

RICERCHE

# When the selfing process goes wrong: Social-biofeedback, causal mechanisms, and pathological narcissism

Cristina Meini<sup>(a)</sup>

Ricevuto: 2 marzo 2019; accettato: 28 febbraio 2020

**Abstract** In direct opposition to the dominant nativist perspective tracing back to Descartes, William James suggested that the sense of self is constructed through a never-ending process of reflexivity. In more recent years, empirical data from various psychological domains (notably developmental, clinical and social psychology) have further strengthened this constructivist perspective. Notably, Gergely and Watson's social biofeedback model has been proposed as a central mechanism in the development of emotional introspection, which itself constitutes a crucial step in the process leading to a mature sense of self. In accordance with the social biofeedback model, it has been suggested that reiterated failures in biofeedback mechanisms predispose an individual to mental suffering. While borderline personality disorder and antisocial behavior have received the most attention, here I make a preliminary attempt to examine the impact of dysfunctional biofeedback on the pathogenesis of narcissism, suggesting that some central features of pathological narcissism may result from serious and reiterated disruptions in social biofeedback. This preliminary exploration aims to deepen our understanding of the origins of psychological suffering. In this sense, my effort could contribute to the construction of a causal model going beyond the purely categorical, atheoretical analysis of mental diseases typical of the diagnostic and statistical manuals.

KEYWORDS: Self; Self-ing Process; Social Biofeedback Model; Narcissism

**Riassunto** *Il farsi e il disfarsi del sé. Biofeedback sociale, meccanismi causali e narcisismo patologico* – La prospettiva costruttivista sullo sviluppo del sé, efficacemente difesa da William James in opposizione all'innatismo di stampo cartesiano, è oggi ulteriormente avvalorata da numerosi dati empirici provenienti da diversi ambiti della psicologia (in particolare, psicologia dello sviluppo, clinica e sociale). Il modello del biofeedback sociale di Gergely e Watson è stato proposto quale meccanismo centrale nello sviluppo dell'introspezione emotiva. In accordo a tale modello, ripetuti gravi fallimenti del biofeedback predispongono al disturbo mentale, segnatamente al disturbo borderline di personalità e al comportamento antisociale. In questo saggio mi occuperò di disturbo narcisistico di personalità, suggerendo che anche alcuni dei sintomi principali di questa patologia potrebbero derivare da disfunzioni gravi e reiterate del biofeedback. Nonostante la sua natura preliminare, la mia indagine si iscrive nell'alveo di quelle ricerche che mirano costruzione di un modello causale che vada oltre l'analisi puramente categoriale e ateoretica tipica dei manuali statistico-diagnostici.

PAROLE CHIAVE: Self; Identità personale; Social Biofeedback Model; Disturbo narcisistico di personalità

---

<sup>(a)</sup>Dipartimento di Studi Umanistici, Università degli Studi del Piemonte Orientale "Amedeo Avogadro", via Galileo Ferraris, 116 - 13100 Vercelli (I)

E-mail: [cristina.meini@uniupo.it](mailto:cristina.meini@uniupo.it) (✉)



## 1 Becoming a self

AS WILLIAM JAMES PARADIGMATICALLY SUGGESTED, the sense of self is not given at birth, but is constructed through a never-ending process of reflexivity.<sup>1</sup> In this view, self-consciousness is defined in terms of *identity*, i.e., a process of self-description that unifies and synthesizes experiences. In the illuminating words of Dan McAdams, the self is «really more like a verb; it might be called “selfing” or “I-ing”, the fundamental process of making a self out of experience».<sup>2</sup> Selfing activity produces the three different Jamesian selves-as-object: the material, social, and psychological Me-representations.

With his analysis, James paved the way for a number of theories that stressed the everlasting nature of personality development. According to many scholars, subjective integration is progressively attained through interpersonal processes. Pivotal in this sense is research at the intersection of infant studies and clinical psychology, as paradigmatically expressed in Bowlby's *attachment theory*.<sup>3</sup> Especially relevant for our analysis are his *Internal Working Models* (IWMs), memory structures that register and store significant interpersonal events.

Not surprisingly, during infancy, most IWMs represent situations involving a child and her caregivers, thus contributing to the construction of an enduring autobiographical self that is constitutively a self-in-relation-with-others, endowed with memories of past relationships and unique psychological attitudes towards new relationships. Fully endorsing Bowlby's constructive perspective on development, Giovanni Liotti<sup>4</sup> made reference to IWMs when considering mental diseases such as dissociative personality disorders. In optimal situations, secure attachment gives rise to coherent and unitary IWMs of self and others, thus promoting the development of a highly integrative selfing process in McAdams' sense. At the other extreme of the spectrum, a markedly disorganized style of attachment leads to multiple

incoherent or incompatible IWMs. In turn, dissociated relational memories generated by reiterated dysfunctional interactions progressively menace self integrity and predispose an individual to psychological suffering, as definitively attested by decades of clinical observations. In an analogous constructivist spirit, Peter Fonagy endorses a Bowlbian perspective, while putting the emphasis on the role of mentalization in self development. Since his earliest writings, Fonagy<sup>5</sup> has stressed the need to go beyond the original interpretation of attachment as a merely motivational system devoted to providing protection in situations of vulnerability. Instead, he has suggested that, in human beings, attachment has the function of promoting mindreading. More precisely, Fonagy was initially persuaded that both mindreading directed at other minds and introspective mindreading depended essentially on attachment, but progressively modified this view in accordance with empirical data that unambiguously proved the precocity of hetero-directed mindreading. By contrast, introspective mindreading develops much more slowly and is crucially modulated by the quality of interpersonal relationships. In this updated, more refined theoretical account, Fonagy suggests that the crucial process in the development of self-introspection is *social biofeedback*,<sup>6</sup> i.e. a constructive process that leads children to recognize their own emotional states.

I next describe the main distinctive features of social biofeedback.<sup>7</sup>

## 2 The social biofeedback model

The social biofeedback process typically takes place in the context of *protoconversations*, i.e., dyadic, affective relationships involving a child and her caregiver. During protoconversations, both partners are actively engaged in multimodal, affectively-charged interactions, reciprocally exchanging information through improvisation, imperfect imitation, eye contact, and sensitivity to those

dynamic features of behavior unfolding in time that Stern called «forms of vitality».<sup>8</sup> For example, the child might start a protoconversational session by vigorously smiling at her father, who in turn looks at her and touches her legs with a coherent vigorous gesture, while at the same time saying something with a high, well articulated, and assertive tone of voice. Despite their different modalities, these interactions share a coherent (vigorous and assertive) form of vitality having a high degree of contingency.

