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Mit Beiträgen von

Peter Berz, Brigitte Boothe, Felicity Callard,
Knut Ebeling, Ilit Ferber, Eckart Goebel, Christine Kirchhoff,
Constantina Papoulias, Armin Schäfer, Gerhard Scharbert,
Heinz Schott und Mai Wegener,

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The rehabilitation of the drive in neuropsychanalysis: from sexuality to self-preservation

CONSTANTINA PAPOULIAS AND FELICITY CALLARD

The bridge between neuroscience and psychoanalysis

In the course of the last quarter century, and in tandem with the exponential growth in neuroscientific research, a number of writings have been published that address the relationship between psychoanalysis and the neurosciences.¹ Many of those writings have been characterized by their desire for the establishment of cordial relations, at the very least, or for future marriage, at their most optimistic. The hope that animates such desires is that the empirical potency of current brain-based neuropsychological research can amplify or clarify Freud's insights regarding the psychical apparatus. The Nobel Prize-winning neuroscientist Eric Kandel, for example, argued in 1998 that »The future of psychoanalysis, if it is to have a future, is in the context of an empirical psychology, abetted by imaging techniques, neuroanatomical methods, and human genetics.«² Kandel followed this statement a year later with a stronger call for the creation of a unified discipline: »One would hope that the excitement and success of current biology would

¹ See for example Rachel B. Blass and Zvi Carmeli: »Th Awareness, Desire e Case against Neuropsychanalysis: On Fallacies Underlying Psychoanalysis' Latest Scientific Trend and Its Negative Impact on Psychoanalytic Discourse,« in: *International Journal of Psycho-Analysis*, 88 (2007), 19–40; Arnold M. Cooper: »Will Neurobiology Influence Psychoanalysis?,« in: *Am I Psychiatry*, 142 (1985), 1395–1402; Eric R. Kandel: »Biology and the Future of Psychoanalysis: A new Intellectual Framework for Psychiatry Revisited,« in: *Am I Psychiatry*, 156 (1999), 505–521; Eric R. Kandel: »A New Intellectual Framework for Psychiatry,« in: *Am I Psychiatry*, 155 (1998), 457–469; Eric R. Kandel: *Psychiatry, Psychoanalysis, and the New Biology of Mind*, Arlington 2005; Mauro Mancía: »Implicit Memory and Early Unpressed Unconscious: Their Role in the Therapeutic Process,« in: *International Journal of Psycho-Analysis*, 87 (2006), 83–103; Jaak Panksepp: »Neuro-Psychoanalysis May Enliven the Mindbrain Sciences,« in: *Cortex*, 43 (2007), 1106–1107; Sydney E. Pulver: »On the Astonishing Clinical Irrelevance of Neuroscience,« in: *Journal of the American Psychoanalytic Association* 51, 1–18; Oliver Turnbull & Mark Solms: »Awareness, Desire and False Beliefs: Freud in the Light of Modern Neuropsychology,« in: *Cortex*, 43 (2007), 1083–1090; Oliver Turnbull & Mark Solms: »Big Issues, Little Issues ...,« in: *Cortex*, 43 (2007), 1116–1121; Watt: »The Dialogue between Psychoanalysis and Neuroscience: Alienation and Reparation,« in: *Neuro-Psychoanalysis*, 2 (2000), 183–192.

² Kandel: »A New Intellectual Framework for Psychiatry,« (note 1), 468.

rekindle the investigative curiosities of the psychoanalytic community and that a unified discipline of neurobiology, cognitive psychology, and psychoanalysis would forge a new and deeper understanding of mind«. ³ The emergence of neuropsychanalysis comprises a vigorous response to Kandel's hopeful prompting.

The nascent field of neuropsychanalysis positions itself as a putative bridge between two »historically divided disciplines«. ⁴ In this chapter, we address this attempt to bridge these two disciplines, through considering a particular scientific and conceptual debate that is taking place within this new field. Neuropsychanalysis is a diverse and loosely defined interdisciplinary field that comprises the efforts of researchers and clinicians within several branches of both psychoanalysis and the neurosciences to construct a shared space of inquiry in which clinical concepts and findings can be correlated with neuronal data and models. ⁵ While researchers differ in how they conceptualize the specific contours of this shared space, they tend to converge in their desire to figure out

³ Kandel: »Biology and the Future of Psychoanalysis,« (note 1).

⁴ This phrase is taken from the editors' introduction to the first issue of *Neuro-Psychoanalysis*. Edward Nersessian & Mark Solms: »Editors' Introduction,« in: *Neuro-Psychoanalysis*, 1 (1999), 3–4. The one significant critique of neuropsychanalysis published to date, that by Rachel Blass and Zvi Carmeli, argues that, far from being a bridge between two disciplines, neuropsychanalysis »rather leads to a new perspective on the nature of psychoanalysis – a biologicistic one«. They argue that the debate over neuropsychanalysis is therefore a debate »over the very essence and aims of psychoanalysis«. Blass and Carmeli: »The Case against Neuropsychanalysis,« (note 1), p. 20. Our chapter, while sharing Blass and Carmeli's critical focus on the role of biology within neuropsychanalysis, is preoccupied with a different issue. Their critique centres on the marginalization of »psychological meaning, truth and ideas« (p. 37) within what they see as a biologized neuropsychanalysis. Our concern here lies in the way in which neuropsychanalysis positions the drive in the service of self-preservation, which, we suggest, has ramifications for how it conceptualizes the psyche, and for how it uses and interprets neuroscientific findings.

⁵ We shall use the words neuropsychanalysis and neuropsychanalysts as umbrella terms to denote those committed to bringing the neurosciences into conversation with psychoanalysis; it is important to note that not all of those engaged in such conversations would describe themselves as neuropsychanalytic researchers. These words are arguably most closely associated with the neuroscientist and psychoanalyst Mark Solms, and with the research published in the journal *Neuro-Psychoanalysis*, which Solms co-founded. For a selection of research published elsewhere that could be described as neuropsychanalytic, see: Ariane Bazan: *Des fantômes dans la voix: Une Hypothèse neuropsychanalytique sur la Structure de L'inconscient*, Montreal 2007. Robin L. Carhart-Harris & Karl J. Friston: »The Default-Mode, Ego-Functions and Free-Energy: A neurobiological Account of Freudian Ideas,« in: *Brain*, 133 (2010), 1265–1283; Robin L. Carhart-Harris et al.: »Mourning and Melancholia Revisited: Correspondences between Principles of Freudian Metapsychology and Empirical Findings in Neuropsychiatry,« in: *Annals of General Psychiatry*, 7 (2008); Mauro Mancia: *Psychoanalysis and Neuroscience*, New York 2006; Avi Peled: *Neuroanalysis: Bridging the Gap between Neuroscience, Psychoanalysis, and Psychiatry*, Hove 2008.

how Freudian concepts might be anchored through neurobiological and anatomico-functional investigations.⁶

For the purposes of this chapter, we confine ourselves to discussions taking place within the journal *Neuro-Psychoanalysis*, and in associated publications by some of its most prominent contributors. *Neuro-Psychoanalysis* has been a key mouthpiece of the field since its establishment in 1999. *Neuro-Psychoanalysis*, as the introduction in the first issue by editors Edward Nersessian and Mark Solms makes clear, assumes an underlying ›unity of purpose‹ between neuroscience and psychoanalysis. Indeed, Solms and Nersessian use a quotation from Freud's *The Interpretation of Dreams* to present this purpose as the rendering intelligible of »the complications of mental functioning,« which would proceed through a dissection of that functioning and an assignation of »different constituents to different component parts of the apparatus.«⁷ Researchers at the forefront of the neuropsychanalytic project are convinced that neuroscience and psychoanalysis »are ultimately pursuing the same task«: while they are understood to have approached this task »from radically different perspectives,« there is, these researchers argue, the possibility of »consilience.«⁸ Our argument proceeds by investigating how neuropsychanalysts conceptualize the »complications of mental functioning« with a view to producing such consilience.

