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Some implications of new developments in neurobiology for psychoanalytic object relations theory

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ABSTRACT

This paper proposes that the primary motivational systems are affect systems, and that libido and aggression represent secondary developments of affect integration. Drives still derive ultimately from neurobiology but are organized and represented in unconscious conflicts between love and aggression expressed in internalized affect-invested object relations. Regarding the development of the dynamic unconscious, conflicts between love and aggression are originally conscious in the context of the primary activation of affect systems in the relation between self and other (mother), but their traces remain only in the behavior patterns, and fragmented affects if extremely traumatic circumstances prevail. Ordinarily, these conflicts are assimilated into a second stage of splitting mechanisms, and if fixated at that stage, expressed as the borderline personality organization. In a normal third stage, identity integration evolves, with the predominance of repressive mechanisms, the establishment of the tripartite intrapsychic structure, and a truly consolidated dynamic unconscious. This paper concludes with an outline of the therapeutic implications of this developmental sequence of intrapsychic organizations.

KEYWORDS

Drives; affect systems; dynamic unconscious; object relations theory; therapeutic strategies

Drives and affects

What follows is my understanding of changes in psychoanalytic theory and its applications to standard psychoanalysis and psychoanalytic psychotherapies suggested by new developments both in neurobiology and psychoanalytic object relations theory. Specifically, I believe psychoanalytic theory needs to be revised in two major areas: (1) the theory of drives and (2) the theory of the dynamic unconscious.

Neurobiological evidence: Affect systems as primary motivators

To begin with, the psychoanalytic theory of drives needs significant revision. Freud had proposed that the basic motivational systems of psychic functioning were libido and the death drive, or libido and aggression (Freud, 1915, 1923). Freud located the origin of the libidinal drive in the erotogenic zones of the skin and related mucous membranes, described in detail the development of sexual drive from multiple, polymorphous sexual impulses and their integration into the dominance of genital sexuality, and related these developments of libido to the culmination of their corresponding object relations in the oedipal constellation.

He had not described, however, the origin and development of the death drive or aggression. The ultimate purpose of “Nirvana” or self-destruction as the objective of the aggressive drive has remained as a controversial aspect of the classical dual drive theory.

I believe that while the clinical relevance of unconscious conflicts between libidinal and aggressive impulses remains as the fundamental etiology common to all unconscious conflicts, the origin of the corresponding neurotic and characterological pathology, and an important aspect of psychotic pathology as well, the present-day neurobiological evidence points to the affect systems as the primary motivators of human behavior (Kernberg, 2004a, 2006). I believe that the contemporary classification of affect systems into positive ones: attachment, erotism, and play bonding – and negative ones: fight-flight and separation-panic, covers the development of essential psychic motivation from the beginning of life to their most complex derivatives (Panksepp, 1998, 2012). There is ample empirical evidence for the brain structures and neurotransmitters of these affect systems, and for their functions in activating behavior as well as specific subjective experience (Damasio, 2010; Krause, 2012). I have proposed that the division of affect systems into positive and negative ones signals the

potential for the integration, respectively, of the positive affect systems as a major overall drive – libido – and the integrative consolidation of the negative affect systems into an overall drive: aggression (Kernberg, 2004a, 2004b, 2006). The basis for this classification is the originally pleasurable affiliative quality of the “positive” affect systems, in contrast to the opposite, painfully disaffiliative or antagonistic quality of the “negative” affect systems.

Thus libido and aggression emerge as the developmentally supraordinate integration of these component affective systems. The positive affect systems of attachment, erotism and play bonding give origin, respectively to the fundamental motivational drive of dependency, sexuality, and affiliative interaction that, jointly, constitute libido. They all include appetitive (“longing”) and consumatory pleasures. The analysis of the concept of libido throughout all psychoanalytic writings illustrates these libidinal components: the search for dependency and its conflicts related to fears of abandonment; the desires of sexuality and the conflicts derived from basic oedipal desire and prohibitions, rivalry and guilt; and the search for personal friendship and community participation in conflict with interpersonal competition and self-affirmation. The negative affect systems, namely, fight-flight, and separation-panic signal the major components of what will be integrated as the aggressive drive, including the aggressive effort to combat and destroy dangerous, damaging, threatening objects or situations, and the efforts to escape from dangerous situations that cannot be overcome or eliminated. The emergency affective system of separation-panic emerges as the emotional reaction to an immediate threat to physical or psychological survival that separation from caregivers represents for young animals, as well as the effort to escape or deny an intolerable, life-threatening reality. Finally, the additional, primary affective “SEEKING” system represents a general affective disposition to explore the environment and to reinforce the approach to gratifying objects or situations.