According to the social biofeedback model, protoconversations constitute the context in which the infant triggers the constructive process leading to psychological introspection.<sup>9</sup> This model firmly contrasts with the strong intersubjectivist perspective, which regards young infants as already capable of perceiving their mental states.<sup>10</sup> According to Meltzoff, for example, when infants engage in spontaneous early imitation of adult behavior, they generate the corresponding feeling states in themselves; these states are then *introspectively accessed* and attributed to the other by inference.<sup>11</sup> This is also in line with Goldman's inner-sense view, which holds that introspection ontogenetically precedes and grounds mentalization of others' minds.<sup>12</sup>

Nonetheless, a more cautious interpretation of the data usually invoked to argue that infants possess an innate, primitive, proprioceptive form of self-consciousness merely suggests an innate capacity to form first-order representations.<sup>13</sup> Although young infants can represent the world, nothing proves that they are also able to draw distinctions between inner and outer, subject and object, or self and other.<sup>14</sup> More probably, they can only experience a *core affect*,<sup>15</sup> i.e., a rough experience of hedonic pleasure and displeasure with some degree of arousal.<sup>16</sup>

In line with this view, the social biofeedback model makes the hypothesis that at the beginning of life infants have a primary bias to attend to and explore external reality. Their early representations are mainly based on *exteroceptive* stimulation; they lack a

complementary capacity to cognize their internal worlds. Such competence is constructed through a complex process sustained by children's innate sensibility to the contingency of actions.<sup>17</sup> This process progressively leads to the first form of psychological self-consciousness: *affective* self-consciousness.

A good starting point to detail social biofeedback is the *marked* nature of interactions. Indeed, focusing more closely on protoconversations, one easily notes that adults tend to respond to infants' affective expressions with «marked» mirroring, i.e., with a response that only partially mirrors children's behavior, while introducing a fictional cue. In other words, caregivers have the tendency to display reactions that are highly congruent, but also schematic, often exaggerated, and partially incoherent. For example, a parent tends to react to a sad, crying infant with an initial manifestation of sadness (as expected by perfect mirroring) that rapidly turns into a light smile. Instead, he tends to react to a joyful child with an expression that is a mix of joy (i.e., the genuinely mirrored expression), tenderness, and possibly surprise. Importantly, empirical data attest that the high-but-not perfect degree of contingency<sup>18</sup> between parental mirroring and ongoing affective experience is registered by the child.

The expressive exaggeration of parental mirroring, coupled with a soothing tone and lacking the typical behavioral consequences of genuine expressions, fulfils its first function by mitigating expression that could have had an excessively arousing effect on a young baby, still incapable of affective self-regulation. In particular, negative consequences for a sad infant are avoided or mitigated by a “non-fully sad response”, thus avoiding a vicious circle the infant would be unable to escape from. Vice versa, the joyful child would risk becoming overexcited by a parent perfectly mirroring her own excitation. More importantly for us, marked affective expressions have a crucial *pedagogical* function.<sup>19</sup> By simultaneously emphasizing central aspects of the somatic emotional

manifestations and signaling that the displayed emotion is “not for real”, the adult encourages the child to “decouple” the emotional expression from its apparent referent. Once decoupled, however, the affect-mirroring display still needs to be interpreted as referring to “someone’s emotion”. To achieve her goal, the child notices (1) a drop in the contingency between parental mirroring behavior and her ongoing core affective experiences, and (2) that a highly salient stimulus such as adult gaze is ostensibly and continuously directed at her. At the end of the monitoring process, the child becomes able to «*referentially anchor* the marked mirroring stimulus as expressing [her] *own* self-state». <sup>20</sup> In such a process, she progressively refines her sensitivity to her ongoing feeling, which is recognized in its multiple, distinct components. The name of the overall process, *social biofeedback*, recalls the terminology used in the physiological domain to denote what happens when someone is sensitized to some physiological internal event (e.g., arterial pressure) through being exposed to an external device monitoring his or her internal situation. In the social domain, the same kind of process results in emotional introspection.

To review the main steps of social biofeedback: (1) the infant notices the caregiver’s affect-mirroring but, at the same time, confusedly experiences a core affect; <sup>21</sup> (2) she becomes sensitive to the degree of contingency between actions and responses; and (3) she perceives the drop in contingency, together with the slightly fictional character of parental responses, which triggers a process that culminates in *secondary affective representations*. <sup>22</sup> These representations pertain to core affect and provide the basis for the infant’s emerging self. The selfing process has reached a crucial stage.

### 3 Breakdowns of social biofeedback

What happens when something goes wrong? Coherently with the social biofeedback model, serious and repeated break-

downs of early emotional interactions can derail the development of affective introspection, as children are prevented from establishing the necessary mapping between the representations of emotional states in others and their own innate states. <sup>23</sup>

To consider a paradigmatic case, imagine a young child interacting with an adult who suffers from a serious psychological disease. The adult, who is inattentive to the child’s affective needs because of his own suffering, not only tends to insufficiently mark his emotional expressions when responding to protoconversational stimuli, but is also easily “infected” and overwhelmed by the child’s states. For example, when his sad child starts crying, a depressed parent either does not mirror at all, or fails to mark his inattentive mirroring with some fictional element modulating the spontaneous expression of his negative experience, thus depriving the child of a crucial pedagogical cue promoting the development of introspection. The child’s sense of agency is also menaced, making it difficult for her to feel actively involved in the affective-communicative context.

It is not surprising that repeated failures of social biofeedback have been associated with the etiopathogenesis of personality disorders, notably *borderline personality disorder*. <sup>24</sup> In this condition, the poorly developed sense of self is “markedly and persistently unstable”, <sup>25</sup> incoherent, and discontinuous, engendering not only a characteristic feeling of emptiness, but also a sense of diffuse entity that Otto Kernberg for one took as the essential element in the borderline symptomatic framework. Switching self-concepts might then represent a strategy to preserve a fragile structure, as a potentially adaptive response to self-discrepant information. <sup>26</sup>

Among the most significant pathological consequences of the borderline patient’s fragile self, Fonagy and collaborators point to the regression, under conditions of emotional stress, to prementalistic styles of introspection and – consequently – to manipulative, controlling behavior. Specifically, in stressing

conditions the borderline patient experiences a sense of *psychic equivalence* in which the states of others are assimilated into her own psychic reality, such that no alternative perspective on a situation is made available and every thought appears to be concrete. This situation engenders a sense of omnipotence, i.e., the conviction of knowing whatever is in the others' minds. *Pretense* is the complementary prementalistic strategy, in which mental states are dissociated from reality and facts are described as internal experiences unmodulated by reality. According to the third prementalistic strategy – the *teleological stance* – internal states are felt only when consequences are publically manifested. Consequently, the patient continuously experiences the need to monitor and manipulate reality, as this appears to be the only way to obtain evidence of people's benevolence or antagonism.<sup>27</sup>

In this paper I aim to go beyond Fonagy's hypothesis concerning the etiopathogenesis of borderline personality disorders, in order to focus on a different personality disease whose origins could be related to repeated failures of socio-biofeedback: narcissism (NPD). This is not a straightforward enterprise, because of the variety, and even apparently reciprocal tensions, among narcissistic symptoms. In order to consider whether NPD might be related to reiterated breakdowns of social biofeedback, I devote the next section to an overview of the most recurrent pathologic manifestations. I shall examine them from the main clinical perspectives that have historically offered an explanation of this pathological condition. A deeper analysis, with reference to contemporary approaches would, though relevant, go beyond the limits of my present investigation.