We focus here on neuropsychanalytic discussions of the drive (*Trieb*). The drive is, of course, one of the most central terms in Freud's writings, as it represents the fundamental force animating the psychic apparatus. The drive was also the focus of extensive discussion in the first few issues of the journal *Neuro-Psychoanalysis*, and has been so again periodically

⁶ Carhart-Harris & Friston, for example, discuss the importance of »explor[ing] the notion that *Freudian constructs may have real neurobiological substrates*« (»The Default-Mode, Ego-Functions and Free-Energy,« note 5). Mauro Mancia argues that the new conversations between neuroscience and psychoanalysis are »intended to produce experimental data to amplify basic psychoanalytical concepts and give them anatomical-functional consistency in the attempt, already theorized by Freud, of one day being able to explain the mind ... in scientific terms as close as possible to those used in chemistry, physics and biology« (Carhart-Harris & Friston: »The Default-Mode, Ego-Functions and Free-Energy,« [note 5], p. 1265; Mancia: *Psychoanalysis and Neuroscience*, [note 5], p. 2).

⁷ Sigmund Freud: »Interpretation of Dreams,« in: *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. By James Strachey, London 1900.

⁸ These quotations are from Nersessian & Solm's ›Editors' introduction‹ to the first issue of the journal *Neuro-Psychoanalysis* (Nersessian and Solms: »Editors' Introduction,« [note 4], p. 3). The editors specify that the journal »will publish unsolicited original articles on any topic that can facilitate consilience between psychoanalysis and neuroscience« (p. 3). The title of Jaak Panksepp's article in the first issue is Jaak Panksepp: »Emotions as Viewed by Psychoanalysis and Neuroscience: An Exercise in Consilience,« in: *Neuro-Psychoanalysis*, 1 (1999), 15–38. The term ›consilience‹ is most obviously associated with E. O. Wilson (Edward O. Wilson: *Consilience: The Unity of Knowledge*, New York 1998).

since. The writings on which we focus attempt to meld a particular set of Freudian formulations with experimental data and concepts drawn from a range of neuroscientific and allied disciplines. We argue that in doing so, the writings are committed to submitting both the normative workings of the psyche and the neurobiological systems that may correlate with such workings to the function of self-preservation. This overarching commitment, we claim, shadows and determines both neuropsychanalytic readings of Freud's texts, as well as neuropsychanalytic researchers' discussion of neurobiological findings.

Our argument moves from a consideration of the place of the drive in psychoanalysis to an elaboration of some of the recent neuropsychanalytic attempts to pin down the drive. We subsequently turn briefly to the writings of psychoanalyst and philosopher Jean Laplanche, whose own readings and recastings of the Freudian oeuvre centrally engage the question of the drive. Laplanche provides an exemplary counterpoint to the neuropsychanalytic writings, in so far as he is preoccupied with untethering the drive – and, through it, the psychic apparatus – from self-preservation. Laplanche acknowledges that Freud's writings on the drive do indeed frequently engage the register of self-preservation – and manifest a frequent recourse to a language of ›function‹ and ›need‹. Through careful readings of the Freudian corpus, he argues, however, that the key discovery of psychoanalysis, that of the vicissitudes of human sexuality, perverts the register of self-preservation. For Laplanche, *»it is sexuality which represents the model of every drive and probably constitutes the only drive in the strict sense of the term«*⁹; any formulation of the drive that in some ways cleaves to psychoanalysis must, on Laplanche's account, therefore contend with the vicissitudes of human sexuality and the perversion of ›function‹ that it subtends. In the course of the chapter, we focus on the neuropsychanalytic investment in self-preservation in order to reflect on how guiding assumptions (whether explicit or implicit) underpin the approaches that those from different disciplines and epistemological starting points take to reading Freud. In so doing, we indicate how such guiding assumptions shadow neuropsychanalytic claims that there might be *»a unity of purpose«* between the two *»historically divided disciplines,«* and pose dangers as well as openings for interdisciplinary projects such as neuropsychanalysis.

⁹ Jean Laplanche: *Life and Death in Psychoanalysis*, translated by Jeffrey Mehlmann, Baltimore 1976, p. 8.

The drive in psychoanalysis

Our choice of focus on the drive as it is discussed in neuropsychanalytic writings is motivated in at least three ways. First, and centrally, the drive is not only a central concept in Freud's work but one that articulates the passage between the somatic and the psychic. Freud claims that the concept of the drive is located »on the frontier between the mental and the somatic«,¹⁰ and in this sense the concept itself embodies the question of the relation between what are posited as two distinct domains. As such, ›drive‹ invokes a problematic that is also central within neuropsychanalysis. Secondly, Freud's drive theory is characterised by a remarkable volatility. On the one hand, Freud was centrally preoccupied with conceptualizing the fundamental forces or impulses that drive the human subject across the span of his work.¹¹ At the same time, however, the precise number and dynamics of such forces and their relation to the body's biological needs underwent considerable recastings in Freud's writings. Freud, in his first elaboration of the drive (*Trieb*)¹² in 1905, set up a distinction between a sexual force (libido) and biological needs (for example, the need for nourishment); he later recast this distinction as an antagonism between sexual drives and self-preservative or ego-drives (around 1910); finally, he installed the more ›mythic‹ opposition between the life and death drives, supplemented by their composites, in 1920.¹³ Thirdly, in so far as the drive marks the space of a quasi-biological foundation of the psyche, it has become

¹⁰ Sigmund Freud: »Instincts and Their Vicissitudes,« in: *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. By James Strachey, London 1915, p. 122.

¹¹ Starting with his posthumously published »A Project for a Scientific Psychology«. (Sigmund Freud: »A Project for a Scientific Psychology,« in: *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. by James Strachey, London 1950, 281–391.) Here, Freud discusses the organisms's subjection to two kinds of excitation (*Reiz*).

¹² In what follows, we refer to ›drive‹ in the singular, when discussing Freud's drive theory. Freud of course talked about a conflict between *drives* in some of his work. In choosing the singular in our discussion of Freud's work, we do not wish to point to the drive as a homogeneous force, but rather refer to *drive* as a dimension which signals the passage from the somatic to the psychic. In this chapter we also refer to components of the drive, and will retain the term in the singular or plural as it appears within neuropsychanalytic writings.

¹³ Sigmund Freud: »Beyond the Pleasure Principle,« in: *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. by James Strachey, London 1920, 1–64; Sigmund Freud: »The Psycho-Analytic View of Psychogenic Disturbance of Vision,« in: *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. by James Strachey, London 1910, 211–218; Sigmund Freud: »Three Essays on the Theory of Sexuality,« in: *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. by James Strachey, London 1905, 123–246.

something of a scandalous concept within contemporary psychoanalysis. As Mark Solms and Oliver Turnbull, in their 2002 monograph *The Brain and the Inner World*, note in an amusing understatement, the drive »seems to be unfashionable in psychoanalysis nowadays,« even though »[i]t is unclear why this happened«. ¹⁴ Before moving any further, we shall briefly consider this fall from grace of the drive, since the terms of this psychoanalytic rejection may illuminate the terms of what we have called the drive's rehabilitation in neuropsychanalysis.

Indeed, many contemporary psychoanalytic traditions have established their domain through an abandonment of the drive as a crude or unnecessary concept. Generally, drive theory has been read as the clearest expression of Freud's adherence to Helmholtz's physiological research, that is, to what is commonly regarded as an outdated mechanistic model of the psychic apparatus as a thermodynamic system. ¹⁵ Additionally, the drive has been denounced as a speculative wilderness encroaching on Freud's writings and therefore turning them away from observable, clinical facts. ¹⁶ (While this assessment most frequently arises in relation to the death drive, it is significantly buoyed by Freud's own claim that drive theory is »our mythology.«) ¹⁷ Finally, the rejection of the drive has corresponded with many contemporary psychoanalysts' rethinking of psychic space through object relations and intersubjective engagements, and their seeking to minimise the determinism of endogenous forces in the production of that space. ¹⁸

There is, however, an additional dimension to this post-Freudian rejection of the drive, which demands our attention insofar as this dimension becomes central to neuropsychanalytic discussions of the drive. A substantial impetus for psychoanalysts' rejection of Freudian drive theory is drawn from the wide acceptance of John Bowlby's claims

¹⁴ Mark Solms & Oliver Turnbull: *The Brain and the Inner World*, New York 2002, p. 117.

¹⁵ See, for example, Arnold Modell: »The Concept of Psychic Energy,« in: *Journal of the American Psychoanalytic Association*, 11 (1963), 605–618; Joseph Sandler et al.: *Freud's Models of the Mind: An Introduction*, London 1997, p. 74.

¹⁶ See, for example, Leopoldo Fulgencio: »Winnicott's Rejection of the basic Concepts of Freud's Metapsychology,« in: *International Journal of Psycho-Analysis*, 88 (2007), 443–461; Daniel N. Stern: *Interpersonal World of the Infant: A View from Psychoanalysis and Developmental Psychology*, New York 1985.