We now know the brain networks involved in the activation and control of these affective systems (Panksepp, 1998, 2012). The activation of the respective affective experiences and affect-driven behavior extends across a wide spectrum of brainstem and limbic areas of the brain. The activation of consciousness and focused alertness to reality arises in the brainstem, and the cognitive contextualization and control related to affects resides in cortical areas of the brain (Panksepp & Biven, 2012; Roth, 2001; Roth & Strüber, 2014).

Affects constitute the organism’s basic motivation to adapt to its environment, protect the homeostasis of

essential biological requirements, react to sources of pain and pleasure, and, at the higher psychological level of this adaptive effort, regulate the internal and external relations with significant others. At a basic brainstem level, homeostatic mechanisms function that usually do not reach consciousness, such as the control of temperature, blood circulation, and breathing. Some of these homeostatic mechanisms do break into consciousness in emergencies (hypothermia, suffocation). Conscious levels of affect activation are determined by sensorial stimuli that determine the experience of sensorial displeasure or pain or by cognitive assessment of predicted pain or pleasure. These stimuli are processed in cortical regions and widely distributed through the brain. Sensorial experience is an initially unconscious cortical function that evolves into a conscious experience only after transfer into the associative cortical region. However, pain, a sensory affect, seems to be generated at the level of the PAG in the midbrain.

At higher levels of limbic structures – in mesencephalic and diencephalic brain structures – the activation of affective needs in relation to other, human objects, dominate, desires that link the organism with its immediate psychosocial environment. The affective linkage between the emerging self and its significant human objects represents the highest limbic level, connecting midbrain and other subcortical structures, with the associative cortex. The associative cortex elaborates the conscious experience of affects, as a central constituent of the self and of the representations of others. Here, affective experience is amplified by cortical functions that integrate consciously sensorial experience, its cognitive framing, and the developing capacity for long-term memory into the conscious, self-aware aspects of experience of emotion. The psycho-social contextual environment, originally, the baby–mother relationship, is internalized as the double aspect of emotional experience and awareness of this experience as self-experience, in parallel to the attribution of similar emotional experience to mother or the significant other. Gradually the experience of others is perceived as willful behavior, with growing empathy by the self, and, eventually, a realistic awareness of the minds of others as well as highly individualized emotional investments in significant others (Förstl, 2012). This process represents the neurobiological basis for the development of intrapsychic dyadic structures, experiential units of self-representation affectively linked to an object representation, the “building blocks” of the mind, the components of unconscious phantasy (Northoff, 2011).

In my view, the function of affect systems to relate the individual to one’s psychosocial environment may be

considered the most remarkable development of the human psyche. The highest level of the limbic system combines the expression of specific affects in intimate relationships with the cognitive functions of the associative cortical areas. This process culminates in the function of the “working memory,” which includes the development of an integrated concept of self, that is, an integrated view of the individual placed in time and space, with the authority of movement, utilization of memory and awareness of emotional needs to relate to selective significant others. By the same token, this process includes the parallel construction of an internal world of significant others, and their assumed – and gradually more realistically assessed, emotional reality (Svrakic & Divac-Jovanovic, 2019).