#### 4 Narcissism: Some historical and clinical notes

Clinical accounts of the narcissistic personality distinguish three behavioral types. Akhtar<sup>28</sup> describes two opposite phenotypes – although he admits possible episodic fluctua-

tions between the two poles. While more “prototypical” *overt* narcissists tend to be extroverted, arrogant, assertive and aggressive, *covert* narcissists are introverted, shy, fragile and hypersensitive; nonetheless, despite their insecurity, even covert narcissists produce grandiose, unrealistic self-fantasies. Overt narcissists impose their ego on others, while covert narcissists have the propensity to withdraw from social contexts in which others could scrutinize their self-centered preoccupations. There is also a form of *malignant narcissism*,<sup>29</sup> a narcissistic structure frequently associated with antisocial behavior, psychopathy, hostility, and violence.

These three rather conflicting personality structures, described primarily in psychoanalytic accounts, are only partly reflected in the DSM-V, which stresses the sense of grandiosity: «The essential feature of narcissistic personality disorder is a pervasive pattern of grandiosity, need for admiration, and lack of empathy that begins by early adulthood and is present in a variety of contexts». <sup>30</sup> Nonetheless, the section *Associated features supporting diagnosis* reveals that «Sustained feelings of shame or humiliation and the attendant self-criticism may be associated with social withdrawal, depressed mood, and persistent depressive disorder (dysthymia) or major depressive disorder». <sup>31</sup>

In sum, some very important differences notwithstanding,<sup>32</sup> the DSM-V and psychoanalytic-oriented accounts agree that narcissism is characterized primarily by a hypertrophic sense of self, with significant fluctuations of self-esteem and a proclivity to experience self-threats.<sup>33</sup> These experiences of self-fragility lie at the origin of the characteristic violent fluctuations between a sense of grandiosity and nonentity, strong feelings of pride and profound despair.

A historical reconstruction of the clinical accounts of narcissism cannot but start with Sigmund Freud, whose writings dedicated to narcissism paved a way marked by some inconsistencies and even contradictions, but were extremely fruitful for subsequent theo-

retical research and clinical practice (although it should be remarked that, in its original sense, the Freudian construct referred to a wider condition, including paranoia, hypochondria, paraphrenia, manic-depressive psychosis, animism, and melancholy). Freud<sup>34</sup> notoriously distinguished between *primary* and *secondary* narcissism. Primary narcissism is typical of a precocious step in healthy development, in which the Ego is invested with libido. Normally, primary narcissism is followed by a stage in which the libidinal investment is readdressed towards external objects. When this process is blocked, the psychic energy is defensively redirected to the Ego, giving rise to secondary, pathological narcissism. Indeed, Freud<sup>35</sup> stressed the *self-preserving* function of narcissism, thus pointing to the defensive nature of the hypertrophic Ego.<sup>36</sup> In this theoretical framework, self-defending attitudes account for the aggressive, unempathic nature of the narcissistic type.

The existence of a *continuum* between physiology and pathology, as well as the defensive nature of narcissism, are two qualifying points that have been further scrutinized in the following decades, sometimes from theoretical perspectives that cannot be reduced to Freudian orthodoxy.

A celebrated example of heterodoxy is Donald Winnicott. From a relational point of view with a specific focus on real (as opposed to idealized) relationships, Winnicott<sup>37</sup> was skeptical about the existence of primary narcissism. From birth, children's attention is directed to the external world, above all to the interpersonal world that in early experience is mostly populated by caregivers mirroring their behavior. While attuned mirroring allows the child to see himself in the eyes of others, thus promoting self-development, reiterated failures in mirroring result in a false self; narcissism represents a defensive strategy against the feeling of vulnerability related to this false self. Winnicott's idea that the quality of mirroring significantly impacts self-construction can easily be found in

Kernberg and Kohut.

Among the legatees of Freud's seminal reflection on narcissism, Otto Kernberg<sup>38</sup> is probably the one who most vigorously highlighted its defensive and compensatory function. He made reference to a *narcissistic personality structure*, conceived as an articulation of the borderline personality disorder. Despite his deep interest (having a clear Kleinian origin) in intrapsychic processes, Kernberg agrees that pathological narcissism is grounded in early relationships with cold, usually hostile but sometimes intrusive caregivers who have excessive expectations from the child.<sup>39</sup> They claim they are investing in their "brilliant child",<sup>40</sup> but their parental style is emotionally dismissing, fundamentally avoidant but – at times – intrusive. What the child perceives through the eyes of her cold and extremely demanding parents are images that fail to match what she directly perceives about herself. While a realistic image, mixing positive and negative features, would promote self-development, unrealistic grandiose images promote no personal growth. The fracture between what the infant internally perceives and the mirrored self-images coming from the cold caregivers eventually results in a pathological but protective grandiose self, in which memories of negative experiences are expunged. Given such dynamics, unintegrated aggressiveness turns out to be a central feature in Kernberg's<sup>41</sup> analysis of pathological narcissism, a primary destructive force that in some extreme cases gives rise to *malignant narcissism*.

A rather different perspective on narcissism has been defended by Heinz Kohut,<sup>42</sup> the author who introduced the term *narcissistic personality disorder*. He made reference to the Freudian hypothesis of a beneficial primary narcissism, an early stage in which the still-unstructured self and external objects are not perceived as separate. Nonetheless, in accordance with the relational turn, he did not consider primary narcissism to be a fully self-standing, auto-referential developmental stage. Equally importantly, Kohut considered

pathological narcissism to be merely a *stop* of the developmental process. Differing from Kernberg, who invoked a developmental distortion in the etiopathogenesis of narcissism, Kohut placed the origins of the disease in the failure of a healthy internalization of idealized parental images.<sup>43</sup> Under optimal conditions, empathic parental mirroring progressively scaffolds both an idealization of parental figures and a positive, grandiose sense of self, which assumes and internalizes parental standards, thereby becoming the child's own standards. Parental positive support, together with their mirroring of the child's strength and limitations – but also momentary frustrating moments when the child is left alone by inattentive parents – structure and modulate a positive but realistic and integrated sense of self. In healthy conditions, this process results in benign adult narcissism, which is an important precondition for developing fundamental human qualities such as a sense of humor, wisdom, aesthetic interests, but also for accepting unavoidable limitations and the caducity of the human condition. When parental style is systematically cold and dismissing, the self-differentiation process is threatened. Adults' indifference and rejection prevent the child from idealizing their image and thus block the whole selfing process. The way to a pathological condition has been paved.