¹⁷ Sigmund Freud: »New Introductory Lectures on Psychoanalysis,« in: *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. by James Strachey, London 1933, p. 95.

¹⁸ Stephen A. Mitchell: *Relational Concepts in Psychoanalysis: An Integration*, Cambridge 1988; Tehodore Shapiro & Robert N. Emde: *Affect: Psychoanalytic Perspectives*, Madison 1993; Charles Spezzano: *Affect in Psychoanalysis: A Clinical Synthesis*, Hillsdale et al. 1993; Robert D. Stolorow: »The Intersubjective Context of Intrapsychic Experience: A Decade of Psychoanalytic Inquiry,« in: *Psychoanalytic Inquiry*, 11 (1991), 171–184.

regarding the importance of attachment between infant and carer in the production of psychic space.¹⁹ Here, what is being rejected is not the biological as such, but rather Freud's insistence on the foundational place of *libido* in his drive theory. Bowlby, in his work with deprived children, had come to emphasise the importance of attachment for child development,²⁰ and vociferously to reject Freud's insistence that such development should be understood primarily through the vicissitudes of infantile sexuality. Notably, Bowlby framed his rejection of the primacy of libidinal drive as a rejection of the drive *tout court*, in so far as he defined attachment as a behavioural system, a concept borrowed from ethology. A behavioural system is »a species-universal neural program that organizes an individual's behavior in ways that increase the likelihood of survival.«²¹ Bowlby and attachment theorists, in replacing drive with behavioural systems, thereby construct a new foundation for psychic space, in which this space emerges under the auspices of self-preservation, fitted towards survival.

In sum, we see the drive being rejected as too biologicistic and not scientific enough, charged with introducing a sham biology, a biolog-ism within the psyche. At the same time, and under the gravitational pull of attachment theory, this rejection of ›sham biology‹ is also a rejection of Freud's emphasis on the libidinal foundations of the psyche. Here, drive theory, in its various recastings across Freud's own writings, becomes a placeholder not only for what Freud referred to as ›the biological‹ but also for the primacy of the sexual in the psychic apparatus. Seen in this way, we would suggest that the rejection of the drive in contemporary psychoanalysis is not so much a refusal of the biological within the psychic but rather a refusal of what we might term Freud's ›con-figuration‹ of the biological as the sexual in particular. It is our contention in this chapter that while much of contemporary psychoanalysis refuses this con-figuration and ejects drive theory altogether, neuropsychanalysis strives to gather and to streamline both Freud's ›biologism‹ and his emphasis on the primacy of the sexual under the aegis of self-preservation, as the evolutionarily driven function of the psyche. In what follows, we consider some of the referential strategies through which such streamlining or normalization has been attempted to date.

¹⁹ John Bowlby: *Attachment and Loss*, Vol. 1 London 1969.

²⁰ World Health Organization: »Maternal Care and Mental Health: A Report Prepared on Behalf of the World Health Organization by John Bowlby.« Geneva 1951.

²¹ Mario Mikulincer: »Attachment, Caregiving, and Sex within Romantic Relationships: A Behavioral Systems Perspective,« in: *Dynamics of Romantic Love: Attachment, Caregiving, and Sex*, ed. by Mario Mikulincer et al., New York 2006, 23–44, here p. 24.

The drive in neuropsychanalysis

»Drive is the most ›biological‹ or embodied side of the mind ...«²²

The emphasis on the drive is important for the project of neuropsychanalysis, insofar as this project seeks to articulate psychoanalysis together with an affective neuroscience and with data gathered from animal models, thus challenging what is seen as a dominant cognitivist and human-centred bias in neuroscience as a whole.²³ Within many neuropsychanalytic writings, references to the Freudian drive theory supports an understanding of human motivation and action based on the sub-cortical and therefore non-cognitive functions of the brain. The drives (pluralised) are seen to mobilise the »perceptual world of the id«, an archaic foundation to the mental apparatus, or a »primary affective consciousness« that engages the representation of visceral states.²⁴ In this context, an emphasis on drive theory also restores the link between »the psychoanalytic understanding of the human mind« and »knowledge derived from all other animals.«²⁵

Any importation of the drive theory into neuropsychanalysis therefore needs to negotiate the latter's emerging neurobiological lingua franca, which is primarily based on the work of psychobiologist and neuroscientist Jaak Panksepp, specifically his formulation of Emotional Command Systems (ECSs), as established in his 1998 work *Affective Neuroscience: The Foundations of Human and Animal Emotions*.²⁶ Panksepp's work posits several distinct »emotional command systems« that instigate and orchestrate the diverse aspects of emotionality within the human brain.²⁷ Importantly, these ECSs represent evolutionarily prepared biological values that safeguard survival. The more basic of these systems are located within what are known as the *paleocortical* parts of the

²² Yoram Yovell: »Is There a Drive to Love?«, in: *Neuro-Psychoanalysis*, 10 (2008), 117–144, here p. 118.

²³ Neuropsychanalysis is indebted and committed to research on the neurobiology of emotion, particularly – as we shall show – to research by Jaak Panksepp. The journal *Neuro-Psychoanalysis* has published several contributions by Panksepp, and its first issue featured commentaries by two of the other most prominent researchers currently investigating emotion; Antonio Damasio and Joseph LeDoux (Antonio Damasio: »Commentary by Antonio R. Damasio«, in: *Neuro-Psychoanalysis*, 1 (1999), 38–39; Joseph LeDoux: »Psychoanalytic Theory: Clues from the Brain«, in: *Neuro-Psychoanalysis*, 1 (1999), 44–49.

²⁴ Mark Solms & Edward Nersessian: »Concluding Remarks«, in: *Neuro-Psychoanalysis*, 1 (1999), 91–96, here p. 93.

²⁵ Solms & Turnbull: *The Brain and the Inner World*, (note 14), p. 117.

²⁶ Jaak Panksepp: *Affective Neuroscience: The Foundations of Human and Animal Emotions*, New York et al. 1998.

²⁷ Panksep: »Emotions as Viewed by Psychoanalysis and Neuroscience«, (note 8), p. 18.

brain, which are the regions including and immediately surrounding the brain stem shared by all vertebrate life. Neurochemical activity across these regions is said to generate exploratory and mating behaviour as well as fight or flight responses, and this activity is codified as distinct yet interlocking ECSs, which Panksepp calls SEEKING, FEAR, RAGE, LUST. The remaining systems are positioned ›higher up‹ in evolutionary terms, in the sub-cortical regions shared by all mammals – these generate proto-social sequences related to separation anxiety, social bonding, and rough and tumble (Panksepp's PANIC, CARE and PLAY). While for Panksepp the expression of subjective feeling involves a complex and variegated interaction across these systems and the so-called higher cerebral processes, there is, nevertheless, nothing specifically human about the ECSs themselves and therefore about the basic architecture of subjective experience. Crucially, Panksepp acknowledges that while these systems are all set up to safeguard the organism by fulfilling its biological needs, their distinctiveness (through different neurochemical signatures, anatomical pathways and phenomenological expression), considerably complicates the possibility of such fulfilment. It is on this complex and heterogeneous neuronal field that neuropsychologists attempt to map Freudian drive theory.

Significantly, Panksepp himself clearly articulates the difficulty with mapping drive theory on to the subcortical emotion systems of the brain. The first issue of *Neuro-Psychoanalysis* hosts a dialogue between Panksepp, the journal's editors Edward Nersessian and Mark Solms, and several contributors, in which Panksepp insists that by attempting to find neuronal correlates for the Freudian drive, neuropsychologists are engaging in a fundamentally futile task. While Panksepp initially sketches several possible mappings of the drive, he finally claims that drive theory cannot subsist with the data of current neuropsychology, because Freud's conception of a global motivational force (libido) or a binary of such forces (ego-drives and sex-drives) are not consistent with the plurality and heterogeneity of the ECSs.²⁸ Despite Panksepp's considerable and ongoing reservations, however, the drive concept continues to be extensively discussed.

Indeed, from the very first article published in the journal *Neuro-Psychoanalysis*, Mark Solms and his colleagues are preoccupied with precisely such a mapping. To this end, they seize upon what will become a favoured and frequently cited definition of the drive from Freud's 1915 essay ›Instincts and their vicissitudes‹, where ›drive‹ refers to:

²⁸ Ibid. p. 27.