The representations of self and others

The concept of self includes an autobiographical awareness, together with imagination and planning in the context of a consistent awareness and interest in significant others, again, realistically perceived, empathized with, and emotionally desired. In my view (Northoff et al., 2016; Roth and Strüber 2014; Kernberg, 2018), the ventromedial preorbital and prefrontal cortex, the anterior part of the cingulum, the insula, and widespread areas within the parietal and temporal lobe all are involved predominantly in this synthetic function of the self, while, in parallel, the dorsolateral aspects of the prefrontal cortex, the parietal–temporal junction, and numerous additional lateral cortical areas focus mostly on the nature of the human other, and the self-relation to the objects of one’s search and desires and fears. Essentially, an organization of emotional experiences defining the relationship between self and others evolves, and is internalized as affective memories. Repeated in thousands of interactions from birth on, affective memory is internalized as a central function of the hippocampus as the “memory chamber” (Roth & Dicke, 2006). A neural network related to this hippocampus function will evaluate the positive or negative potential of any new experience with significant others, and fundamentally contribute, together with the associative cortex, to the buildup of an internal world of object relations, conscious and unconscious (more about this to follow) (Svrakic & Divac-Jovanovic, 2019).

As I have previously proposed (see, e.g., Kernberg, 2001, 2012), the dyadic units constituted by the representation of self, the representation of a significant other, and a dominant affect framing their interaction divide all early internalizations into affectively positive and affectively negative ones, and, eventually, into

respectively idealized and persecutory internal object relations. These units are the constituents of unconscious phantasy. As such, they may remain as deep layers of affective memories in the hippocampus and other affective and procedural memory circuits. We know from the neurobiology of affect activation as well as from the observation of infants and small children, that positive and negative units of experience are originally split, dissociated from each other, while all the positive experiences tend to be merged as a world of ideal relationships, and all the negative, in parallel, will merge as an intolerable, persecutory world. I propose that the later, integrative gathering of these experiences, their modulating and more realistic integration, is a function of the associative cortex, linked to the elaboration of emotional experiences in consciousness (Kernberg, 2012; Northoff et al., 2016). I further suggest that prefrontal, preorbital, cingulate, and insular cortical functions integrate the originally split “good” and “bad” concepts of self and significant others, leading to realistic total object relations, and corresponding neurotic and normal personality structure.

Severely conflictual, intolerable internalized object relations that remain dynamically split preserve the quality of representations of self and others framed by extreme affects, and unconsciously are either extremely desired or feared. They become the constituents of the dynamic unconscious.

I believe that this concept of self – object – affect relations as positive and negative building blocks of the mind corresponds to the nature of unconscious phantasy as described by the Kleinian psychoanalytic school (Isaacs, 1952; Spillius et al., 2011). I believe that each unconscious phantasy is, at bottom, a highly desired or terribly feared unit of an embedded self/object representation relationship and the correspondent affect, reflecting a consciously intolerable phantasy.

The activation of these internalized object relations in the transference between patient and therapist in intensive psychodynamic treatment constitutes the dominant expression of the unresolved conflictual unconscious past. The analysis of transference is represented by the analysis of the corresponding activation of representations of self and other, and of the dominant affect linking them expressing the desired or feared interaction. The respective representation of the object may be projected onto the therapist while the corresponding representation of self is enacted by the patient (prevalent with neurotic personality organization), or, with rapid interchange of roles in the case of borderline personality organization, the patient may enact an identification with the object while the corresponding self-representation is projected onto the therapist.

Transference interpretation is an analysis of the dominant, consciously activated dyadic units, in the context of the simultaneous maintenance of an external perspective, the therapist's interpretive function as an "excluded other," a triangulation that facilitates the patient's insight, and the development of his emotional capacity to tolerate such a triangular vision himself (Yeomans et al., 2015).

So far, I have pointed to a significant shift in the concept of motivational systems, from Freud's original dual drive theory to an affect theory of motivation that conceives drives as a supraordinate, second level of development. Drives, thus conceived, become activated in the clinical situation in their component affect dispositions and related object relations. This conception of drives corresponds closely with the contemporary concept of psychoanalytic object relations theory. In my view, it does not replace the dual concept of drives proposed by Freud, but puts them into the context of a primary motivational system of affects that reflects our present knowledge of the neurobiological determinants of psychic life. Clinically, unconscious conflict is mainly still between love and aggression.