Importantly for us, in Kohut's perspective narcissistic adults rigidly engage in interpersonal relationships in "archaic" ways. As in infantile narcissism, they use others to scaffold and modulate their still immature self, providing that unconditioned admiration which is a necessary condition to feel alive. When such admiration is lacking, or not boundless, the reaction can be violent. Indeed, unempathic attitudes, as well as rage and aggressive or destructive propensities, are secondary reactions to narcissistic injuries, somehow necessary to overcome feelings of anxiety or shame, and ultimately to establish an extreme but provisional self-integration. In other words, violence is just a

way of expressing anxiety.

## ■ 5 Back to social biofeedback

Despite Kernberg's initial view of the narcissistic personality structure as a possible characterization of borderline personality disorder, nowadays the two pathologies are taken to be distinct and independent.<sup>44</sup> In everyday clinical practice, the most salient difference is probably the contraposition between instability and disintegration of the self. Narcissistic disaggregation of the self is structural, and not circumscribed to strong emotional experiences. Borderline patients need others to regulate their fragmented self and envisage emotionally stressing situations, while the narcissistic self cannot exist at all without grandiose self-projection. Prementalistic, archaic modalities are in place instead of full-fledged introspection, while hetero-directed mindreading can even be overpracticed, especially for manipulative goals. Indeed, in recent years, both developmental psychology and clinical practice have suggested that, in contrast to the long and complex processes that are necessary to develop introspection, hetero-directed mindreading is largely sustained by innate psychobiological mechanisms.<sup>45</sup> The narcissistic person can thus be seen as an extreme example of that dissociation, with refined hetero-directed mindreading strongly overtaking poorly-developed introspective capacities.

A scientifically informed analysis of narcissism cannot disregard the evidence for genetic predisposition – up to 79%, according to Torgersen's extensive twin study.<sup>46</sup> Nonetheless, genetic data do not rule out the influence of dysfunctional relationships, which are rather peculiar to the narcissistic pathology and attested by decades of clinical observation. Specifically, while borderline disorder tends to be associated with various insecure styles of attachment,<sup>47</sup> even the brief overview proposed above confirms the preponderance of avoidant caregiving styles in narcissism. When the mix of overvaluation and

coldness so frequently described in the clinical literature is protracted over time and constitutes the baseline for interpersonal relationships, it impacts the quality of markedness, which tends to be inattentive and, so to speak, untuned. While BPD has been associated with a preponderance of unmarked responses, the typical relational style of narcissistic people involves caregivers who are, so to speak, “coldly attentive”. In these conditions, it seems reasonable to suppose that the adult’s responses *are* marked, but rather untuned, issuing either from emotional misunderstanding or even from a failure to detect child’s emotions. Consequently, self-other differentiation through social biofeedback is strongly impaired, paving the way for a situation of compromised introspective capacities and – ultimately – for an extremely fragile self-identity that is strongly dependent on others. Pathological consequences can emerge even precociously, since NPD is even diagnosed in infancy.<sup>48</sup>

This empirical hypothesis on the peculiar nature of dysfunctional marking, and its role in the pathogenesis of narcissism, could easily be tested in controlled observational settings. Such an analysis, together with a parallel rigorous analysis of the nature of markedness in BPN, would first and foremost shed further light on the computational process – marked socio-biofeedback – that plausibly plays a causal role in the pathogenesis of personality disorders (not only BPD but also, as already suggested by Fonagy, NPD). Equally important, it could help to definitively distinguish between two pathologies that, by virtue of exhibiting similar signs and symptoms, have always been associated, even when the hypothesis of their different nature has been prevalent.

## 6 Conclusions

In this paper, I have suggested that social biofeedback represents an important component in the long and complex process of identity construction. Specifically, through proto-

conversations characterized by marked mirroring, infants acquire information that triggers a biofeedback process progressively leading to emotional introspection. Conversely, iterated serious failures of biofeedback predispose individuals to personality disorders. While the relationship between failures of biofeedback and borderline personality disorder has been investigated, the possible impact of untuned biofeedback on pathological narcissism remains to be explored.

I have suggested that NPD represents a case study for the social biofeedback perspective on self-identity development that is at least as interesting as BPD. In both cases, the selfing process seems to be blocked by serious interpersonal dysfunctions that trigger pre-mentalistic strategies such as those indicated by Fonagy and collaborators. Nonetheless, when we focus on the relational contexts related to these two pathological conditions, differences rapidly emerge. The parental style typically involved in NPD is more univocally grounded in the avoidant continuum and, at the same time, is more pervasive, while early interpersonal exchanges of borderline patients are less dysfunctional, both in time and in style.

To the extent that a relationship between mental diseases and dysfunctional computational mechanisms is explicitly established, the hypothesis on the origins of narcissism preliminarily sketched in this paper is coherent with the *strong interpretation* of the medical model applied to psychiatry.<sup>49</sup> In contrast to minimalist interpretations, which take mental disorders to be mere collections of signs and symptoms occurring together and unfolding in typical ways, strong interpretations make commitments about the underlying causes of mental illness. Ultimately, computational processes obviously take place at the neurological level, but the strong medical model does not privilege any specific level of explanation – not even the biological one. Rather, psychiatry is considered to be a multi-level science and an elucidation of the computational processes involved at any lev-

el represents an important step towards a mature explanation of mental diseases. In particular, such analysis represents concrete progress with respect to the a-theoretical and symptomatologically-based diagnostic categories of DSMs. Although the latest edition of the diagnostic-statistical manual contains, in the definition of mental disorders, a reference to «a dysfunction in the psychological, biological, or developmental processes underlying mental functioning»,<sup>50</sup> the accent is still on signs and symptoms. Advances in biological and psychological knowledge will hopefully render psychiatry more aware of its potentialities, not only from the explanatory point of view, but also for increasingly accurate clinical interventions.

## Acknowledgments

I want to thank Dr. Stefano Iacone for helping me to clarify some major clinical concepts. This work was supported by the University of Eastern Piedmont, Grant FAR 2019.

## Notes

<sup>1</sup> Cf. V. GECAS, *The self-concept*, in: «Annual Review of Sociology», vol. VIII, 1982, pp. 1-33.

<sup>2</sup> D.P. MCADAMS, *Personality, modernity, and the storied self: A contemporary framework for studying persons*, in: «Psychological Inquiry», vol. VII, n. 4, 1996, pp. 295-321, here p. 302. See also D.P. MCADAMS, K.S. COX, *Self and identity across the life span*, in: R.M. LERNER (ed.), *The handbook of life-span development*, vol. II, Wiley, New York 2010, pp. 158-207; M. DI FRANCESCO, M. MARRAFFA, A. PATERNOSTER, *The self and its defenses*, Palgrave, London 2016.

