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Repression as the Condition for Consciousness

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abstract

Solms makes a convincing case for the subcortical structures as conciousness-inducing instances and the audacious logical consequence, that the Freudian Id, therefore, is conscious, makes sense. However, in his understanding of this conscious Id, affect and drive are conceptually confused and a brain-based view of affect, drive and pleasure altogether is defended. My first aim is to stress the importance of understanding the drive – the vector between an internal body regulatory imbalance and an external body motor response – as an acquired link, for which the criterion is first given by the pleasure, produced by a release of tension when an internal body need is alleviated. Moreover, I question the representational nature of this primary subjective consciousness and I propose that the constitutive contribution of the neocortex to consciousness is not so much memory space, than it is the process of inhibition – or repression – which enables the distinction between a mental and a perceived object and consequent action-selection, and in the process of doing so generates representations and "solidifies" objects.

key-words: drive – affect – pleasure – repression – inhibition – representation

This paper has the great merit to put a range of empirical observations together and to point out the "obvious" (but nobody has done so before), that "cortical varieties of consciousness actually depend upon the integrity of subcortical structures, not the other way round" (p. 13). Moreover, it makes sense to me to understand these subcortical structures, and the consciousness they generate, as of an inherent drive-nature and therefore all the more closer to the concept of the Freudian "Id".

My first aim is to defend a conceptual distinction between an affect and a drive (or "instinct"), in the Solms-Panksepp notion of the conscious "Id" while both concepts are often equated or conflated in this paper[2]. I understand that one of the pillars of the conceptual framework presented by Solms is Panksepp's (1998) ground-breaking notion of affective neuroscience, implying that there are distinct subcortical brain circuits, which seem conserved over species and which, when activated, give rise to the behavioural expressions of the different affects and therefore, as the result of the feeling of these motor discharges, to the different emotions. Panksepp (1998) regards

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[2] ex. p. 4 "affect and affective motivation", "various instinctual motivational circuits (…) known as the circuits for 'basic emotions' (…)", p. 5 "What distinguishes them [the basic emotions] is their *instinctual* nature.", etc. See also Shevrin (2003) for a comparison between Panksepp's Seeking System and Freud's definition of the drive.

these emotional operating systems not as drives but as regulatory mechanisms emerging from the intrinsic potentials of the nervous system. Solms (p. 4) also considers the brain as the emergence site of affect: “Affect is an intrinsic property of the brain.”, of the affect-as-the-drive: “They [the various instinctual motivational circuits] are intrinsic to the brain” and of the (un-)pleasure feelings: “Feelings of pleasure-unpleasure (…) are readily generated by stimulating a region of the ERTAS knows as periaqueductal grey.”. This suggests an all-brain organisation for affect, drive and pleasure. Therefore, it is as if an organism comes to organise itself as an intentional entity as the result of a causal chain emerging from the brain, from its “intrinsic potentials”, and, by consequence, eventually from the innate structure of the brain[3]. Flexibility and learning are understood as mere ways to fine-tune the system to changing environments but the major impulse comes from the nervous system, be it from the subcortical and brain stem structures.

Now, it is difficult to understand intentionality itself as emerging from the brain. My fundamental point is that *we can not do away with the body as a site of origin* – in contrast to a brain-based site of origin – if we want to end up with directed, oriented behaviour, i.e. with an intentional system. Going back to Freud’s (1895) concept of the “experience of satisfaction” a possible chain of event might go as follows. The main regulatory systems (respiration, digestion, sudation, excretion, circulation, copulation etc.) are taken care of by the viscera of the internal body. Suppose that there is a depletion of nutrients in the tissues of the internal body; this lack is translated in an afferent stimulation, which is “achieved through a network of upper brainstem, diencephalic and basal forebrain ‘arousal’ structures (…) known (…) as the extended reticulo-thalamic activating system” (p.3). This arousal stimulation will probably set off the SEEKING system. Panksepp (1998: 194) indicates: "The species-typical expressions of this system lead to foraging in some species and predatory stalking in others.". But even in animals, only in the case foraging or predator stalking leads to food coming in, will the depletion, from which the urge to act first emerged, get replenished. This replenishing is a release of tension, which Freud (1895) qualifies as “pleasure”. In other words, *the pleasure criterion is given by the (internal) body* – not by the brain. Only if the motor pattern chosen is successful will there be pleasure, a pleasure given by (the release of tension in) the body.