The death drive

Freud's theory of the death drive was based upon his clinical observations of severe forms of self-destructive psychopathology, including repetition compulsion, sadism/masochism, negative therapeutic reaction, suicide in severe depression and non-depressive characterological structures, and destructive and self-destructive developments in group processes and their social implications (Kernberg, 2009). In the light of today's experience, both regarding the diagnosis and treatment of severe forms of psychopathology, and regarding the reality of social conflicts under conditions of the mass psychology of the last 100 years, Freud's observations regarding self-directed aggression have been dramatically confirmed. In all these areas in which Freud described the importance of self-directed and potentially deadly aggression, we have found that the analysis of the psychodynamics of the intrapsychic development of borderline conditions, or, respectively, the ideological preconditions for the development of severe social self-destructiveness, all indicate that such severe self-directed aggression is a pathological consequence of an excessive predominance of negative affect systems. In other words, in contrast to the normal predominance of positive affective systems under conditions of relatively normal psychological developments from birth on, particularly in the first few years of life, a predominance of a severely negative, aggressive disposition is

a fundamental causal factor of these severe psychopathologies. Excessive negative affect systems may be the consequence of genetic, constitutional, and temperamental factors in some cases, but environmental causes predominate in the large majority of types of pathology that directs aggression against the self. Insecure attachment, exposure to physical, emotional, or sexual abuse, early abandonment, and chronically chaotic family situations reinforced by further significant deprivation, aggressive and sexual traumatization during childhood and early adolescence are major causes of self-directed aggression (Kernberg, 2004b).

André Green (1993, 2007) first pointed to the fact that Freud's concept of the death drive reflected his awareness of what Green called "negative narcissism," namely, the fact that the investment of the self-structure is not only with libido or positive affect systems but also with a certain amount of negative affect systems, a potential for fight and aggressive self-affirmation that is part of the normal development of autonomy, self-affirmation, resilience, and dealing with the ambivalent features of ordinary social life. It is only under conditions of severe traumatization, in psychopathological developments, that what originally was a positive, functional investment of aggression by the self (together with the identification of the self with predominant libidinal, positive affect systems), now would become what Freud called the death drive. In simple terms, the death drive is a secondary motivational system that reflects the pathological, exaggerated self-directed investment with negative affect systems that, under ordinary conditions, are mostly directed outside the self.

The dynamic unconscious

In addition to the concept of drives, another major concept of classical psychoanalysis that requires revision is that of the dynamic unconscious. The prevalence of unconscious processes in psychic development has been amply confirmed. However, the structure of the unconscious and its dominant influences on consciousness needs to be reformulated, in my view.

Recent neurobiological findings indicate that consciousness and unconsciousness evolve in parallel from the beginning of life (Roth & Strüber, 2014). Unconsciousness may be divided into the "primary unconscious," which includes the functions of all subcortical brain regions and the non-associative cortical functions, and the "secondary unconscious," that refers to the cumulative emotional processes of the infant and the small child before maturation of the associative cortex. The secondary unconscious also includes unconscious "procedural memory," the early learning of skills that,

after the initial conscious experience, become automatic and persist in unconscious behaviors. This early learning, however, also includes learning of ways to relate self to the environment, determining the earliest and potentially very influential structures of self and representations of significant others that, while originally conscious, because of the early lack of maturation of the capacity for long-term memory (that only develops, during the second and third year of life, with the maturation of the associative cortex and the hippocampus) are erased from conscious memory or may never have been recorded declaratively (Solms, 2015).

I believe that these earliest learning processes affect behavior in the form of unconscious procedural memory, but without reaching the long term dynamic unconscious, nor ever being available to consciousness because they leave no trace other than that immediately activated and learned behavior. In addition, during the entire childhood development, consciously learned activities, integration between sensorial and motor processes, may remain as procedural memory, and sink into unconsciousness: for example, learning how to ride a bicycle or how to play the piano.