»the psychical representative of the stimuli originating from within the organism and reaching the mind, as a measure of the demand made upon the mind for work in consequence of its connection with the body«. ²⁹ This is the baseline referencing point both in Solms and Nersessian's opening salvo in the journal, as well as in numerous articles that discuss what they call Freud's theory of »motivation« in relation to neuropsychological findings. ³⁰ However, Solms and Nersessian precede their citation of passage from Freud with a very particular gloss on the psychoanalytic project:

According to Freud, the mental apparatus as a whole serves the biological purpose of meeting the imperative internal needs of the subject in a changing (...) external environment. These needs are expressed through »drives«: quantitative demands on the mental apparatus to perform work (i. e. to bring about the specific changes that are necessary to relieve current internal needs). ³¹

A number of things happen here. Right from the beginning, drive is defined as »quantitative demands,« in other words as pressure or an undifferentiated arousal (it is thus separable from the qualitative aspects of such demands, that is, from the experienced emotions as such). In addition, drive is submitted to an overarching function, the »biological purpose« of the mental apparatus as a whole to »meet« needs; in other words, it is conceived in terms of an overarching self-preservative purpose. ³² Furthermore, this submission is posited as Freud's own (»according to Freud«). ³³ In so far as drive is enlisted as a self-preservative function, it is pluralized and, under the auspices of self-preservation,

²⁹ Freud: »Instincts and Their Vicissitudes,« (note 10), p. 7.

³⁰ This quotation is used not only by Solms and Turnbull but by others publishing in *Neuro-Psychoanalysis* in their discussions of the Freudian drive.

³¹ Mark Solms & Edward Nersessian: »Freud's Theory of Affect: Questions for Neuroscience,« in: *Neuro-Psychoanalysis*, 1 (1999), 5–14, here p. 5.

³² This paper by Solms and Nersessian also describes the »evolutionary ›why?‹ »of affect as the assigning of value to the state of the mental apparatus, a process that is »an innate mechanism crucial for reproductive survival« (p. 5). Elsewhere, Solms (in collaboration with Oliver Turnbull) states that: »Freud argued that the unconscious mind was dominated by unconstrained instinctual mechanisms – which in turn revealed the fundamentally *biological* nature of human mental life. Thus humans, no less than other living creatures, are animals: driven by evolutionarily conserved drives.« (Turnbull & Solms: »Awareness, Desire and False Beliefs,« [note 1], p. 1084) These formulations provide further evidence of Solms and other neuropsychologists' commitment to conceptualizing the psychical apparatus in its entirety as under the yoke of biological, evolutionary pressures.

³³ Indeed the psychoanalyst André Green, who was one of the commentators for Solms and Nersessian's article, vigorously refuted the legitimacy of this reference to Freud, arguing that »the task of meeting the imperative internal needs is that of the ego« and not the »mental apparatus« as a whole (André Green: »Consilience and Rigour: Commentary by André Green,« in: *Neuro-Psychoanalysis*, 1 [1999], 40–44, here p. 41).

rendered compatible with the bio-evolutionary terrain of the ECSs, while at the same time, made analytically distinct from the latter. From the beginning then, an alignment of drive with an overarching self-preservative function is not only posited as a Freudian claim; it is in addition defined as the challenge to be met through a gathering of the evidence accruing from the various local experimental findings on the workings of the ECSs. As a result, and throughout numerous neuropsychanalytic texts, drive is imagined and re-imagined as »motivations«, which, while not strictly localisable, nevertheless both coincide with and yet disarticulate the chemical and anatomical distinctiveness of the ECSs.

Solms' and Turnbull's *The Brain and the Inner World* constitutes a more sustained attempt to meet Panksepp's reservations about drive theory. Here, the Freudian drive is immediately qualified as ›appetitive‹ in an adaptive correction of Freud's narrow ›libidinal‹ emphasis: Solms and Turnbull state in a footnote that, »[w]here Freud used the sexual term ›libido‹ to denote the mental function activated by our bodily needs of all kinds, modern neurobiologists speak of ›appetites‹.«³⁴ This particular manoeuvre appears to render the drive concept compatible with a more generalized repertory of biological needs addressed by the ECSs. For Solms and Turnbull, neurobiological findings necessitate this correction: in the complex neurochemical terrain of brain systems, a single drive as motivating force has strictly speaking no precise equivalent if such drive is qualified as a libidinal force. This is because the ECSs address different types of needs (the only approximation to a libidinal dimension would be Panksepp's LUST system, but LUST activates specific mating behaviour, narrowly understood). Instead, ›drive‹ for Solms and Turnbull comes to signify initially the mental readout of different bodily needs. In this sense, ›drive‹ is, once again, conceptualized as a purely quantitative measure; it is a kind of proto-registration of homeostatic imbalances, before these imbalances become qualified as distinct feelings of arousal (including sexual arousal, as one type of arousal among others).³⁵ In *The Brain and the Inner World*, as in most neuropsychanalytic texts that follow, this qualification of drive as an ›appetitive‹ function, allows the Freudian concept to disperse across different levels of brain complexity, which then become its components: ›drive‹ is envisaged as surging from the brain stem's homeostatic need regulators and works through Panksepp's SEEKING system, a dopamine-activated system that

³⁴ Interestingly, this corrective gesture aligns the Freudian libido with that of Jung's concept of ›undifferentiated energy,‹ and in so doing effectively erases the significant dispute between Freud and Jung regarding the drive.

³⁵ Solms & Turnbull: *The Brain and the Inner World*, (note 14), p. 118.

initiates exploratory, purposeful behaviour.³⁶ Unlike the case of other ECSs, the activation of SEEKING is not attached to the experience of a specific emotional tonality: rather, SEEKING activation generates the felt experience of anticipation and diffuse craving, and, as such, can be posited as a foundation for the functioning of all other ECSs.³⁷ However, this adaptive ›correction‹ of the Freudian drive towards a more undifferentiated appetitive function runs into a further set of problems, since emerging experimental findings suggest that craving urges are not necessarily submitted to the purpose of meeting biological needs.

The neuropsychanalytic reorientation of Freudian drive theory as the expression of biological needs means that any *non-adaptive* activation of the SEEKING system then needs to be understood through a discourse of malfunction and addressed through a supplementary concept. Thus, when Solms and Turnbull present the neurobiological correlates of addictive behaviours, they speak of a ›hijacking‹ of drive from its original appetitive functions to pathological, ›pseudo-appetitive‹ ones.³⁸ Even with the supplementary correction, however, the SEEKING system still falls short of the definition of the drive. Howard Shevrin (a psychologist with psychoanalytic and neuroscientific research interests) debated the correctness of the association that Panksepp had tentatively suggested vis-à-vis the drive and SEEKING in another issue of *Neuro-Psychoanalysis*.³⁹ Shevrin noted that while Panksepp's system is ›inherently objectless and amorphously affective,‹⁴⁰ the experimental findings from which Panksepp had drawn, in part, this concept testified to the perdurance of imperious cravings instigated uniquely by certain stimulants.⁴¹ (Rats stimulated in their mesoaccumbens, dopamine-activated system continue to press levers even in the absence of reward and while ignoring other needs – so that they go hungry and die of exhaustion unless

³⁶ This qualification of the drives as ›appetitive,‹ as well as their incorporation of different levels of brain complexity, is drawing considerable consensus. See for example: Yovell: ›Is There a Drive to Love?,‹ (note 22); Maggie Zellner: ›Neural Substrates of Drive Motivation and Cathexis,‹ in: *New York Psychoanalytic Society*. Arnold Pfeffer Center for Neuropsychanalysis, New York 2009.

³⁷ Solms & Turnbull: *The Brain and the Inner World*, (note 14), p. 117.

³⁸ *Ibid.*, p. 121.

³⁹ Panksepp: ›Emotions as Viewed by Psychoanalysis and Neuroscience,‹ (note 8), p. 23; Howard Shevrin: ›Commentary on Jaak Panksepp's Response,‹ in: *Neuro-Psychoanalysis*, 1 (1999), 247–250, here p. 247.

⁴⁰ Shevrin: ›Commentary on Jaak Panksepp's Response,‹ p. 247.