This pleasure has to be distinguished from another kind of gratification. The behaviour which has delivered this pleasure, because it has delivered this pleasure, will get tagged physiologically as a salient behaviour. This is what neuroscience tells us (e.g. Berridge, 2009) but also what Freud (1905: 182) suggested: “This satisfaction must have been previously experienced in order to have left behind a need for its repetition; and we may expect that Nature will have made safe provisions so that this experience of satisfaction shall not be left to chance.”. As a result, once this tagging happened, acting out the behaviour, delivers a gratification subserved by the dopamine circuitry[4]. Say that due to changed circumstances (e.g. captivity) some

[3] e.g. p. 6-7 “[Feud] no less than Panksepp, recognized that the basic emotions are innate mental organizations.” This kind of statements is confusing in the context of this paper, since this might be true for the basic emotions (a motor pattern set off by a stimulation, internal or external; the link is innate or learned; what is innate is the activated pattern of reactions) but this seems to me fundamentally wrong when it comes to drives (which by definition is a vector linking an internal body need state to an external motor behaviour pattern; it is of crucial importance to see that the linking is not innate but acquired; see further).

[4] Note that this distinction between the pleasure given by the consumption of something, the internal body was in need of, and the *gratification* or the *incentive* given by the motor activation of the

other motor pattern (e.g. pushing a button) leads to food coming in, than it is that motor pattern which will become gratifying. In other words, the link between the internal body's need status and the external body's behaviour pattern responding to that need, has to be physiologically registered, by the internal body's signal of pleasure when the need is effectively alleviated; even in animals, therefore, this link is acquired and not innate.

But there is more. In animals the "translation gap" between internal and external body is small: there is almost always immediate efficient adjustment between the internal regulatory systems and the external behaviours, which are even qualified as "associated peremptory*"* actions (p. 4). However, in humans, due to the large helplessness of the newborn, that translation gap becomes an unavoidable reality. For example, the kind of behaviour induced by the human SEEKING system in a newborn when activated by an internal body need signal, is far less specific than the complex stereotyped behaviour of newborn animals: when it comes to "seeking", the human baby will cry and wriggle. Nonetheless, this behaviour may be effective. Indeed, a mother may come along, hear the baby cry, *interpret* the behaviour and feed the baby. In the end, as the milk alleviates the hunger and thereby brings pleasure, the cry was an adequate act and gets physiologically tagged as such, i.e. the motor activity of crying and sucking become gratifying, which ensures that they will in the future be readily repeated when a new hunger signal arises. In other words, humans, far more than animals, need the internal body tissues based pleasure criterion to connect afferent brain stem stimulation with "associated" motor expression patterns, which are much less a-priori associated (as might confusingly be understood from e.g. p. 6 "[instincts] are intrinsic affective-motor stereotypes").

For these reasons, we can not do away with the body as a site of origin for the constitution of an organism, and eventually of a mental system. As the notion of "drive" supposes this bodily site of origin in its definition, while an affect may arise from the encounter with an external stimulus, it is important not to conflate affects and drives. It is important to remember that Freud (1915*a*) called the drive the vector between the biological and the mental.

Second, what kind of consciousness is generated by the subcortical structures? Solms indicates that in the Libet experiment the "primary subjective" or the "affective (volitional)" self actually initiates the movement and that it is only to the "representational 'declarative'" self that awareness of the movement comes with some delay. This makes sense, but I don't think that this primary subjective self is the self that generates the kind of consciousness which gives us the (illusory) idea of free will, and therefore, the Libet results remain: the awareness of having decided to move comes after the decision to move. What is more, e.g. Haggard and Eimer (1999) show

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behaviour pattern leading to this consumption, parallels Berridge's (2009) distinction between "liking" and "wanting" (see also Shevrin, 2003) and the Lacanian distinction between pleasure and *jouissance* (Lacan, 1959-1960; see also Bazan et al., 2012; Bazan & Detandt, *in press*). Also note that the motor behaviour pattern may remain physiologically gratifying, because it is carved as such in the physiology of the subject, even when it no longer brings pleasure, due to changed circumstances. This disconnection between pleasure and gratification happens far more in a human than in animal life, due to the large "translation gap" between internal and external body, which induces a large variability in the range of possible adequate actions, many of them which may become later on in life inadequate, while still gratifying. This then may result in the typical suffering which is induced by the persistence of behaviours which the subjects themselves do no find pleasurable, i.e. it is one of the major causes of human distress.

that this awareness may come as the result of the decision to move, and more precisely, as the result of the movement *selection*, i.e. the inhibition of non-chosen alternatives.

