

The New Anatomy: Is the ego more than skin deep?

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What is the ego?

I'm going to jump right in with some speculations about the ego, and then consider how what we know about the structure and function of the skin can add to this concept.

The ego is an emergent property of the highly complex human organism. At a certain level of complexity, self-regulation evolves to a level where it includes the capacity for self-consciousness. In particular, it is a product of socialisation. Ego functions derive from the capacity of the organism to know its own boundaries, to store information from experience, and to adapt to its environment. In a rudimentary way, these capacities are present to some degree in most forms of life, but in humans these capacities are able to crystallize out at another level, which I am calling ego.

As a result of optimal development, the 'healthy' ego can acquire a unified representation of itself, an awareness based on exteroception (perceiving the environment via the senses), interoception (perceiving the state of the internal organs) and proprioception (perceiving its own responsive/active muscular state). [i] The ego is embodied, relational, capable of reflection, expression and action.

But this is an ideal ego. One reason for the widely divergent definitions of ego has been that the non-ideal 'normal neurotic' ego is what we all live with and encounter in each other. It is broadly accepted in metapsychology that the ego is that part of the self which has been modified by or adapted to the social environment. Developmental neuroscience is beginning to elucidate *how* the infants rapidly growing brain is shaped by its experience of the environment. The mother acts as a regulator of the baby's state of emotional arousal, through her touch, tone of voice and facial expression. In a process whose stages are now more clearly understood, the baby/toddler learns increasingly to self-regulate emotionally, with the mother's ongoing support.

The baby internalizes both the good experiences and the failures, neglect and even abuse as patterns which actually affect the overall function of the brain-body. In body psychotherapy we have the concepts of visceral, tissue and muscle armour. Neuroscience has recently detailed the myriad neural and chemical dysfunctions which can happen, reducing the child's capacity to cope with stress, to learn and to relate. As formative social interactions occur and recur, they become structuralized within the organism. These structuralizations (we could think of it as cerebral armour) then exert a projective influence over peripheral perceptual events. In other words, they limit our openness to new experience.

The 'skin ego'

The phrase 'skin ego' comes from psychoanalysis and derives from Freud's much quoted comment that the body ego could be regarded as 'a mental projection of the surface of the body'. (Freud 1923: 26) This was taken up by Esther Bick, who suggested that the baby's good experience of skin sensation was a basis for the sense of a 'containing object'. It enables the baby to begin differentiating inner and outer, what is inside is me, what is outside is not me.

In body psychotherapy we have the concepts of the 'motoric ego' and the 'perceptual ego', which includes the tactile function of skin. (Boadella) [ii] The characteristics of the muscular aspect of the ego (motoric) are related to the function of the muscles to act, to hold back, to express, to repress. Via the muscles we can introject parental models, prohibitions, and cultural styles as unconscious identifications with the body attitudes and postures of others. Where we are in harmony with ourselves, the muscles can embody grace, physical skills, and vitality. When we are in conflict, this is directly reflected in patterns of muscular tension as the different impulses and inhibitions pull against each other. Chronic conflict reduces blood flow and creates the hardening and fixedness of muscle tension we call armour. Reich correlates this with character armour which reflects particularly the vicissitudes of the child's first seven years.

By contrast the development of the 'skin ego' belongs primarily to the earliest months of life. The baby's skin is sensitive, soft and energetically 'open'. The attachment needs of the baby are met primarily through eye and skin contact. Harlow's experiments in the 1950's showed that the need for comfort contact often supersedes hunger for food. The mother's body moderates high arousal – anxiety, excitement, distress. Reich attributes this to the expansion of the child's biosystem as it reaches for the mother. (Reich:1972: 248) Neuroscience confirms that the mother acts as a regulator of the baby's homeostatic system via endocrine, autonomic and central nervous system activity. *Nourished by comfort, contact, soothing experience, he or she starts to feel good 'in' his or her own skin.*

Body contact reassures the baby and helps organize its underdeveloped nervous system. Touch promotes the growth of myelin, the insulating material around nerves. It increases hormone production for growth, digestion, and learning. Skin contact requires physical closeness, and is therefore associated with the effects of the other proximal senses, particularly smell, and also the perception of rhythm and vibration in the other. The adult's heart-beat, breathing, and vocal rhythms, also comfort the baby, and become associated as a gestalt, a sense of safety and familiarity with a particular person. As the baby becomes a toddler, this is superseded to some degree by the distal senses – the eyes and ears – which allow more independence.