⁴¹ For a review of these experimental findings on addiction, see Kent C. Berridge and Morten L. Kringelbach: ›Affective Neuroscience of Pleasure: Reward in Humans and Animals,‹ in: *Psychopharmacology*, 199 (2008), 457–480.

stopped or presented with food immediately accessible to them.)⁴² For Shevrin, that original work on addiction may be closer to approximating a Freudian drive-like force than Panksepp's later elaboration of the SEEKING system. This is because, both the Freudian drive and the craving pangs of addiction are »specific to objects which can gratify the drive,«⁴³ whereas in Panksepp's model, SEEKING is objectless and diffuse. Shevrin here disputes the validity of Panksepp's move from the specificity of data on addiction to what he sees as a generalisation about a foundational transmammalian, hard-wired adaptive system. In so doing, Shevrin is also claiming that it is a certain excitability of the mesoaccumbens pathways rather than their submission to an assumed adaptive function, that can be said to better approximate the Freudian drive. In light of Shevrin's reservations, it could be claimed that dopaminergic activity in the mesoaccumbens resonates more with Freud's descriptions when it behaves in what Solms and Turnbull call »pseudo-appetitive« fashion, when it serves »no biologically useful purpose.«⁴⁴ Shevrin's intervention is significant here, because it questions neither the validity of the experimental data, nor the legitimacy of the reference to Freud. Instead, it questions the emerging overarching model according to which addictive behaviours, to use one example, constitute a hijacking of the drive's original purpose.

It is important to go further here: what does it mean in this context to talk, as Shevrin does, of objects capable of »gratify[ing] the drive«? While cocaine or amphetamines can function as such objects, what these substances do is not at all compatible with the Freudian account of the aim of the drive as it is most frequently used in neuropsychanalytic texts. While in »Instincts and their Vicissitudes« Freud claimed that the aim of the drive is to »remov[e] the state of stimulation at the source of the instinct,«⁴⁵ Solms and Turnbull's interpretation of this concept glosses this as an aim to restore »the homeostatic mechanisms« within their »acceptable range.«⁴⁶ In the case of the stimulated rats, by contrast, the hyper-excitation of their mesoaccumbens becomes an end in itself, and, by the same token, the addict craves cocaine not in order to stem this hyper-excitation, but on the contrary, in order to perpetuate it. Thus Shevrin's intervention brings to light a set of implicit models around

⁴² Howard Shevrin: »The Contribution of Cognitive Behavioral and Neurophysiological Frames of Reference to a Psychodynamic Nosology of Mental Illness.« n. d.

⁴³ Shevrin: »Commentary on Jaak Panksepp's Response,« (note 39), p. 247.

⁴⁴ Solms & Turnbull: *The Brain and the Inner World*, (note 14), p. 122.

⁴⁵ Freud: »Instincts and Their Vicissitudes,« (note 10), p. 122.

⁴⁶ Solms & Turnbull: *The Brain and the Inner World*, (note 14), p. 118.

self-preservation, which mobilise the meeting between Freudian drive theory and neuroscientific data.

These debates between Solms and his collaborators on the one hand, and Panksepp and Shevrin on the other, exemplify the trouble generated in the early attempts to position the drive as a bridge between the somatic and the psychic. We have argued that such positioning has been attempted through a series of assumptions; chief amongst these are an understanding of the drive as a pressure for the relief of bodily needs, as well as a translation of Freud's ›libidinal‹ as ›appetitive‹. We have suggested that these assumptions both enable and trouble such a positioning of the drive. We now turn to a second moment in these attempts, where something like a neuropsychanalytic consensus may be emerging, in order to consider how, and with what consequences, such a consensus may have engaged a revision of the earlier debates.

This moment is represented by the publication in 2008 in *Neuro-Psychoanalysis* of a paper by the psychoanalyst and neurobiologist Yoram Yovell entitled ›Is there a drive to love?‹⁴⁷ The paper proposes a neuropsychanalytic account of romantic love and, in this context, gives an extensive and succinct exposition of the Freudian drive theory, as well as performing further corrections to this theory in light of findings in neuroscience and developmental psychology. Here, Yovell initially affirms the positioning of Panksepp's SEEKING system as a neurobiological equivalent of drive ›pressure,‹ as well as reasserts the consequent neuropsychanalytic characterisation of drive as appetitive rather than libidinal. However, even in light of these ›corrections,‹ Yovell claims that there is still a considerable problem with the attempt to designate a certain appetitive function as the undifferentiated motivation of all ECSs. This is because: ›these other instinctual (emotional) systems are not elaborations of the libidinal drive. They are not derived from it, each of them has evolved for its own sake, and they serve other survival needs. Importantly, these other instinctual / emotional command systems are absent from Freudian theory.‹⁴⁸

To return to the subjective experience of romantic love: Yovell conjectures that it is not possible to understand the different aspects of that experience without resort to further, non-appetitive motivations. Such a hypothesis would also be fully supported in the Pankseppian model of independent ECSs serving ›other survival needs‹. In this context, non-appetitive basic motivations can find neurobiological equivalents in

⁴⁷ Yovell: ›Is There a Drive to Love?,‹ (note 22). Indeed, the issue as a whole is devoted to the drive, with Yovell's article as the target paper.

⁴⁸ *Ibid.*, p. 123.

the activation of two further ECSs, PANIC and CARE, which subtend separation anxiety and social bonding respectively. These latter ECSs are activated by neuromodulators that are distinct from and partly antagonistic to those engaged in the SEEKING system.⁴⁹ In light of this, Yovell proposes that, »drive theory may now be revised to include the contribution of nonlibidinal instinctual/emotional systems such as the attachment system. It may then serve as a useful *link* between psychoanalysis and the cognitive and affective neurosciences in their combined efforts to study and understand romantic love.«⁵⁰

To produce this link, Yovell appears to have effectively corrected Freud's prioritization of the libidinal drive, as well as Bowlby's and later attachment theorists' replacement of the drive concept with that of behavioural systems, in light of »what we know today«⁵¹ about the relative autonomy of ECSs. Here, the correlation of libido with SEEKING/LUST (two ECSs working together) is supplemented by that of attachment with PANIC/CARE. However, like the earlier moment in which the drive made possible a bridge between disciplines, this further apparent consolidation of that bridge obscures a similar set of assumptions. Here, in particular, the Freud that requires further supplementation is a very specific *neuropsychanalytic* Freud, one who has emerged through the establishment of equivalences between the drive and SEEKING, and between the libidinal and the appetitive in the first place. Yovell succinctly states, »the action of the SEEKING system is the closest biological correlate of the psychoanalytic concept of ... libidinal drive ... [but] there appears to be more in romantic love than libido.«⁵² What is not spelled out in this conclusion is the extent to which what Yovell identifies as the »psychoanalytic concept of libidinal drive« constitutes in fact a very particular *neuropsychanalytic* reading of a psychoanalytic concept. That is, the Freudian drive has been correlated to SEEKING only after having been submitted to the overarching assumption that drive is the general motivational pressure of biological needs and, as such, serves a specific evolutionary purpose. According to Yovell's logic, if the hypothesis of a libidinal/appetitive drive alone is not sufficient to explain romantic love, then further non-appetitive drives also serving

⁴⁹ This distinction between appetitive and non-appetitive is based primarily on one between neurotransmitters (primarily dopamine) and neuropeptides (such as oxytocin and vasopressin). The former are said to mediate sexual appetite, while the latter are associated with bonding behaviours. See *Ibid.*, p. 137–139.

⁵⁰ *Ibid.*, p. 140–141. italics added.

⁵¹ *Ibid.*, p. 128.

⁵² *Ibid.*, p. 138.

a specific evolutionary purpose need to be elaborated. That is to say, this formulation of »more ... than« – to return to Yovell's claim »more in romantic love than libido« – can only mean *more drives serving the same evolutionary purpose*, rather than *more to the drive than the servicing of this evolutionary purpose*.