<sup>3</sup> Cf. J. BOWLBY, *Attachment and loss, vol. I: Attachment*, Basic Books, New York 1969; J. BOWLBY, *Attachment and loss, vol. II: Separation: Anxiety and anger*, Basic Books, New York 1973; J. BOWLBY, *Attachment and loss, vol. III: Loss: Sadness and depression*, Hogarth Press and Institute of Psycho-Analysis, London 1980. See also D.N. STERN, *The interpersonal world of the infant*, Basic Books, New York 1985.

<sup>4</sup> Cf. G. LIOTTI, *Disorganized/disoriented attachment in the etiology of dissociative disorders*, in:

«Dissociation», vol. V, n. 4, 1992, pp. 196-204.

<sup>5</sup> Cf. P. FONAGY, G. GERGELY, E. JURIST, M. TARGET, *Affect regulation, mentalization and the development of the self*, Other Press, New York 2002.

<sup>6</sup> Cf. G. GERGELY, J.S. WATSON, *The social biofeedback theory of parental affect-mirroring: The development of emotional self-awareness and self-control in infancy*, in: «International Journal of Psychoanalysis», vol. LXXVII, n. 6, 1996, pp. 1181-1212; G. GERGELY, J.S. WATSON, *Early social-emotional development: Contingency perception and the social biofeedback model*, in: P. ROCHAT (ed.), *Early social cognition*, Erlbaum, Hillsdale 1999, pp. 101-137.

<sup>7</sup> For details see G. GERGELY, J.S. WATSON, *The social biofeedback theory of parental affect-mirroring*, cit.; G. GERGELY, J.S. WATSON, *Early social-emotional development*, cit.; P. FONAGY, G. GERGELY, E. JURIST, M. TARGET, *Affect regulation, mentalization and the development of the self*, cit.

<sup>8</sup> Cf. D.N. STERN, *Pre-reflexive experience and its passage to reflexive experience: A developmental view*, in: «Journal of Consciousness Studies», vol. XVI, n. 10-12, 2009, pp. 307-331; D.N. STERN, *Forms of vitality: Exploring dynamic experience in psychology, the arts, psychotherapy, and development*, Oxford University Press, Oxford 2010.

<sup>9</sup> Cf. G. GERGELY, J.S. WATSON, *The social biofeedback theory of parental affect-mirroring*, cit.; G. GERGELY, J.S. WATSON, *Early social-emotional development*, cit.; P. FONAGY, G. GERGELY, E. JURIST, M. TARGET, *Affect regulation, mentalization and the development of the self*, cit.; G. GERGELY, *The social construction of the subjective self: The role of affect-mirroring, markedness, and ostensive communication in self development*, in: L. MAYES, P. FONAGY, M. TARGET (eds.), *Developmental science and psychoanalysis*, Karnac, London 2007, pp. 45-82; G. GERGELY, Z. UNOKA, *Attachment, affect-regulation and mentalization*, in: E.L. JURIST, A. SLADE, S. BERGNER (eds.), *Mind to mind: Infant research, neuroscience and psychoanalysis*, Other Press, New York 2008, pp. 50-88; G. GERGELY, O. KOÓS, J.S. WATSON, *Contingent parental reactivity in early socio-emotional development*, in: T. FUCHS, H. C. SATTEL, P. HENNINGSEN (eds.), *The embodied self: Dimensions, coherence and disorders*, Schattauer, Stuttgart 2010, pp. 141-169.

<sup>10</sup> Cf. A.N. MELTZOFF, *Origins of social cognition*, in: M.R. BANAJI, S.A. GELMAN (eds.), *Navigating the social world*, Oxford University Press, Oxford 2013, pp. 139-144; S. GALLAGHER, D. ZAHAVI,

*Phenomenological approaches to self-consciousness*, in: E.N. ZALTA (ed.), *The Stanford encyclopedia of philosophy*, 2015, Spring Edition, URL: <<http://plato.stanford.edu/archives/spr2015/entries/self-consciousness-phenomenological/>>; P. ROCHAT, *Primordial sense of an embodied self-unity*, in: V. SLAUGHTER C. BROWNELL (eds.), *Early development of body representations*, Cambridge University Press, New York 2012, pp. 3-18; S.C. PREBBLE, D.R. ADDIS, L.J. TIPPETT, *Autobiographical memory and sense of self*, in: «Psychological Bulletin», vol. XXXIX, n. 4, 2013, pp. 815-840.

<sup>11</sup> Cf. A.N. MELTZOFF, *Origins of social cognition*, cit.

<sup>12</sup> Cf. A.I. GOLDMAN, *Simulating minds*, Oxford University Press, Oxford 2006.

<sup>13</sup> Cf. M. DI FRANCESCO, M. MARRAFFA, A. PATERNOSTER, *The self and its defenses*, cit.; M. MARRAFFA, C. MEINI, *Forms of vitality revisited: The construction of an affective bodily self*, in: «Theory & Psychology», vol. XXIX, n. 1, 2019, pp. 27-45.

<sup>14</sup> Cf. M. MARRAFFA, C. MEINI, *Forms of vitality revisited*, cit.

<sup>15</sup> Cf. L.F. BARRETT, J.A. RUSSELL (eds.), *The psychological construction of emotion*, Guilford Press, New York 2015.

<sup>16</sup> Cf. K. LINDQUIST, T. WAGER, H. KOBER, E. BLISS-MOREAU, L.F. BARRETT, *The brain basis of emotion: A meta-analytic review*, in: «Behavioral & Brain Sciences», vol. XXXV, n. 3, 2012, pp. 121-143.

<sup>17</sup> For details see G. GERGELY, J.S. WATSON, *The social biofeedback theory of parental affect-mirroring*, cit.; G. GERGELY, J.S. WATSON, *Early social-emotional development*, cit.

<sup>18</sup> In the social biofeedback model, the Contingency Detector is the computational mechanism enabling the child (as the adult) to evaluate the conditional probability between self-produced actions and their effects (cf. G. GERGELY, J.S. WATSON, *The social biofeedback theory of parental affect-mirroring*, cit.; G. GERGELY, J.S. WATSON, *Early social-emotional development*, cit.).

<sup>19</sup> Cf. G. CSIBRA, G. GERGELY, *Natural pedagogy as evolutionary adaptation*, in: «Philosophical Transactions of the Royal Society – Section B: Biological Sciences», vol. CCCXLVI, n. 1567, 2011, pp. 1149-1157.

<sup>20</sup> G. GERGELY, J.S. WATSON, *The social biofeedback theory of parental affect-mirroring*, cit., p. 1199.

<sup>21</sup> Cf. L.F. BARRETT, J.A. RUSSELL (eds.), *The psychological construction of emotion*, cit.

<sup>22</sup> Arguably, each episode of social biofeedback

contributes to a global process that takes time to be entirely accomplished. Only at the end of such macro-process the child has become really capable to introspectively recognize her emotions.