Let's go back to the experience of satisfaction. Say the hungry baby cried and the mother fed him. The whole motor pathway leading to the effective sucking of the breast, the adequate act, gets linked to the hunger drive and becomes physiologically gratifying. Especially the image of the breast in the right angle for effective sucking becomes the wishful image, which serves as the reference for the motor search of the head movements. In first instance, as Solms keenly points out, whenever the hunger stimulus appears, it is that motor image that gets activated and there is a hallucinatory wish fulfilment with a release of the sucking movement. Indeed, in this stage one could say that "biologically valenced (…) objects of past experience are rendered conscious by dint of their 'incentive salience'" (p.15). I agree that this kind of consciousness, characterised by hallucination and acting-out, is played-out through neocortical activation aroused by drive-instigated subcortical activation and that it doesn't entail secondary process cognition. But I think that this "very primitive form" of desinhibited hallucinatory consciousness might not be representational and it might even be question to debate if this state then really qualifies as "conscious" if it is not representational[5].

I propose, however, that the state we would readily qualify as conscious emerges, when no breast is present. In that case, releasing the sucking movement not only will not be effective, but will also lead to a loss of energy. The baby would be better off to stop sucking and start crying again. Therefore, it becomes crucial for the baby's survival to be able to distinguish a mental image from a perceived image of a breast. It is there where the ω neurons – the motor neurons of perception – come in (see also footnote 6, p. 8). As soon as there is enough inhibitory weight of the maturing Ego[6], the ω neurons (e.g. oculomotor neurons) – and especially their "messages of discharge" or "indication of reality"[7] – will enable this distinction, because a movement of the eyes has radically more drastic effects on a perceived than on a mental image of a breast. At this stage, as the internal origin of the mental image is recognised, the sucking movement is withheld. We might say that the sucking action "is not hypercathected, remains thereafter in the Ucs." (Freud, 1915*b*: 202), that is, we have here a very basic form of repression (namely of the motor act of sucking)[8].

At the same time, if no breast is present, the neuroscientist Jeannerod (1994: 201) suggests that the neurons encoding the final configuration "(of the environment, of the body, of the moving segments, etc.) as they should arise at the end of the action (…) remain active until the requested configuration has been obtained. If the goal [of an action plan] were not reached, the sustained discharge would be interpreted centrally as a pure representational activity and give rise to mental imagery. ». In other words, the baby will still generate an internal image of the breast, but this image will be

[5] Is a hallucination a representation, or should we consider it as an activation or stimulation at the periphery of the mental apparatus, namely at its perceptual periphery, in the same way the acting-out is an activation at the motor periphery of the mental apparatus?

[6] or of the Default Mode Network (Carhart-Harris and Friston, 2012).

[7] Elsewhere, we have defended an equivalence between the Freudian "indications of reality" and the "efference copies" of the modern neuroscientific models (Bazan, 2007*a*; Bazan and Snodgrass, 2012; see also Shevrin, 1998).

[8] Indeed, the French psychoanalyst Le Guen (2001: 46) underscores that "what has to be inhibited in fact not the object, but truly the motor act, as a function".

recognized as a mental image, and is thus no longer a hallucination. This means that it is truly *inhibition* of action, which generates representations. Moreover, what is called an "object" can only be what is assembled in these representations as a wishful action or a desired goal of that action (i.e. as an object of a drive, ultimately) [9].