Yovell's concluding remarks further elaborate on this »more ... than«. Indeed, after Yovell has accounted for what he sees as the sexual and attachment aspects of romantic love, through reference to the working of the SEEKING/LUST and the PANIC/CARE systems respectively, he turns to a further question. This is the question of the fixation on a particular object that characterises romantic love. At that point, Yovell brings forward fMRI animal studies to claim that some aspects of this fixation are mediated by »activation of dopaminergic transmission« (i. e. an activation of the SEEKING system), while others are »mediated by the neuropeptides oxytocin and vasopressin« (an activation of the CARE system). Here, the strengthening of object choice appears to work *across partly antagonistic ECSs* in ways that are not fully reducible to the distinct dynamics of these systems. Having hypothesised that a third drive enlisting the services of antagonistic dynamics may be required in order fully to explain romantic love, Yovell then concludes by questioning that very hypothesis »*it is not certain that these contributions [i. e. from antagonistic neuromodulators] fully account for the special characteristics according to which the choice of the beloved is made, nor for the intensity with which it is maintained.*«⁵³

Here, something remains unaccounted for, despite Yovell's readiness to pluralise the drive. In other words, a certain »more ... than« appears to exceed that pluralisation. Of course, there is nothing surprising about such a remainder: by definition, the project of bringing together two distinct disciplinary terrains will inevitably generate such problems. However, rather than concluding that the presence of this remainder indicates the measure of the work still to be done, we would suggest instead that such a remainder is the effect of a particular set of alignments between the sexual and the appetitive and between the drive and self-preservation. That is to say, it is an effect not of the encounter between Freud and neurobiological data as such, but rather of a certain reading of Freud that is already in operation to facilitate this particular encounter. In the remainder of this chapter, we schematically outline the stakes of an alternative reading of Freud, insofar as this latter reading disturbs the possibility of an alignment between drive and self-preservation.

⁵³ Ibid., p. 139.

This reading insists that the drive *qua sexuality* splits apart the model of the human organism as solely devoted to the tasks of homeostatic self-regulation and self-preservation.

Sexuality and the drive: Laplanche reads Freud

The philosopher and psychoanalyst Jean Laplanche, in an extended and meticulous exegesis of Freud's oeuvre that has been conducted over the course of several decades, illuminates what might be at stake in the difficulty that neuropsychanalytic research has in locating – and operationalizing – the drive.⁵⁴ Laplanche posits that Freud's texts themselves are organised around a difficulty in ›locating‹ the drive, and that they are characterized by repeated attempts to cover over and normalise the trouble that the drive marks. This trouble is for Laplanche the trouble posed by sexuality, which he conceptualizes as that which installs the psychic apparatus as parasitic upon the order of biological needs. The drive troubles the insistence on self-preservation, such that the psychic names that which exceeds the logic of self-preservation. On Laplanche's account, the drive within Freud fundamentally names that which *exceeds* function.

Central to Laplanche's endeavours is the conceptual distinction that he makes between the drive (*Trieb*) and the instinct (*Instinkt*). That Freud employs two terms – *Instinkt* and *Trieb* – indicates for Laplanche the import that he placed on the drive's difference from those models indebted to behavioural patterns.⁵⁵ Laplanche at this point performs a reading that has something in common with that of the neuropsychanalysts: for example, Solms and Nersessian claim that the drive »concern[s] the

⁵⁴ English-speaking audiences remain deprived of much of the force of this exegesis, since many of Laplanche's key writings remain untranslated. Of those that have been translated, most central to the argument we are pursuing here are: Jean Laplanche: *Essays on Otherness*, London et al. 1999; Laplanche: *Life and Death in Psychoanalysis*, (note 9); Jean Laplanche: *New Foundations for Psychoanalysis*, Translated by David Macey, Oxford 1989.

⁵⁵ Curiously, neuropsychanalytic writings both acknowledge and do not acknowledge this fundamental distinction. This is most obvious in Yovell's paper »Is there a drive to love?,« in which he admits that drive is a better translation of *Trieb* than instinct, and indeed cites Jean Laplanche and Jean-Bertrand Pontalis on the drive (Jean Laplanche & Jean-Bertrand Pontalis: *The Language of Psycho-Analysis*, Translated by Donald Nicholson-Smith, New York 1973). However, Yovell then proceeds to use the term »instinct« to signify a component part of the drive. Indeed, for Yovell, SEEKING as instinct becomes the neuronal equivalent of such a component (Yovell: »Is There a Drive to Love?,« [note 22], p. 140–141, italics added). This association of an ECS with an instinct is not specific to Yovell but subtends Panksepp's model as a whole.

mental representation of the fundamental processes of organic life«. However, this claim leads Solms and Nersessian to urge for a »parsing of such general concepts into a range of more specific constructs which lend themselves more readily to detailed scientific research«. ⁵⁶ This means that they map particular components of the drive across different brain systems and end up pluralizing the drive when such mapping can no longer justify a unified concept. In their reading, different instinctual/emotional systems become different components of the drive. In contrast, Laplanche argues that the concept of ›drive‹ refers to a *sexualisation* of the instinctual functions as such. Here, he makes use of Freud's concept of »anaclisis« (to use Strachey's translation) or »leaning on« (to use Laplanche's favoured translation of *Anlehnung*), to refer to the relationship between the sexual drive and instinctual or self-preservative functions of the organism. »Leaning on« refers, on Laplanche's account, to how the drive props itself on and emerges from »those vital functions which furnish [it] with an organic source, an orientation and an object«. ⁵⁷ Laplanche contends that Freud's concept of drive establishes a radical disarticulation of the register of self-preservation (the satisfaction of vital needs). Instincts (such as the vital need of hunger as well as of attachment) are indeed to be conceptualized as preformed behavioural patterns that are more or less adapted to certain types of objects and have certain clearly definable aims associated with homeostasis. But understanding the vicissitudes of the drive – its source (...) orientation and (...) object – requires a different register from that of the behavioural systems. This for Laplanche is the register of sexuality, which performs what he terms a radical »dehiscence« (or splitting asunder) of those vital functions. ⁵⁸ Here, as in Freud, sexuality does not signify an urge to reproduce, but rather refers to »a whole range of excitations and activities which may be observed from infancy onwards, and which procure a pleasure that cannot be adequately explained in terms of the satisfaction of a basic physiological need.« ⁵⁹

The drive as constituted through dehiscence is most visible in the divergence between the objects of the vital order/behavioural systems (which are objects of *need*) and the object of the drive (which then gives rise to desire). While the objects of the drive appear at first glance to shadow those of the instinct, the latter are in fact fundamentally re-invested and thus recast as erotogenic objects, that is, as objects that afford

⁵⁶ Solms & Nersessian: »Concluding Remarks,« (note 24), p. 94.

⁵⁷ Laplanche & Pontalis: *The Language of Psycho-Analysis*, (note 55), p. 29.

⁵⁸ Laplanche: *Life and Death in Psychoanalysis*, (note 9), p. 25.

⁵⁹ Laplanche and Pontalis: *The Language of Psycho-Analysis*, (note 55), p. 418.

a certain kind of arousal. The prototypical example of this is the breast: while the breast as nourishment – in its provision of milk – satisfies hunger, the contact between breast and mouth generates excitement.⁶⁰ Here, craving for this arousal – sensual sucking – re-invests the appetite for milk and nourishment. In this reading, *the drive inhabits and perverts the functional systems*. As Laplanche puts it, the *source* of the drive is the *instinct in its entirety*: »The entire instinct with its own ›source‹, ›impetus‹, ›aim‹, and ›object‹, [...]; the instinct, kit and caboodle with its four factors, is in turn the source of a process which mimics, displaces, and denatures it: the drive.«⁶¹ Consider, in this context, Solms and Turnbull's distinction between the appetitive and the pseudo-appetitive: the latter relates to occasions (such as addictions) when the activation of SEEKING »serves no biologically useful functions«. While for Solms and Turnbull an activity outside the realm of self-preservation constitutes a pathological development, for Laplanche, such activity actually instantiates the sexual drive: indeed, the drive is the denaturing of vital needs *as such*.

Laplanche's work is particularly engaged with the relationship between the drive and the early bonds between carer and infant. He reads Freud's elaboration of infantile sexuality emerging out of such gestures and objects of care not simply as a tale of derivation (sexuality is derived from a more primal caring) nor as one of developmental distinction (sexuality is different from and is activated independently of caring), but rather as one of perversion (sexuality is a parasitic reinvestment of the gestures of caring).⁶² He claims that for Freud sexual life *is* »grafted on to [...] a relational life [that is][...] characterized in terms of self-preservative instincts or in terms of need«. ⁶³ We may be reminded here of Yovell's suggestion that the peculiar attraction to the *object*, which he sees as characteristic of the state of romantic love, cannot be fully accounted for by a pluralisation of drive and the enlisting of distinct, even antagonistic behavioural systems, because it somehow

⁶⁰ Laplanche: *Life and Death in Psychoanalysis*, (note 9), p. 15–22.

⁶¹ *Ibid.*, p. 22.