At the point when the development of long-term memory becomes available, around the end of the second and in the course of the third year of life, with the maturation of the hippocampus as "affective memory storage facility," and the development of the associative cortex, conscious experiences may now become dynamically unconscious, and constitute the dynamic unconscious proper. Thus, the dynamic unconscious is linked to the capacity for long-term declarative memory, because according to my view, by definition the content of the dynamic unconscious was originally conscious, and has become repressed or dissociated in the course of development. Broadly speaking, then, the unconscious includes both procedural, unconscious memory, and explicit, episodic, declarative memory. However, only the latter is the basis of the dynamic unconscious proper. To repeat, all subcortical brain regions and non-associative cortical brain regions constitute the primary unconscious. The affective processes and emotional experiences of infant and small child before the maturation of the associative cortex and hippocampus leave significant behavioral traces, but no memory, and only later, repressed and dissociated experiences determine the dynamic unconscious.

It is important to point out that, as mentioned earlier, all sensorial stimuli are originally unconscious, and only selectively enter into consciousness after a very fast and complex selective unconscious cortical and subcortical process that determines the input into the associative cortical area, that is, consciousness (LeDoux, 2019). All

sensorial stimuli are widely distributed to various brain regions and systematically explored (in three hundred milliseconds) for their newness, significance, positive or negative affective value, with input from the sensorial thalamic system, and affect-activating limbic structures such as the ventral tegmental area, the nucleus accumbens, and activating amygdala. The hippocampus and dorsal striatum are also involved in the decision-making process regarding which stimuli are to become conscious. All sensorial perceptions selected to become conscious are channeled through the thalamus that acts as a "port of entry and exit" into cortical consciousness (Roth, 2001). Consciousness is originally determined at the inferior limbic level, particularly the periaqueductal gray, the reticular formation, the locus ceruleus, and the raphe nuclei. It is activated by the basic affective systems such as the sensorial reaction to pain and, most importantly, by homeostatic requirements of temperature, blood circulation, hunger, and thirst (Roth & Strüber, 2014). In the first year of life, consciousness emerges by the activation of any and all of the major affect systems involving the interpersonal world that I outlined above.

Eventually, human consciousness involves the awareness of self, of one's body, one's placement of self and body in space and time, the experience of one's identity and its autobiographical continuity, the function of one's actions and mental acts and, gradually, the differentiation of reality and imagination. These are background features of the self that converge in consciousness and depend on the integration of information from multiple brain regions, including, particularly, the posterior cingulate cortex, the posterior parietal cortex, and the dorsal lateral prefrontal cortex, that constitutes the "working memory" of actual consciousness. Working memory includes, in addition to all of the above-mentioned aspects of awareness, one's present awareness of the environment of one's body, one's present awareness of needs, affects, and emotions, and one's focused attention on specific aspects of one's relationship with the environment, as well as the general functions of thinking, imagining and remembering. In short, consciousness includes fundamentally the consciousness of self, its expectations, desires, and fears, and its assessment of the psychosocial environment, that is the nature of and relationship with others and the mutual influence of self and others in their interaction.

In parallel with the building up of the structure of the self, the structure of significant others is built up based on cognitive awareness, the development of other limbic structures that originate the capacity for empathy, theory of mind, and the direct affective and cognitive interaction with others (Förstl, 2012). I have

already referred to the corresponding functions of the dorsolateral prefrontal cortex and would add here the important role of the insula and the parietal–temporal junction.

Thus I believe that the unconscious is even more important in determining human experience and behavior than Freud assumed, including the procedural memory unconscious that derives from sensorial and motor experiences and the long-term procedural memory derived from automated learning. The declarative memory unconscious, that is, the unconscious that contains both explicit memory episodes and semantic memory, permits the development of the dynamic unconscious which, I now suggest, may be divided developmentally into three major timespans.

Developmental phases of the dynamic unconscious

First, the infantile experience, from birth on, is conscious in terms of the activation of affect systems determining the involvement in interpersonal relations, and habitual behavior patterns are established based on these early experiences that are conscious, but that cannot yet be transferred into long-term declarative memory. This early time corresponds to normal infantile amnesia. In addition, this period is the beginning of the internalization of affective dyads of self and others (Hart, 2008; Kernberg, 2012; Stern, 1985). Thus the effect of the earliest object relations, normal or traumatic, only remains in temperamental and primitive behavior patterns, and perhaps in some specific effects of traumatization (Coates et al., 2003). In this regard, Freud was wrong regarding the unconscious origin of the dynamic unconscious. As Mark Solms (2015) first pointed out, based on modern affect theory, particularly Panksepp's contributions, the dynamic unconscious is originally conscious. The ego, insofar as we consider the establishment of habitual behavior patterns as part of the control system of the ego, is originally unconscious in terms of learned patterns that at times, may reflect significant traumatic experiences that left no mental content.

