the ability to connote. At a moderate level of impairment, the link becomes a predicate of verbal quality; "I am hungry . . . that is where my parents were born." As the impairment progresses, the associational link is replaced by identification rather than similarity; "I am hungry . . . my parents must eat." Displacement is inferred in the fluid and rapid shifting of associations based upon verbalization and identification. In the absence of formal thought-disorder connotations are based upon similarity; "I am hungry . . . that reminds me of a

joke about goulash and the country Hungary where my parents were born.”

A process of decompensation is partially a person's inability to separate or distinguish any part or parts from a whole, one way in which condensation (*pars pro toto*) and displacement (tangential associations) will syncretistically magnify and accelerate the clinical evidence of formal thought disorder.

In summary, the shift toward formal thought disorder through the mechanisms of primary process can be conceptualized on two dimensions. First, the primary process of condensation is a horizontal condensing of abstract, functional, and concrete representations that violates conceptual boundaries of Aristotelian logic and compels identification and equivalence of only similar representations. Second, the primary process of displacement is a vertical shift from abstractions (connotations) to objects and functions (denotations) to phonemes (verbalizations).

Although these two principles provide a conceptual understanding of the relationship between formal thought disorder and the primary process, the use of the term “thought disorder” implies the maladaptive appearance of such paleologic thinking. Thought organization cannot be removed from the social, or object relations, context in which it is embedded, and can only be judged disordered when it results in the failure of the reality-adaptive tasks of the individual. Johnston and Holzman (1979, p. 12) defined ordered thinking as “the process by which a person selects and organizes perceptions for presentation in the course of ongoing adaptive functioning and problem solving.” They presented a viewpoint similar to the distinction between primary and secondary process, but they emphasized the way in which the modes are employed that determine whether the thinking is ordered or disordered.

The selection, or lack of selection, of thoughts to vocally express is a pathognomonic indicator of formal thought disorder, and is unalterably tied to the social context. The choice to vocally express only those thoughts that will be perceived by others as logical and sensible implies a concern for the quality of actual object relations with others that may be absent for a psychotic individual. He has abandoned real objects in favor of a fantasized object world in which vocal and sub-vocal thoughts are undifferentiated and expressed without apparent conscious choice.

This phenomenon is clinically evident in the schizophrenic individual who is no longer acutely psychotic, but whose thought is still pervaded by private delusions. The ease with which he is able to conceal his delusional thoughts from others is an indicator of partial

recompensation, even though the delusions remain within his world of fantasy and may render his private thoughts quite psychotic. It is also apparent in the paranoid schizophrenic who is able to present an affectively appropriate and cognitively organized self to the clinical examiner until the actual object relation precipitates a delusional upsurge of paranoid content and a concomitant displacing and condensing of thought that may be both fantastic and disconcerting.

I have attempted in this paper to briefly review the history of the terms "primary process" and "formal thought disorder," emphasizing the genotypic mechanisms of condensation and displacement as the common and parallel structures of all clinical manifestations of formal thought disorder. Two principles of linkage, one a horizontal dimension and one a vertical dimension, have been hypothesized to conceptualize both the discriminative and convergent relationship between condensation and displacement. I have also emphasized the belief that all clinical judgments of formal thought disorder must be assessed in the context of the individual's interpersonal and intrapsychic object relations. A subsequent paper will explore further the interface of formal thought disorder and internalized representations of self and objects, with particular attention to the affect complexes inherent in all object relations.

References

- Arieti, S. (1967), The intrapsychic self, in *Feeling, Cognition, and Creativity in Health and Mental Illness*, Basic Books, New York.
- Arieti, S. (1974), *Interpretation of Schizophrenia*, Basic Books, New York.
- Bleuler, E. (1950), *Dementia Praecox or the Group of Schizophrenias*, International Universities Press, New York.
- Broga, M., and R. Neufeld. (1977), Dimensions of thinking among process and reactive schizophrenics, *Psychological Record*, **27**:265-277.
- Cameron, N. (1944), Experimental analysis of schizophrenic thinking, in *Language and Thought in Schizophrenia*, A. Kasanin, Ed. Norton, New York, pp. 50-65.
- Craig, R., and S. Verinis. (1979), Evidence for organicity in concrete vs. overinclusive thought-disordered schizophrenics, *Journal of Clinical Psychology*, **35**, 696-703.
- Freud, S. (1954), Project for a scientific psychology, in *The Origins of Psychoanalysis*, E. Kris et al., Eds., Basic Books, New York, pp. 140-174.
- Freud, S. (1955), *The Interpretation of Dreams*, Basic Books, New York.
- Froeschels, E. (1949), A peculiar intermediary state between waking and sleeping, *Am J Psychotherapy*, **3**, 19-25.

- Gill, M. (1967), The primary process, in *Psychoanalytic Essays in Honor of David Rapaport*, R. Holt, Ed., International Universities Press, New York, pp. 260–298.
- Goldstein, K. (1944), Methodological approach to the study of schizophrenic thought disorder, in *Language and Thought in Schizophrenia*, A. Kasanin, Ed., Norton, New York, pp. 17–41.
- Holt, R. (1967), *Psychoanalytic Essays in Honor of David Rapaport*. International Universities Press, New York.
- Johnston, M., and P. Holzman (1979), *Assessing Schizophrenic Thinking*, Jossey-Bass, San Francisco.
- Kraepelin, E. (1919), *Dementia Praecox and Paraphrenia*, Chicago Medical Book Company, Chicago.
- Ogden, C. and I. Richards (1947), *The Meaning of Meaning*, Harcourt, Brace, New York.
- Rapaport, D. (1951), *Organization and Pathology of Thought*, Columbia University Press, New York.
- Rapaport D. (1967), Cognitive structures, in *Collected Papers of David Rapaport*, M. Gill, Ed., Basic Books, New York, pp. 631–665.
- Schafer, R. (1954), *Psychoanalytic Interpretation in Rorschach Testing*, Grune and Stratton, New York.
- Schroetter, K. (1951), Experimental dreams, in *Organization and Pathology of Thought*, D. Rapaport, Ed., Columbia University Press, New York, pp. 234–248.
- Silberer, H. (1951), Report on a method of eliciting and observing certain symbolic hallucination-phenomena, in *Organization and Pathology of Thought*, D. Rapaport, Ed., Columbia University Press, New York, pp. 195–207.
- Varendonck, J. (1921), *Psychology of Daydreams*, Macmillan, New York.
- Von Domarus, E. (1925), Über die besiehung des normalen zum schizophhrenen denken, *Arch. Psychiat.* **74**, 641.
- Von Domarus, E. (1944), The specific laws of logic in schizophrenia, in *Language and Thought in Schizophrenia*, A. Kasinin, Ed., Norton, New York, pp. 104–115.
- Werner, H. (1940), *Comparative Psychology of Mental Development*. Follett, New York.