⁶² See the first two chapters, »The Order of Life and the Genesis of Human Sexuality« and »Sexuality and the Vital Order in Psychical Conflict« of *Ibid.* In Laplanche's later writings, he elaborates on these formulations in his general theory of »primal seduction«: the other's – care giver's – gestures and words carry unconscious sexual messages, and implant what Laplanche calls »enigmatic signifiers« into the primitive body-ego of the infant. These signifiers in turn are conceptualized as the source-objects of the drive. Laplanche thereby significantly departs from a conception of the drive's ›source‹ as an endogenously rooted biological stimulus (the conception used within neuropsychanalysis) to one that is infected by the inciting remnants of the other's gestures (see Laplanche: *Essays on Otherness*).

⁶³ Laplanche: *New Foundations for Psychoanalysis*, (note 54), p. 72.

exceeds these. Yovell makes these claims under the overarching assumption that romantic love, in its psychobiological dimensions, must be folded back to the order of self-preservation. Laplanche, by contrast would suggest that romantic love, insofar as it is potentiated through the vicissitudes of the drive, exceeds that order. Here, desire towards the love-object exceeds both the reproductive urges and affectionate bonds which may be present: for Laplanche, this would be because desire emerges as a re-investment of original objects of vital needs and thus constitutes them as an excessive dimension of such objects. Just as the breast concretises the arousing aspects of feeding, and acts as the initial focus of incorporative fantasies, so other arousals emerge (perversely) from the gestures of care and bonding. The object of the drive is thus subject to a very peculiar sort of contingency: it emerges via the object of need, but while it does not coincide with that object neither is it entirely separable from it. In this sense, the object of the drive does not exist in itself, but rather both is, and is not, the object of need: it is precisely »more ... than« that object.

What bearing might these formulations have on the neuropsychanalytic project? Laplanche argues that this logic of the sexual drive as that which marks a dehiscence of the register of self-preservation is perpetually in danger of being covered over by subsequent psychoanalytic traditions, as it was indeed in many of Freud's own texts. And this, Laplanche maintains, was because of Freud's frequent dependence on a biological theory of the drive, a theory held captive by *an adaptive logic* that returns the psychic apparatus to the demands of homeostasis and self-regulation. It is a similar adaptive logic that we see played out in the discussions of the emerging neuropsychanalytic consensus: here, the privileged text upon which the neuropsychanalysts tend to draw is »Instincts and their Vicissitudes,« a text that Laplanche has characterized as one in which the drive appears assimilable to »an analysis which is *also valid for so-called instinctual patterns of behavior*.⁶⁴ If we follow Laplanche's claim that Freud resorted to a certain adaptive logic (which he named »biology«) as a way to domesticate and render familiar the object of psychoanalysis (sexuality), then we might argue that neuropsychanalysts, in resorting to a similar adaptive logic (which directs their interpretation of neurobiological data), may also be performing a similar domestication.

⁶⁴ Laplanche: *Life and Death in Psychoanalysis*, (note 9), p. 13.

Reading Freud

In the brief for the conference »Freud's References,« out of which this book emerged, Gerhard Scharbert and Christine Kirchhoff asked, »What happens to Freudian concepts when they are referenced? To what extent do they change? To what extent do the references made to Freud differ?« We have argued that the neuropsychanalytic project tends towards a particular interpretation of Freud – and have intimated that it favours particular citations from Freud's body of work. (We have noted, in particular, the frequent invocation of a quotation from »Instincts and their vicissitudes« regarding the drive as »a measure of the demand made upon the mind for work in consequence of its connection with the body«.) This is in itself an unsurprising – and perhaps inevitable – finding, given that every turn, or re-turn, to Freud animates a distinctive network of references, associations and interpretations that relate to the rich Freudian *oeuvre*. In this sense, one could justifiably argue that Laplanche, too, proceeds by endowing particular Freudian texts (such as the *Three Essays on the Theory of Sexuality*) with greater interpretative valence than others. But we want to go further. Specifically, we wish to argue that those embedded in different disciplinary domains tend to *read differently*, though interdisciplinary endeavours frequently appear not to dwell on the potential implications that these differing practices of reading might have on the constitution and character of the new field.⁶⁵ We contend that Solms and Laplanche – to take two examples – differ not only in their selections from the Freudian corpus and in their interpretation of particular concepts within the Freudian *oeuvre*. More fundamentally, they proceed very differently in how they relate parts to whole; how they negotiate the relationship between Freud's development of terminology and the very ›objects‹ of psychoanalysis; and how they respond to the various registers – examples of which might loosely be described as empirical, scientific, speculative, figurative and aesthetic – that characterize Freud's writing. While we cannot adequately address these differences here, we would suggest that while Solms pursues what we might describe as a ›pragmatic‹ practice of reading, Laplanche explicitly performs a structural reading of Freud's *oeuvre*.

⁶⁵ This is a problematic that we have also addressed in an overlapping field – that of research in the humanities and social sciences that engages scientific research on ›affect‹; see Constantina Papoulias & Felicity Callard: »Biology's Gift: Interrogating the Turn to Affect,« in: *Body & Society*, 16 (2010), 29–56.

How, then, does Laplanche read Freud? Jeffrey Mehlman, in his introduction to his translation of Laplanche's *Life and Death in Psychoanalysis*, memorably characterized Laplanche's monograph as »an exemplary act of reading«: Laplanche, through »temporarily suspending the question of empirical reference in favor of considerations of structure« has, Mehlman argues, »given us nothing less than a poetics of Freud's work«. ⁶⁶ Central to Mehlman's argument is that »the poetic« lies at the very heart of that work, rather than floating above it as a stylistic flourish. Indeed, he argues that »until we grasp the poetics of Freud's work, the general economy of that work – i. e., its ultimate import – will escape us«. ⁶⁷ It is only through such attention to *structure* that Laplanche is able to elucidate what the very ›object‹ and specificity of psychoanalysis might be – as distinct, say, from the adjacent field of child psychology. Mehlman's laudatory endorsement of Laplanche's »exemplary act of reading« offers a significant provocation to empirical (neuro)scientific fields that would not usually characterize themselves as in the business of articulating a »poetics«. Indeed, many neuropsychanalysts, when reading Freud, appear to be drawn to the possibility of amplifying or updating in Freud those moments that might extend psychoanalysis towards another discipline – biology.

How do neuropsychanalysts read Freud? What is arguably most pressing for empirical neuropsychanalytic researchers is to submit what they term Freud's »hypotheses about the global architecture of the mind« ⁶⁸ to scientific investigation, while attending to how such hypotheses – and the findings associated with them – compare with other hypotheses and other findings currently under discussion within the mind-brain sciences. There is undoubtedly a generative character to scientific investigation: the hope that findings from different scientists and different sites might be compared, as well as the pragmatism, frequently demanded by the design of experiments and the need to operationalize scientific concepts, generate an impetus for bringing different theories and conceptual models into conversation with one

⁶⁶ Jeffrey Mehlman: »Translator's Introduction,« in: *Life and Death in Psychoanalysis* (note 9), vii–x, here p. vii.

⁶⁷ Ibid. We are unable to address here how Laplanche's argument in *Life and Death in Psychoanalysis* mobilizes an elegant and complex use of the linguistic concepts of metaphor and metonymy (which are of course fundamental to any conception of ›poetics‹) in order to explore how psychoanalytic concepts – and indeed psychological ›entities‹ themselves (such as drive, ego, trauma) – are derived by the extension of concepts from contiguous domains (metonymy), or by their transposition from other, different fields that are analogously structured (metaphor). For Laplanche, the drive is a ›metaphorico-metonymical ›derivative« of the instinct (Laplanche: *Life and Death in Psychoanalysis*, p. 125).