<sup>23</sup> Cf. M. HERNIK, P. FEARON, P. FONAGY, *There must be more to development of mindreading and metacognition than passing false belief tasks*, in: «Behavioral and Brain Sciences», vol. XXXII, n. 2, 2009, pp.147-148.

<sup>24</sup> See, e.g., P. FONAGY, A. BATEMAN, *Mechanisms of change in mentalization-based treatment of BPD*, in: «Journal of Clinical Psychology», vol. LXII, n. 4, 2006, pp. 411-430; P. FONAGY, A. BATEMAN, *The development of borderline personality disorder – A mentalizing model*, in: «Journal of Personality Disorders», vol. XXII, n. 1, 2008, pp. 4-21; P. FONAGY, P. LUYTEN, *A developmental, mentalization-based approach to the understanding and treatment of borderline personality disorder*, in: «Development and Psychopathology», vol. XXI, n. 4, 2009, pp. 1355-1381.

<sup>25</sup> AMERICAN PSYCHIATRIC ASSOCIATION, *Diagnostic and statistical manual of mental disorders*, 5<sup>th</sup> Edition, American Psychiatric Publishing, Washington 2013, p. 664.

<sup>26</sup> Cf. K. VAN DEN BROECK, *Specificity and vantage perspective of autobiographical memories in borderline pathology*, Ph.D. Thesis, University of Leuven 2014.

<sup>27</sup> Cf. P. FONAGY, G. GERGELY, E. JURIST, M. TARGET, *Affect regulation, mentalization and the development of the self*, cit.; P. FONAGY, A. BATEMAN, *The development of borderline personality disorder - A mentalizing model*, cit.

<sup>28</sup> Cf. S. AKHTAR, J.A. THOMSON, *Overview: Narcissistic personality disorder*, in: «American Journal of Psychiatry», vol. CXXXIX, n. 1, 1982, pp. 12-20; S. AKHTAR, *Narcissistic personality disorder: Descriptive features and differential diagnosis*, in: «Psychiatric Clinics of North America», vol. II, n. 3, 1989, pp. 505-530; S. AKHTAR, *The shy narcissist*, in: S. AKHTAR, *New clinical realms. Pushing the envelope of theory and technique*, Jason Aronson Inc., Northvale (NJ) 2003, pp. 47-58.

<sup>29</sup> Cf. O.F. KERNBERG, *The psychotherapeutic management of psychopathic, narcissistic and paranoid transference*, in: T. MILLON, E. SIMONSEN, M. BIRKET-SMITH, R.D. DAVIS (eds.), *Psychopathy. Antisocial, violent and criminal behavior*, Guilford Press, New York 1998, pp. 372-392.

<sup>30</sup> AMERICAN PSYCHIATRIC ASSOCIATION, *Diagnostic and statistical manual of mental disorders*, 5<sup>th</sup> Edition, cit., p. 670.

<sup>31</sup> *Ibid.*, p. 671.

<sup>32</sup> See also E. RONNINGSTAM, J. GUNDERSON, *Differentiating borderline personality disorder from narcissistic personality disorder*, in «Journal of Personality Disorders», vol. V, n. 3, 1991, pp. 225-232.

<sup>33</sup> Cf. E. RONNINGSTAM, *Narcissistic personality disorder: Facing DSM-V*, in: «Psychiatric Annals», vol. XXXIX, n. 3, 2009, pp. 111-121.

<sup>34</sup> Cf. S. FREUD, *On narcissism* (1914), in: *The Standard Edition of the complete psychological works of Sigmund Freud*, vol. XIV, edited by J. STRACHEY, Hogarth Press, London 1966, pp. 66-102.

<sup>35</sup> Cf. S. FREUD, *Libidinal types* (1931), in: *The Standard Edition of the complete psychological works of Sigmund Freud*, vol. XXI, edited by J. STRACHEY, Hogarth Press, London 1966, pp. 217-220.

<sup>36</sup> Cf. K.N. LEVY, W.D. ELLISON, J.S. REYNOSO, *A historical review of narcissism and narcissistic personality*, in: W.K. CAMPBELL, J.D. MILLER (eds.), *The handbook of narcissism and narcissistic personality disorders: Theoretical approaches, empirical findings, and treatments*, John Wiley & Sons, London 2011, pp. 3-13.

<sup>37</sup> Cf. D.W. WINNICOTT, *Mirror-role of mother and family in child development*, in: D.W. WINNICOTT, *Playing and reality*, Routledge, New York 1971, pp. 149-159.

<sup>38</sup> Cf. O.F. KERNBERG, *Borderline conditions and pathological narcissism*, Aronson, New York 1975.

<sup>39</sup> In an interesting longitudinal study, Brummelman and colleagues observed 565 children ranging from 7 to 12 years of age. Parental warmth turns out to be predictive of the level of self-esteem, while parental overvaluation predicts narcissistic self over-esteem. See E. BRUMMELMAN, T. SANDER, S.A. NELEMANS, B. OROBIO DE CASTRO, G. OVERBEEK, B.J. BUSHMAN, *Origins of narcissism in children*, in: «Proceedings of the National Academy of Sciences», vol. CXII, n. 12, 2015, pp. 3659-3662.

<sup>40</sup> Cf. O.F. KERNBERG, *Borderline conditions and pathological narcissism*, cit.; see also K. KERNBERG BARDENSTEIN, *The cracked mirror: Features of narcissistic personality disorder in children*, in: «Psychiatric Annals», vol. XXXIX, n. 3, 2009, pp. 147-155.

<sup>41</sup> Cf. O.F. KERNBERG, *Severe personality disorders*, Yale University Press, New Haven 1984.

<sup>42</sup> Cf. H. KOHUT, *Forms and transformations of narcissism*, in: «American Journal of Psychotherapy», vol. XIV, n. 2, 1966, pp. 243-272; H. KO-

HUT, *The psychoanalytic treatment of narcissistic personality disorder*, in: «Psychoanalytic Study of the Child», vol. XXIII, n. 1, 1968, pp. 86-113.

<sup>43</sup> Cf. H. KOHUT, *The analysis of the self*, International Universities Press, New York 1971; H. KOHUT, *The restoration of the self*, International University Press, New York 1977.

<sup>44</sup> Cf. AMERICAN PSYCHIATRIC ASSOCIATION, *Diagnostic and statistical manual of mental disorders*, 5<sup>th</sup> Edition, cit.

<sup>45</sup> Cf. e.g., G. GERGELY, Z. UNOKA, *Attachment, affect-regulation and mentalization*, cit.; M. MARRAFFA, C. MEINI, *Forms of vitality revisited*, cit.