Curiosity in a young baby is channelled via tactile exploration, especially at the highly sensitive mouth, and the hands. The exteroceptors are the receptors on the surface of the body that register changes in temperature, pain, pleasure, pressure etc The high degree of sensitivity of the skin is related to the abundance of nerve endings located there. Juhan has emphasised the connection between the origins of both the skin and the cortex in the same embryological layer. Tactile experience is an essential food for the cortex, stimulating its growth and development. Both skin and cortex are characterised by sensitivity and the ability to handle complex patterns of stimuli. The cortex houses the 'higher' mental operations, including the capacity for complex, abstract, and long-term thinking. The receptors in the skin function optimally with light contact with stimuli which enables a very refined perception. Stimuli are re-transcribed en route to the cortex, especially via association, as they are organised into meaningful patterns and cross referenced with information from other senses, including proprioception. [iii]

Reich: ["For the infant, the environment with its innumerable stimuli can be nothing but a chaos in which the sensations of its own body are a part. [initially] Everything pleasurable became part of an expanding ego; everything unpleasurable became part of the [contracting] ego. As time goes on, this condition changes [...] parts of the environment which are pleasurable (e.g. the mother's nipple) are recognized as belonging to the outer world. Thus the child's ego gradually crystallizes from the chaos of internal and external sensations and begins to sense the boundary between ego and outer world". (Reich 1973: 41-2)

The young baby's skin is more continuous with its aura and the energy fields around it than an adults. Having been in symbiosis with the mother in utero, the tendency is still to coalesce with her. In psychoanalytic terms this is merging, which is the psychological correlate of blurred or softened boundaries. Gradually the baby begins to gain a sense of its own boundaries through repeated tactile experience in the context of attuned response by the caregiver. It begins to acquire a sense of the physical boundary of its own skin in connection with a stable and empathic maternal presence. It learns to associate this with the sight of part of its own body, and by five months or so will recognise itself in the mirror. Its knowledge of itself and others as separate people is crucially built up and enhanced through social interaction and cross-modal (ie. multi-sensory) perception.

But there is also an illusory aspect to this early primitive aspect of the ego – the boundary of the skin which delineates an individual body belies the absolute dependency of a very young baby on others. The visual seamlessness of skin also carries a sense of completeness, perfection and intactness which may be in stark contrast to inner experiences of turbulence and complexity. Lacan calls this 'the lure of spatial identification'. (Lacan 1977:4) The skin ego – unsupported by the developing motoric ego – is a fragile one. In contrast to the motoric ego, the skin ego is not a vehicle for agency or will. Its condition changes involuntarily – changes in colour and secretions reflecting emotional states and the effect of the environment. Acne, psoriasis, urticaria and other skin conditions, as well as having psychological origins, can have a torturous impact on the sufferer because they appear to betray by their external appearance something about the self. Their visibility speaks loudly.

Triggered via the autonomic nervous system, blushing, sweating, blanching, irritation are more fleeting modes of self-regulation, which also have a communicative impact.

The skin has a barrier function in several respects: it helps regulate body temperature; it keeps harmful substances from getting into the body; it is one exit for excreting toxic substances out of the body; it operates as the last physical layer of the body which contains energy. The skin has insulation in the form of fat cells which act as 'shock absorbers'. We can observe a correlation between thin-skinned 'nervous' characters and the apparently greater equanimity (ie a particular kind of defence/containment) of those with more layers of fatty tissue under the skin. We also see and experience variations in skin porosity, which reflects the individual's relationship to their physical/social/energetic environment.

The psychological characteristic of the openness of skin may be vulnerability, pleasure or excitement. When we feel embarrassed, touched, self-conscious, or extremely sensitive we often feel it directly as a charge at skin level. We may feel a heightened sense of exposure. Conversely, when people close down in order to protect themselves, it is often palpable at skin level. There is a withdrawal of energy deeper into the body, characteristic of shock, or schizoid withdrawal and deep depression. This may be referred to as "thick skin" but it is a defence against further shock, loss or disappointment. We can deliberately toughen up (tone our skin, seal energetic boundaries) when we know we must not let someone 'get under our skin'.

Damasio reports an interesting experiment with skin conductance which was undertaken to research the claim of the pianist Maria Joao Pires that she could control the flow of emotion through her body. They measured her skin conductance while she listened to Chopin's Nocturnes. When she was 'allowing feeling', it was full of peaks and valleys. When she deliberately reduced her emotional response, her skin conductance graph was virtually flattened. (Damasio 1999: 50)

The 2-d and the 3-d ego

In reality, of course, the skin does not operate separately from other parts of the body. The concept of the skin ego is only used to distinguish a set of ego functions that may be derived from the physiological function of the skin. In line with general principles of development, we see that trauma impacts the system that is most sensitive at that stage. In the crucial phase of separation-individuation, the infant's skin boundary may be especially vulnerable. Lack of sufficient 'holding' and/or a particular trauma in infancy, may leave someone susceptible to chronically nebulous boundaries. Underdevelopment may mean that an individual overuses tactile sensors, and is therefore 'hypersensitive', and easily overwhelmed by stimuli (emotional and sensory). (Kahaner)