⁶⁸ Turnbull & Solms: »Awareness, Desire and False Beliefs« (note 1), p. 1083.

another. These theories and conceptual models might use the same words to describe particular constructs, but it is quite possible that the scientific objects those words are describing are not identical. Traces of this can be found in instances where neuropsychanalytic texts embed constructs and models from non-psychoanalytic research in their references to Freud; or where Freudian concepts are imaginatively reworked in the service of translatability into other fields. Solms and Nersessian, for example, insert the concept of the »basic emotions« into some of their quotations of Freud,⁶⁹ and in so doing bypass the substantial divergence between accounts of the basic emotions and Freud's own formulations regarding affect.⁷⁰ Panksepp creates the neologism ›id energies‹ as a global placeholder for distinct neurochemical activities in the sub-cortical regions of the brain.⁷¹

Such acts cover from view how Freud is thereby made consonant with a model of the organism that is centred around adaptive need. Thus while such neuropsychanalytic practices of reading and referencing are undoubtedly creative in their elaboration of a ›new‹ Freud, we would suggest that such creativity is held back through being tethered to questions of function and self-preservation. Freud is read in a manner that renders his writings *not too strange* for the terrain of the neurosciences; hence the purpose of the reading is arguably to consolidate the familiarity of this terrain rather than radically to destabilize it. It remains an open question how significantly an engagement with psychoanalytic texts might push many neuroscientific researchers to think differently about the practices, experimental paradigms and the very ›style of thought‹ pursued by the neurosciences.⁷² What we see is a downplay-

⁶⁹ Solms and Nersessian here use a Pankseppian term – ›basic emotion‹ – in their exegesis of what Freud ›believed‹: ›Freud believed that fixed patterns of affective motor discharge are, for the most part, innately prewired, although some basic emotions are apparently forged during early development by momentous biological events of universal significance.‹ Additionally, they substitute such terms within the Freudian text itself, as in their quotation from Freud's *Inhibitions, Symptoms and Anxiety*: ››We assume, in other words, that [a basic emotion] is a reproduction of some experience which contained the necessary conditions for discharge ...‹‹ Here, Solms and Nersessian substitute ›a basic emotion‹ for Freud's term ›anxiety-state‹ (both quotations taken from Solms & Nersessian: ›Freud's Theory of Affect: Questions for Neuroscience,‹ [note 31], p. 9).

⁷⁰ See Chapter 4 ›Shame now‹ in Ruth Leys: *From Guilt to Shame: Auschwitz and After*, Princeton et al. 2007, for an elaboration of how significantly models of ›basic emotions‹ differ from Freudian conceptualizations of affect.

⁷¹ Panksepp writes: ›I suspect that a clarification of the core brain issues (i. e., the pathways and neurochemistries for the instinctual id energies) will be essential for establishing a substantive foundation for psychoanalytic thought‹ (Panksepp: ›Emotions as Viewed by Psychoanalysis and Neuroscience,‹ [note 8], p. 26).

⁷² Ludwig Fleck: *Genesis and Development of a Scientific Fact*, Translated by Frederick Bradley, Chicago 1979.

ing of that which is ›alien‹ in Freud, rather than an engaging with the alien as that which is risky or changes the terrain of what is known.⁷³ Turnbull and Solms, for example, define as the »central psychoanalytic claim« the ability of »emotion systems (and the drives that govern them) [to] *distort* cognitive representations of reality, by hijacking executive resources (through so-called defences). Thus, Freud argued, humans are often ›irrational‹ (holding patently false beliefs)«. ⁷⁴

While Solms and Turnbull might be watering down the Freudian project for the benefit of their psychoanalytically unconvinced neuroscientific colleagues (the paper from which this quotation is taken appeared in the orthodox cognitive neuroscientific journal *Cortex*), it is nonetheless clear that such a gloss of the psychoanalytic project (which folds back the Freudian engagement with the unconscious into references to distortion and irrationality) does not significantly challenge the neuroscientific edifice as a whole.

Concluding thoughts

What are the implications for neuropsychanalysis of the argument we have elaborated here? Let us be clear. Our aim is not to relish specifying in ever greater detail why the drive ›does not fit‹ with the empirical neuroscientific data and with the formulations that are brought to bear on them. Nor is it to claim that the drive ›does not fit‹ because it is an entity wholly unconstrained by the materialist confines of the neuroscientific endeavour. Equally, we would not wish readers to infer that neuropsychanalytic researchers ought simply to eject the drive as too troublesome (and thereby fall in line with much of contemporary psychoanalysis in its reformulation of the Freudian project without the drive). The readings of neuropsychanalytic texts that we have pursued in this chapter are neither motivated by the desire to challenge the validity of the empirical neuroscientific data, nor intended to bolster the arguments of those who contend that psychoanalysis and neuroscience are incompatible. What we have attempted to raise to critical visibility through these readings, rather, is a *set of assumptions* that buttresses the bridge being constructed within neuropsychanalysis between Freud's

⁷³ Cf. Felicity Callard: »The Taming of Psychoanalysis,« in: *Social and Cultural Geography*, 4 (2003), 295–321, for another example of how a disciplinary domain's engagement with psychoanalysis resulted in a domestication of much that is alien within psychoanalysis.

⁷⁴ Turnbull & Solms: »Awareness, Desire and False Beliefs,« (note 1), p. 1085.

writings and neuroscientific data. That is, we are questioning the reading practices by which a particular formulation of the drive is extracted by neuropsychanalysts from the heterogeneous and tangled textual terrain of Freud's oeuvre, a terrain in which the term drive (both in the singular and the plural) comes to address a series of unruly and often contradictory problematics.

The term ›drive‹ within Freud does not cohere within a single ›register‹. This, we argue, creates difficulties for any attempt to secure the crossing between psychoanalysis and the neurosciences through a concept of drive built around a biological logic – that is, primed to respond to the peremptory demands of self-preservation and endogenous bodily needs. If we take seriously Laplanche's argument that the drive represents a deviation from, or mimicry of the vital functions, then the current identification and mapping of putative functions, circuits and emotion systems within the brain does not – and could not – equate to the mapping of the Freudian drive. For such mapping does not address the manner in which a certain sexualisation of function inhabits and perverts those functional systems, nor how the object of the drive emerges as an excessive dimension of the object of need.

It is important to note here that Freud's theory of the drive does not decisively break with the register of self-preservation either. As John Fletcher argues, »The aporias of Freud's theory of the drives arise from the fact that the break from the biological concept of the instinct is incomplete,« and from the vexed intimacy that is to be found between Freud's conceptualizations of the drive and of the self-preservatory functions.⁷⁵ It is far from surprising, therefore, that neuropsychanalysis is drawn to the ›biological‹ formulations of the Freudian drive, and to those texts of Freud – such as »Instincts and their Vicissitudes« – where such formulations are most vigorously pursued. But such practices of reading and of theorizing ›with Freud‹ run the risk of subsuming the entirety of the Freudian project within one's own already constituted position. The question might then be staged: is it possible for neuropsychanalysis to consider how the drive might be disarticulated from a logic of function and of need? What, in other words, would it mean for neuropsychanalysis to engage the drive as the point of dehiscence from adaptive needs rather than as their support? For Laplanche, the use of ›the biological‹ in Freud is closely tied to the demands of self-preservation, self-regulation and adaptation. The question for neuropsychanalysis is

⁷⁵ John Fletcher: »Introduction: Psychoanalysis and the Question of the Other,« in: *Essays on Otherness*, ed. by Jean Laplanche, London et al. 1999, 1–51, here p. 26.

to what extent might it be possible for the new discipline to uncouple its empirical findings from the assumption of such demands. How might neuropsychologists read both Freud's formulations regarding the psychological apparatus *and* neurobiological data concerning activations of different systems at different levels of complexity without submitting them immediately to the normative register of self-preservation?

We are writing at a point at which the field of neuropsychology is little more than a decade old. There are still ongoing energetic – and sometimes combative – debates taking place both within and beyond neuropsychology concerning its scientific status and its epistemological and ontological underpinnings. As the birthing pangs of a new field recede, such debates are likely to diminish (though never entirely to dissipate, given the vexed status that any body of thought associated with psychoanalysis has within public and intellectual life). It is quite possible, then, that the field of neuropsychology might ›stabilize,‹ and come to operate with a set of paradigms, models, concepts and definitions that are widely accepted by those participating in the research field. (We have indicated, for example, that certain formulations regarding the drive – a kind of composite model that draws on research by Panksepp, Solms and Yovell – are already beginning to have the status of common currency within neuropsychology.) We choose to comment, and thereby intervene, during this relatively early period of instability. It is at precisely such an early moment in the constitution of an interdisciplinary field that it is easier to recognize – and hence analyse – how particular references, quotations, and bodies of knowledge are employed in the service of building that new interdisciplinary knowledge. We suggest that current neuropsychological debates and exchanges *make visible* the intractability of moving between and across the axes of self-preservation and of Freudian sexuality. The unruliness of the drive in those debates – its refusal to ›fit‹ – unwittingly acts as a kind of symptom of this intractability. In offering an interpretation of this intractability, we tend towards its embrace rather than its rejection or occlusion. How might this moment of unruliness be held open, and how would the process of attempting to do so reorient some of the practices of reading and of experimentation in the fertile seam that is neuropsychology?

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