<sup>46</sup> Cf. S. TORGENSEN, S. LYGREN, P. A. OIEN, I. SKRE, S. ONSTAD, J. EDVARDSON, K. TAMBS, E. KRINGELN, *A twin study of personality disorders*, in: «Comprehensive Psychiatry», vol. XLI, n. 6, 2000, pp. 416-425. See also E. RONNINGSTAM, *Identifying and understanding the narcissistic personality*, Oxford University Press, Oxford/New York 2005.

<sup>47</sup> Cf., e.g., A. BUCHHEIM, C. GEORGE, *Attachment disorganization in borderline personality disorder and anxiety disorder*, in: J. SOLOMON, C. GEORGE (eds.), *Disorganized attachment and caregiving*, Guilford Press, New York, 2011, pp. 343-382; R. MILJKOVITCH, A.S. DEBORDE, A. BERNIER, M. CORCOS, M. SPERANZA, A. PHAM-SCOTTEZ, *Borderline personality disorder in adolescence as a generalization of disorganized attachment*, in: «Frontiers in Psychology», vol. IX, Art. Nr. 1962, 2018 – doi: 10.3389/fpsyg.2018.01962; L.N. SCOTT, K.N. LEVY, A.L. PINCUS, *Adult attachment, personality traits, and borderline personality disorder features in young adults*, in: «Journal of Personality Disorders», vol. XXIII, n. 3, 2009, pp. 258-280.

<sup>48</sup> Cf. K. KERNBERG BARDENSTEIN, *The cracked mirror*, cit.

<sup>49</sup> Cf. D. MURPHY, *Psychiatry in the scientific image*, MIT Press, Cambridge (MA) 2006.

<sup>50</sup> AMERICAN PSYCHIATRIC ASSOCIATION, *Diagnostic and statistical manual of mental disorders*, 5<sup>th</sup> Edition, cit., p. 64: «A mental disorder is a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning. Mental disorders are usually associated with significant distress or disability in social, occupational, or other important activities. An expectable or culturally approved response to a common stressor or loss, such as the death of a loved one, is not a

mental disorder. Socially deviant behavior (e.g., political, religious, or sexual) and conflicts that are primarily between the individual and society

are not mental disorders unless the deviance or conflict results from a dysfunction in the individual, as described above».

## References

- AKHTAR, S. (1989). *Narcissistic personality disorder: Descriptive features and differential diagnosis*. In: «Psychiatric Clinics of North America», vol. II, n. 3, pp. 505-530.
- AKHTAR, S. (2003). *The shy narcissist*. In: S. AKHTAR, *New clinical realms. Pushing the envelope of theory and technique*, Jason Aronson Inc., Northvale (NJ), pp. 47-58.
- AKHTAR, S., THOMSON, J.A. (1982). *Overview: Narcissistic personality disorder*. In: «American Journal of Psychiatry», vol. CXXXIX, n. 1, pp. 12-20.
- AMERICAN PSYCHIATRIC ASSOCIATION (2013). *Diagnostic and statistical manual of mental disorders*, 5<sup>th</sup> Edition, American Psychiatric Publishing, Washington.
- BARRETT, L.F., RUSSELL, J.A. (eds.) (2015), *The psychological construction of emotion*, Guilford Press, New York.
- BOWLBY, J. (1969). *Attachment and loss, vol. I: Attachment*, Basic Books, New York.
- BOWLBY, J. (1973). *Attachment and loss, vol. II: Separation: Anxiety and anger*, Basic Books, New York.
- BOWLBY, J. (1980). *Attachment and loss, vol. III: Loss: Sadness and depression*, Hogarth Press and Institute of Psycho-Analysis, London.
- BRUMMELMAN, E., SANDER, T., NELEMANS, S.A., OROBIO DE CASTRO, B., OVERBEEK, G., BUSHMAN, B.J. (2015). *Origins of narcissism in children*. In: «Proceedings of the National Academy of Sciences», vol. CXII, n. 12, pp. 3659-3662.
- BUCHHEIM, A., GEORGE, C. (2011). *Attachment disorganization in borderline personality disorder and anxiety disorder*. In: J. SOLOMON, C. GEORGE (eds.), *Disorganized attachment and caregiving*, Guilford Press, New York, pp. 343-382.
- CSIBRA, G., GERGELY, G. (2011). *Natural pedagogy as evolutionary adaptation*. In: «Philosophical Transaction of the Royal Society – Section B: Biological Sciences», vol. CCCXLVI, n. 1567, pp. 1149-1157.
- DI FRANCESCO, M., MARRAFFA, M., PATER-NOSTER, A. (2016). *The self and its defenses*, Palgrave, London.
- FONAGY, P., BATEMAN, A. (2006). *Mechanisms of change in mentalization-based treatment of BPD*. In: «Journal of Clinical Psychology», vol. LXII, n. 4, pp. 411-430.
- FONAGY, P., BATEMAN, A. (2008). *The development of borderline personality disorder - A mentalizing model*. In: «Journal of Personality Disorders», vol. XXII, n. 1, pp. 4-21.
- FONAGY, P., GERGELY, G., JURIST, E., TARGET, M. (2002). *Affect regulation, mentalization and the development of the self*, Other Press, New York.
- FONAGY, P., LUYTEN, P. (2009). *A developmental, mentalization-based approach to the understanding and treatment of borderline personality disorder*. In: «Development and Psychopathology», vol. XXI, n. 4, pp. 1355-1381.
- FREUD, S. (1966). *On narcissism (1914)*. In: *The Standard Edition of the complete psychological works of Sigmund Freud*, vol. XIV, edited by J. STRACHEY, Hogarth Press, London, pp. 66-102.
- FREUD, S. (1966). *Libidinal types (1931)*. In: *The Standard Edition of the complete psychological works of Sigmund Freud*, vol. XXI, edited by J. STRACHEY, Hogarth Press, London, pp. 217-220.
- GALLAGHER, S., ZAHAVI, D. (2015). *Phenomenological approaches to self-consciousness*. In: E.N. ZALTA (ed.), *The Stanford encyclopedia of philosophy*, Spring Edition 2015, URL: <<http://plato.stanford.edu/archives/spr2015/entries/self-consciousness-phenomenological/>>.
- GECAS, V. (1982). *The self-concept*. In: «Annual Review of Sociology», vol. VIII, pp. 1-33.
- GERGELY, G. (2007). *The social construction of the subjective self: The role of affect-mirroring, markedness, and ostensive communication in self development*. In: L. MAYES, P. FONAGY, M. TARGET (eds.), *Developmental science and psychoanalysis*, Karnac, London, pp. 45-82.
- GERGELY, G., KOÓS, O., WATSON, J.S. (2010). *Contingent parental reactivity in early socio-*