This seems particularly evident in very narcissistic individuals, who seem to seek constant reinforcement at skin level – they want to be stroked psychologically and literally. They are terrified of psychological penetration and preoccupied with appearance. Grandiosity is a sort of puffing up, and when their bubble is burst (implying a skin filled with air), the sense of humiliation and despair is unbearable. In *Neuropsychanalysis*, Mark Solms makes an intriguing link between narcissism and anosognosia, a condition which is characterised by the patient's refusal to admit illness or loss of function in a part of the body (this can occur after brain injury to the right hemisphere, often after a stroke). He argues that rather than being a purely mechanical loss of brain function, it is related to the withdrawal of libido (ie. energy) which leads to a collapse in spatial perception. This has parallels in a typical experience of narcissism where, when energy is withdrawn from the surface inwards (after a perceived rejection, for example), the capacity to propriocept and to judge spatial and emotional relations is itself severely diminished. The world implodes. [\[iv\]](#)

The skin is a surface, and for me the main significance of this in terms of the skin ego is that it is a *two-dimensional projection*. It is a superficial image. This may be particularly so if it is reinforced visually rather than through experiences of skin pleasure through contact. When body image is substituted for body experience (as it often is in our culture), there is a price to pay as the perception of the interior of the body gets split off. It is interoception and proprioception that we monitor the deeper register of our internal life. One explanation for the motivation to self-harm may be to enact and depict an internal feeling of rupture or disarray by cutting the skin. [\[v\]](#)

By contrast, *the motoric ego which develops over a longer period, has much more structural complexity and is three dimensional*. From early birthing and feeding movements, through crawling, walking, and manipulation of objects, the child discovers his or her capacity for agency in the world. With delight, they find out what they can 'do' in the world and to objects. With difficulty, they face the frustration and limits of what they can't do, either because they haven't mastered it, or because it is prohibited. There is much more potential for developing robustness in this phase of ego development – there is a direct engagement with physical matter and gravity. In the wrestling, poking, pushing, twisting, and more intricate manipulations – folding, eating, tying shoe laces – there is a real opportunity to find out about reality. And it embraces another level of social learning – what happens if you hit someone, or lick them, or stroke them.

In contrast to the skin, the muscles have much more volume and are weighted with blood. They are packed with proprioceptors measuring muscle tension values, pressure and the position of limbs in space. This creates a constantly updated dynamic and dense map of the body. When we sense ourselves through our muscles, especially when we move, we may feel our capacity to express and to act. (Hence its crucial value as a resource in Somatic Trauma Therapy) Of course, we may also feel our blocks, inhibitions and conflicts, as deadness and tension.

In actuality the activity of muscles and all the sensors in the body (in skin and muscle) are profoundly interrelated. Sensory and motor functions form a continuous loop, with the motor action focussing sensory information, and sensory information influencing movement. Boadella has pointed to the relationship between low muscle tone and an over-active fantasy life; it reflects passivity in relation to the world and its objects. (Boadella :50) The sensory stimulus creates images – the flat projection (as in dreams) but the muscular activity embodies them. When the brain receives a balanced input from all sensors: "the image of skin and musculature as a boundary gives a schema fundamental to the bodymind's orientation of its data (Damasio 1994: 230)

[i] Proprioception is used here in the widest sense to refer to all the information the body reflects back to itself about itself. See the 'Bodymind' chapter in Totton.

[iii] I have elaborated on the theme of the Motoric Ego, and also on The Autonomic Nervous System as a Barometer of Emotional Intensity and Internal Conflict in articles on my website. See Carroll

[iiii] In BodyMind Centering the lightness and sensitivity of the cortex is contrasted with the groundedness and weight of the evolutionarily older parts of the brain. See Hartley

[iv] This is specifically linked to the function of the right hemisphere which governs holistic and spatial perception, as well as the integration of body signals, and capacity to attune to others. See my interview with Allan Schore for a more complete account.

[v] Cutting also stimulates the production of endogenous opioids which temporarily numb pain, so it has a parallel with using drugs.

	Skin Ego	Muscle Ego
Senses via	exteroceptors	proprioceptors
Stimulus	contact/environment change	movement/pressure
Experience	sensation - modalities	kinesthetic
Range	open/closed	tension/relaxation
Quality	sensitivity/insensitivity	excitability/stability

Priming	birth-18 months	in-utero-7 years
Develop't	threshold setting	developmental sequence, skills
Control	involuntary	voluntary/involuntary
Body map	2-d surface projection	3-d dense complex projection
Psych func	Merging/separating	agency, expression, repression
Identity	inner/outer	intojected/projected
Need	dependant-receptive	dependant-will/independent
Container	delineated/defined	differentiated/bound

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