In other words still, the kind of consciousness we experience thanks to the contribution of the neocortex, is the kind of consciousness which we end up with after *inhibition* has made selection possible, stabilising both the selected and the inhibited actions/objects. Therefore, I don't think it is as much the passive presence of memory space which the cortex contributes to consciousness, as Solms suggests, but I propose that it is the active process of inhibition (or, in psychodynamic terms, of *repression*; see Bazan and Snodgrass, 2012; Bazan, 2012), which is the foundational, constitutive process which the cortex contributes to representational consciousness. And this kind of consciousness, to my view, is truly secondary process-consciousness. For example, the Swiss psychiatrists Saraga and Gasser (2002: 111) indicate that Freud underscored the importance of this inhibition as being the essence of the secondary process, which enables the development of thought itself, the "substitute of the hallucinatory wish fulfillment".

A last point on words and things. I disagree with Solms on understanding "word-presentations" as re-representations of objects at a higher level in secondary process thinking. Freud (1891), with his model in *On aphasia*, intended in the first place to stress a certain *equivalence* between words and objects. Both words and object presentations are defined by the same type of characteristics, namely perceptual and motor characteristics for both. The perceptual characteristics for objects mostly cover the whole spectrum (vision, smell, taste, feeling, sound etc.), while for words the range is more restrained (the graphic image, the word sound). The motor characteristics of objects include the usual way we interact with them, while for words it includes the articulation movement for spoken word and the writing movement for written words. In other words, a word is in the first place an object like another and treated as another. The special faculty which emerges from language only emerges because of the fact that connections are made between specific object representations and specific word representations (the famous double link in his scheme) at a conscious level. But this linking – the reference capacity of language – is structurally unstable, very much so in the unconscious (where the word presentation is loosely connected to the object presentation) but also consciously, due to language's structural ambiguity. So, even if in some cases word-presentations are re-representations of objects at a higher level, they always also are not, i.e. they can induce effects without any connection to their "corresponding" object-presentations[10] (such as in signifier-structured symptoms; Bazan, 2007*b*; Bazan, 2011*b*). It is

[9] When does an object become an object to a mental apparatus or a Freudian object presentation, as Solms points out? There is only one criterion possible *from within* the emerging mental system is: when it becomes a possible object of the drive. This is also what Solms says when he speaks of "objects of desire coming to mind" (p. 15). By trial and error, by learning, through interpretation from others, internal body need states get linked to a range of *adequate* actions, delivering the objects which can alleviate the depletion at the origin of the drive. This makes each adequate action and its object an entity. We usually think of objects as perceptual entities, while even in Freud's object presentation model, the motor modality, the usual way of motor interaction with that object, its "grasp", is present as an important constitutive component. Likewise, the neuroscientists Grabowski and colleagues (1998) and Grafton and colleagues (1997), propose that objects are encoded as the motor program which we have to mobilise to use these objects. In that sense, there is some neurophysiological equivalence between the adequate act and the adequate object of a drive.

[10] For empirical evidence on this point see Villa et al. (2006).

precisely because words can navigate on these two hierarchical levels, the primary and the secondary process, that they are effective in the talking cure and not only because they are the instruments of rational, contextualized thought capable of representing relations.

To end with, three things with which Solms closes his paper and with which I wholeheartedly agree. First, I completely agree that "it is difficult to imagine how the neuroscience of the future can be anything but psychodynamic"[11]. Second, when Solms says that "we are breaking through to a truly *mental* science" (p. 23), I completely adhere to this view (and I have defended elsewhere that this will be the logical result of the tremendous revolution in the neurosciences; Bazan, 2011*a*). Let me add, in the same line of thought, that I also adhere to his word choice of "mental solids" and that we are reminded that Freud (1900: 613) spoke about "psychic reality" and not about some metaphorical discursive construction for his understanding of the unconscious. And finally, of course I am encouraged to read that the final word is giving to the clinical expertise. As psychoanalysts, these last decennia, especially in the domain of neuro-psychoanalysis, we have been far too little proud and aware of our precious and unique clinical method. This lengthy, most of the time undirected, often times confusion and ambiguity-inducing therapeutic offer, is so much at the antipode of what has been valued in science, ànd in clinics, these last decennia that many of us have been readily willing to leave it or to undervalue it – while it actually is the very core of our unique contribution.

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[11] "Psychoanalysis is the future of neurosciences" was also the closing sentence of my presentation at the Athens' International Neuropsychoanalysis Congress (Bazan, 2012).

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