The second developmental period involves the development of the capacity for long-term conscious and unconscious declarative memory, with a predominance of dissociation between idealized and persecutory internalized object relations that are the typical affective structures that develop in the second and third years of life. This development corresponds to the psychodynamics Melanie Klein described as the "paranoid–schizoid position" (Klein, 1946). As I have described in detail elsewhere (Kernberg, 2001, 2012), if negative and

aggressive experiences predominate, the integration of idealized and persecutory internalized object relations fails to take place, leading to the fixation of borderline personality organization, that is, the fixation of an organization of the personality with a predominance of splitting operations of the dynamic conflicts between idealized and persecutory internalized object relations. Here the affective experiences are conscious, but dissociated, in the moment, from other experiences. In treatment, interpretive interventions are geared to resolving the dominant primitive defensive operations (splitting, projective identification, denial, primitive idealization, devaluation, and omnipotent control) that interfere with the integration of normal identity and the setting up of a neurotic and normal personality structure (Yeomans et al., 2015).

Lastly, the third period that predominates from the third or fourth year of life is a period of integration of idealized and persecutory internalized object relations, the "depressive position" (Klein, 1946), resulting in the development of normal identity, and of repression as the dominant defensive mechanism, with the related defensive mechanisms of intellectualization, rationalization, reaction formation, and mature forms of projection and negation. This period of development marks the consolidation of the tripartite structure, in which consciousness and pre-consciousness, i.e. the ego, are separated by a repressive barrier from the dynamic unconscious, or what we might call the id in its *mature* form. Here, the psychotherapeutic technique is to interpret repression and related mechanisms, to permit the emergence of the repressed unconscious into consciousness (Kernberg, 2018).

Therapeutic implications

This outline of the developmental phases of unconscious mental conflict has diagnostic and therapeutic implications. The predominance of extremely traumatic circumstances in the first year or two of life would not leave unconscious representations of self and object representations, only extreme dispositions to negative affect with potential fragmentation of affect experience to escape the panic–separation system. These traumatic psychological experiences may also lead to lasting influences on neurobiological systems and brain functioning (Heim & Nemeroff, 2001). These patients evince a profound disposition to behavioral pathology that emerges as bizarre interactions in the transference, the typical developments of extremely schizoid structures. The therapist may experience the implications, in the "here and now," of these pathological developments, and approximate the reconstruction of what Bollas

(1989) has called “unthought” thoughts or experience that have to be deduced from later, secondary developments of these experiences. It implies an extremely slow and tentative work in the transference, and a very important utilization of countertransference reactions.

Clinical experiences with severely schizoid and schizophrenic individuals have indicated very primitive mechanisms of fragmentation of affective experience geared to reduce the attention to and investment in the external world, with the danger of confusion between good and bad experiences in the interpersonal field, a general withdrawal from contacts, and profound distrust of any interpersonal experience (Rosenfeld, 1950). Severely schizoid personality structures may require particular therapeutic approaches. Under the worst circumstances, in conditions with a severe cognitive failure, a lack of differentiation between self and others may result in the loss of reality testing, and a predisposition to psychosis (Dammann & Kernberg, 2019).

Much more frequently, severe traumatization and pathology of aggression affect the second level of development, the stage between 2 and 5 years of age, in which splitting mechanisms predominate, fostering a potential fixation at this stage that results in borderline personality organization. Here the severity of negative affect activation in the form of persecutory internalized object relations that predominate over positive ones still permits the establishment of split-off positive relationships. It is likely that both genetically determined differences in neurotransmitter systems sensitizing the individual excessively to negative experiences, and hyperactivity of the amygdala or other negative affect activating structures, constitute temperamental predispositions to excessive aggressive reactions, although traumatizing early object experiences are leading etiological factors. Here idealized and persecutory internalized object relations predominate, are activated in the typical transferences of borderline patients, and the interpretive psychotherapeutic work focuses particularly on splitting operations, projective identification, denial, and other related, primitive defensive operations. Oedipal and pre-oedipal conflicts are combined in many ways, with aggressive object relations and affects prevalent in both areas (Kernberg, 2018).