- emotional development*. In: T. FUCHS, H. C. SATTEL, P. HENNINGSEN (eds.), *The embodied self: Dimensions, coherence and disorders*, Schattauer, Stuttgart, pp.141-169.
- GERGELY, G., UNOKA, Z. (2008). *Attachment, affect-regulation and mentalization*. In: E.L. JURIST, A. SLADE, S. BERGNER (eds.), *Mind to mind: Infant research, neuroscience and psychoanalysis*, Other Press, New York, pp. 50-88.
- GERGELY, G., WATSON, J.S. (1996). *The social biofeedback theory of parental affect-mirroring: The development of emotional self-awareness and self-control in infancy*. In: «International Journal of Psychoanalysis», vol. LXXVII, n. 6, pp. 1181-1212.
- GERGELY, G., WATSON, J.S. (1999). *Early social-emotional development: Contingency perception and the social biofeedback model*. In: P. ROCHAT (ed.), *Early social cognition*, Erlbaum, Hillsdale, pp. 101-137.
- GOLDMAN, A.I. (2006). *Simulating minds*, Oxford University Press, Oxford.
- HERNIK, M., FEARON, P., FONAGY, P. (2009). *There must be more to development of mindreading and metacognition than passing false belief tasks*. In: «Behavioral & Brain Sciences», vol. XXXII, n. 2, pp.147-148.
- KERNBERG BARDENSTEIN, K. (2009). *The cracked mirror: Features of narcissistic personality disorder in children*. In: «Psychiatric Annals», vol. XXXIX, n. 3, pp. 147-155.
- KERNBERG, O.F. (1975). *Borderline conditions and pathological narcissism*, Aronson, New York.
- KERNBERG, O.F. (1984). *Severe personality disorders*, Yale University Press, New Haven.
- KERNBERG, O.F. (1998). *The psychotherapeutic management of psychopathic, narcissistic and paranoid transference*. In: T. MILLON, E. SIMONSEN, M. BIRKET-SMITH, R.D. DAVIS (eds.), *Psychopathy. Antisocial, violent and criminal behavior*, Guilford Press, New York, pp. 372-392.
- KOHUT, H. (1966). *Forms and transformations of narcissism*. In: «American Journal of Psychotherapy», vol. XIV, n. 2, pp. 243-272.
- KOHUT, H. (1968). *The psychoanalytic treatment of narcissistic personality disorder*. In: «Psychoanalytic Study of the Child», vol. XXIII, n. 1, pp. 86-113.
- KOHUT, H. (1971). *The analysis of the self*, International Universities Press, New York.
- KOHUT, H. (1977). *The restoration of the self*, International University Press, New York.
- LEVY, K.N., ELLISON, W.D., REYNOSO, J.S. (2011). *A historical review of narcissism and narcissistic personality*. In: W.K. CAMPBELL, J.D. MILLER (eds.), *The handbook of narcissism and narcissistic personality disorders: Theoretical approaches, empirical findings, and treatments*, John Wiley & Sons, London, pp. 3-13.
- LINDQUIST, K., WAGER, T., KOBER, H., BLISS-MOREAU, E., BARRETT, L.F. (2012). *The brain basis of emotion: A meta-analytic review*. In: «Behavioral & Brain Sciences», vol. XXXV, n. 3, pp. 121-143.
- LIOTTI, G. (1992). *Disorganized/Disoriented attachment in the etiology of dissociative disorders*. In: «Dissociation», vol. V, n. 4, pp. 196-204.
- MARRAFFA, M., MEINI, C. (2019). *Forms of vitality revisited: The construction of an affective bodily self*. In: «Theory & Psychology», vol. XXIX, n. 1, pp. 27-45.
- MCADAMS, D.P. (1996). *Personality, modernity, and the storied self: A contemporary framework for studying persons*. In: «Psychological Inquiry», vol. VII, n. 4, pp. 295-321.
- MCADAMS, D.P., COX, K.S. (2010). *Self and identity across the life span*. In: R.M. LERNER (ed.), *The handbook of life-span development*, vol. II, Wiley, New York, pp. 158-207.
- MELTZOFF, A.N. (2013). *Origins of social cognition*. In: M.R. BANAJI, S.A. GELMAN (eds.), *Navigating the social world*, Oxford University Press, Oxford, pp. 139-144.
- MILJKOVITCH, R., DEBORDE, A.S., BERNIER, A., CORCOS, M., SPERANZA, M., PHAM-SCOTTEZ, A. (2018). *Borderline personality disorder in adolescence as a generalization of*

- disorganized attachment*. In: «Frontiers in Psychology», vol. IX, Art. Nr. 1962, – doi: 10.3389/fpsyg.2018.01962.
- MURPHY, D. (2006). *Psychiatry in the scientific image*, MIT Press, Cambridge (MA).
- PREBBLE, S.C., ADDIS, D.R., TIPPETT, L.J. (2013). *Autobiographical memory and sense of self*. In: «Psychological Bulletin», vol. XXXIX, n. 4, pp. 815-840.
- ROCHAT, P. (2012). *Primordial sense of an embodied self-unity*. In: V. SLAUGHTER C. BROWNELL (eds.), *Early development of body representations*, Cambridge University Press, New York, pp. 3-18.
- RONNINGSTAM, E. (2005). *Identifying and understanding the narcissistic personality*, Oxford University Press, New York.
- RONNINGSTAM, E. (2009). *Narcissistic personality disorder: Facing DSM-V*. In: «Psychiatric Annals», vol. XXXIX, n. 3, pp. 111-121.
- RONNINGSTAM, E., GUNDERSON, J. (1991). *Differentiating borderline personality disorder from narcissistic personality disorder*. In: «Journal of Personality Disorders», vol. V, n. 3, pp. 225-232.
- SCOTT, L.N., LEVY, K.N., PINCUS, A.L. (2009). *Adult attachment, personality traits, and borderline personality disorder features in young adults*. In: «Journal of Personality Disorders», vol. XXIII, n. 3, pp. 258-280.
- STERN, D.N. (1985). *The interpersonal world of the infant*, Basic Books, New York.
- STERN, D.N. (2009). *Pre-reflexive experience and its passage to reflexive experience: A developmental view*. In: «Journal of Consciousness Studies», vol. XVI, n. 10-12, pp. 307-331.
- STERN, D.N. (2010). *Forms of vitality: Exploring dynamic experience in psychology, the arts, psychotherapy, and development*, Oxford University Press, Oxford.
- TORGENSEN, S., LYGREN, S., OIEN, P.A., SKRE, I., ONSTAD, S., EDVARDSON, J., TAMBS, K., KRINGELN, E. (2000). *A twin study of personality disorders*. In: «Comprehensive Psychiatry», vol. XLI, n. 6, pp. 416-425.
- VAN DEN BROECK, K. (2014). *Specificity and vantage perspective of autobiographical memories in borderline pathology*, Ph.D. Thesis, University of Leuven.
- WINNICOTT, D.W. (1971). *Mirror-role of mother and family in child development*. In: D.W. WINNICOTT, *Playing and reality*, Routledge, New York, pp. 149-159.