When the pathology predominates at the third level of intrapsychic organization, which involves the integration of idealized and persecutory segments of experience, the development of normal identity and mature defenses prevail. The dynamic unconscious in its “mature form” dominates. Unconscious phantasies reflect the conflicts between desired and dreaded relationships, with the accent on typical oedipal conflicts, but a relative decrease of the intensity of

their aggressive implications. Now ideal self and ideal object representations are integrated into the ego ideal as part of an integrated superego, in which primitive sadistic precursors from early stages of development and later oedipal prohibitions are integrated as well. The tripartite structure of ego, superego, and id reflects this overall integration. Pathology here involves the typical symptomatic neuroses and character pathology at the level of neurotic personality organization.

The development of an integrated concept of the self, both good and bad, and of an integrated concept of significant others, both good and bad, contributes to the development of an ego ideal that also integrates the desirable aspects of an ideal self and ideal objects. By the same token, this integration also facilitates a more realistic set of internalized mandates and prohibitions, in other words, the constituents of a more mature superego, in which aggression has been tamed, and sexuality integrated in a tolerable way (Jacobson, 1964). All these processes are renewed at the time of adolescence, with the further organization of the superego as well as the consolidation of the repressive barrier against the dynamic unconscious.

The general implication is that ordinary personality development starts with the internalization of dyadic object relations and splitting mechanisms, and only evolves gradually into the definite structure of ego (probably better called the self at this point), the repressed dynamic unconscious, and the superego as an internalized system of integrated values. The earliest schizoid stage, under extremely traumatic conditions, with affective fragmentation and psychosocial withdrawal would reflect, if defensively fixated, the earliest psychopathology of the personality structure.

Throughout this developmental sequence, it emerges that the organization of the self, its degree of integration or splitting, constitutes a fundamental structure influencing the consolidation of habitual behavior patterns or character traits, with the understanding that the very earliest behavior patterns are determined before the existence of an integrated self and before the possibility of mentalization of earliest traumatic experiences. It is of interest that the parallel development of integrated concepts of significant others has aroused less attention on the part of neurobiologists than the analysis of the sequential development of the components of the self-structure. From the clinical viewpoint of the study of subjective intrapsychic experience reflected in unconscious phantasy, the nature of the internalized world of object relations including the sequential development of the representation of significant others is as important as that of the self. It is the relationship *between* self and significant others that one might

consider as the most important intrapsychic structures influencing organization of behavior, and subjective emotional experiences – from ecstasy to despair, throughout life. I believe it is fair to say that psychoanalysis, after Freud, has neglected the study of the neurobiological roots of intrapsychic, subjective psychological structures. By the same token, neurobiology has neglected the study of the establishment of an internal world of object relations as the ultimate, most advanced objective of neurobiological developments, the autonomous dynamics of this intrapsychic world, and the fact that personality structure and functions depend on the interaction of both neurobiological and psychodynamic developments. Melanie Klein (Isaacs, 1948; Klein, 1946) described unconscious phantasy as the basic structures of the internal world, the product of the interaction of the mental representations of drives and early defensive operations, constituted by internalized objects and self-aspects as well as the affective derivatives of drives. This formulation corresponds, I believe, to the components of the basic dyadic structures of self-representation, object representation and a specific affect defining their positive or negative values described by contemporary object relations theory. Here lies a key linkage between neurobiological and psychodynamic determinants of psychic life.

This leads us to the therapeutic implications of what has been said so far in terms of the theory of unconscious conflicts, the unconscious dynamics of psychopathology, and the objective of psychoanalytic treatment. First of all, the most severe cases of early distortions of the personality are related to severe traumatization in the first year of life, probably primarily traumatization in the context of insecure attachment, with its corresponding failure of normative development of affective experience, control, and integration. Traumatic physical mistreatment, sexual mistreatment, severe, painful illness, abandonment, and chronic unpredictability of care relate to such extreme severity of illness. Here the transference will not reflect clearly any particular interactions between self and other, of which no memory remains, but rather, enacted behavior patterns derived from such early states of development. Strangely chaotic transferences may develop: emotional unavailability, the emergence of separation – panic, and primitive aggression may characterize transference developments, and permit therapist to tentatively interpret the dominant meaning of a certain object relationship in the transference in terms of a hypothetical earliest experience of life. This is, I believe, what Ogden (1997) called the “autistic – touching” earliest stage of development, and what other authors have interpreted as the basic schizoid dilemma, requiring an

intense, although thoughtfully managed countertransference utilization in interpreting such primitive mental states (Dammann & Kernberg, 2015).

It is generally stated that these are “pre-symbolic” emotional experiences that predate the development of organized language and the capacity for symbolic thinking. However, clinically, those patients usually are both able to think and talk in ordinary ways at other moments of their daily existence, and one may question to what extent a defensive regression has taken place in the transference, which needs to be interpreted as such, and the extent to which earliest experiences may be translated into symbolic interpretation that does justice to their present reactivated affective nature. Gerhard Roth (personal communication) has suggested that purely cognitive approaches to deep-seated emotional conflicts will not be adequate because of the lack of direct limbic communication between the dorso-lateral region of the prefrontal and preorbital cortex, in contrast to the effectiveness of interventions that have an important affective component, and thus relate to the ventromedial prefrontal and pre-orbital cortex and anterior part of the cingulum, thus reaching the deeper levels of affective experiences in the hippocampus. I have described a related technical approach with schizoid personalities in earlier work. The therapy is structured to allow for affect expression in the context of a safe environment, where the therapist is alert to assist in the patient’s growing capacity to understand and modulate the affective links between self and others.

Regarding the treatment of patients with borderline personality organization, Transference Focused Psychotherapy (Yeomans et al., 2015) has proven to be an effective application of psychoanalytic technique, with the specific strategies and tactics required by these patients, and modified according to the predominant characterological structure that patients with borderline personality organization present (Caligor et al., 2018). Thus borderline personality disorder, narcissistic personality disorder, schizoid personality disorder, all require modifications in the psychoanalytic technique derived from the rapid activation of role reversals of dyadic relationships, in which patient and therapist alternatively enact representation of self and other under the dominance of a predetermined primitive affect. The treatment of these conditions requires a technique different from standard psychoanalysis due to intense behavioral manifestations of primitive affective activation, lack of tolerance of emotional thinking, vs. behavioral acting out, and the need to protect the structure of the treatment from severe acting out. Standard psychoanalysis, in turn, is indicated for patients with

severe character pathology and regressive developments in the context of an integrated identity, a consolidated self and stable internalized relations with significant others. The typical neurotic patient may count on psychoanalysis as the most effective treatment for neurotic syndromes and character disorders (Caligor et al., 2018; Kernberg, 2018).

Conclusion

In short, the psychoanalytic theory requires the following revisions:

1. The proposal that the primary motivational systems are affect systems, and that libido and aggression represent secondary developments of affect integration. Drives still derive ultimately from neurobiology but are organized and represented in unconscious conflicts between love and aggression expressed in internalized, affect invested object relations.
2. Conflicts between love and aggression are originally conscious, in the context of the primary activation of affect systems in the relation between self and other (mother), but their traces remain only in behavior patterns and fragmented affects, if extremely traumatic circumstances prevail. If less severe, these conflicts are assimilated into the second stage of splitting mechanisms and borderline personality organization. Here mutual dissociation between idealized and persecutory object relations dominates.
3. In the advance toward identity integration, repressive mechanisms, and consolidation of the tripartite structure (originally, ego, superego, id) evolves, with a truly consolidated dynamic unconscious. Achievement of identity integration lends itself to the therapeutic indication for non-modified classical psychoanalytic technique.
4. In all cases, the interpretation of activated transference dispositions and the working through of their emotional implications in the context of technical neutrality characterize both psychoanalysis and truly psychoanalytic psychotherapies.

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