



Intimacy; views from impairment and neuroscience



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ABSTRACT

Intimacy usually involves the body. Its dependence on and the difficulties in transcending this are explored by discussing some of the problems those with neurological impairment have in this regard. These impairments are considered in relation to intimacy with one's own body, with others and with the world. Intimacy is also often expressed through touching, and work on the neural basis for the pleasurable aspects of touch is also given. The main part of this paper, however, consists of narratives from the experiences of those with a number of conditions. For instance an adult who has gone blind describes losing the recognition and enjoyment of his family's faces; someone with a facial visible difference describes the impossibility of physical intimacy as a result. The ways in which couples adapt to one becoming quadriplegic are explored as intimacy changes and continues. A person with hemiplegic cerebral palsy describes how one side the world is available normally, but the other side hostile, alien and unusable. Through these and other personal narratives, one of the main purposes of intimacy, maintenance of relationship, is revealed.

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1. Introduction

The definition of intimacy from a classic English dictionary, The OED, begins abstractly, almost cognitively; "Inmost, deep seated, hence essential; pertaining to the inmost thoughts or feelings." Only then does it become more social; "close in acquaintance or association, characterised by familiarity," before leading – possibly – to a more bodily definition; "pertaining to or dealing with close personal relations," (Shorter OED 1983). In contrast, a modern online dictionary equates intimacy, completely, with a special friendship or attitude to another person or place; "the *intimacy* of old friends, the *intimacy* of their relationship, the band liked the *intimacy* of the nightclub." The Merriam-Webster's list of synonyms includes belonging and closeness. These encompass its common, present meaning, a special form of relation between a person and others or a place, and one which has an affective or emotional tone. This tone is usually pleasant and rewarding and so sought, implying mutuality and consent. One can imagine unpleasant intimacy, say of a prisoner for his cell, but this is an unusual use of the term. It also has exclusivity; one can be intimate with a relatively small number of people or places and— it may be diminished by being (over)extended. Lastly, intimacy does not really fall into familiarity;

it retains an element of freshness or renewal, made possible by its developing richness and depth, and by the rewards it usually brings.¹

Intimacy, like consciousness, also has content or an object; intimacy *with* something or someone. And again like consciousness, it has a subject, and though it can be used in relation to, say, a band with a nightclub, that subject is usually a person, and that person includes body and mind, if those two can be separated. Merleau-Ponty wrote that; 'Consciousness projects itself into the physical world and has a body... The body is the general medium for having a world,' (Merleau-Ponty, 1962). To become intimate with someone else, usually, tends to either be mediated through or focussed on the body, and people with problems in and of their body have particular problems in this regard. In this paper I explore the role the body plays in intimacy, by a phenomenologically informed exploration of the experiences of some people with clinical

¹ In a rare neuropsychological problem, Capgras Syndrome, subjects think their family and friends have been replaced by imposters. One theory to explain this is that there has been a disconnection between areas of the brain concerned with facial recognition and those underpinning emotional valence in relation to faces. Then the person knows the familiar face but does not feel the emotion which typically comes with seeing a loved one. The presentation to consciousness of this recognition minus emotion is that the person must be an imposter. Intimacy may usually involve elements of familiarity and emotional response (See Ellis and Young, 1990).

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conditions, for instance spinal cord injury and facial visible difference. These show some of the ways in which one's body is an opening for intimacy, the ways in which changes in the body alter the possibilities for intimacy, and the ways in which intimacy is crucial to human experience and well-being.

Working from the phenomenological premise that experience is located not within our heads but extended in our relationships to others and the world around us, and is mediated through and by our bodies, I suggest that we can think about intimacy in relation to our own bodies, with others, and intimacy with place or our environment. Through these I suggest that what we seek in intimacy is more than a momentary connection with things or others but rather sustained, temporally enduring relationships. Intimacy matters because through it we are able to *maintain* relationships.

But first I will touch on one possible neurophysiological substrate for social touch to reveal something of how the brain may organise intimacy more generally.

2. Neuroscientific Entrée

Traditionally neuroscience has divided somatic sensation, broadly touch, from and of the body, between interoception—information about the body's functioning—and exteroception—information through the body about the environment beyond it. Originally Sherrington defined interoception as being visceral sensations, from bladder, bowel, lungs etc., but the term has expanded to include the physiological condition of the entire body and how this reaches awareness. In contrast, exteroceptive information is of the outside world, whether through vision, hearing, touch or taste.

Sensations are also intimately tied to action and evaluation; for enactivists they are almost one indivisible whole, and it is — arguably — artificial to separate sensory and motor systems (e.g. Thompson, 2010). Lastly sensation is also related to feeling, as Sherrington well understood: “Mind rarely, probably never, perceives any object with absolute indifference, that is without ‘feeling.’ All are linked closely to emotion” (Sherrington, 1900: 974).

Feelings, from our bodies, can affect mood, our sense of well-being and emotions as can, of course, exteroceptive perceptions. This affective evaluation is a crucially important parallel processing of any perception and takes place within a hugely complex web of an individual's taste, needs, history, present state and even future hopes and dreams way beyond reductive science at present. But where science may have opened this a little is in relation to touch.

Traditionally skin has been considered to have receptors and pathways related to pain and temperature, and to discriminative touch, (localisation and characterisation of touch, which allows identification and exploration of objects). But, more recently, research has begun to uncover a pathway concerned not with the discriminative aspects of touch but with its pleasantness. Over the last decade or so researchers, led by groups in Sweden, have explored a novel class of cutaneous receptors in skin that are sensitive to varieties of pleasant touch.

Discriminative touch receptors connect with the fast large nerve fibres ($A\beta$), and receptors underpinning perceptions of pain and temperature to smaller low threshold fibres ($A\delta$ and C). Recently a novel class of receptor and pathway has been investigated, the C tactile (CT) afferent fibre which is sensitive to innocuous tactile stimulation (Nordin, 1990; Vallbo et al., 1999).

CT fibres have been found to respond to non-painful touch in a curious way; they prefer slow gentle stroking over the skin to fast movement; they like stroking or caressing. Loken et al. (2009) also found that the response of these CT nerve fibres to stroking correlated well with the perceived pleasantness of the stroke (unlike the response of $A\beta$ fibres).

The central pathways of these fibres have been investigated in two unique subjects lacking myelinated tactile ($A\beta$) afferents, but with spared small afferents, [$A\delta$ and C fibres, which underpin the perceptions of pain, temperature and, we suggest, pleasant touch]. Such subjects have no perception of touch per se on the skin, but can detect soft brush stroking, (Cole et al., 2006; Olausson et al., 2002, 2008b). These subjects' importance lies in the fact that normally stroking will activate both $A\beta$ and CT fibres, and the latter's responses are drowned out by the former. In these rare subjects' CT responses can be studied in isolation. The sensation associated with a selective CT input (soft brush stroking) was weak, vague, and inconsistent and only uncovered using forced-choice ratings in which they were asked whether they had been touched or not. Though not always sure they had been touched, nevertheless they were very accurate when forced to respond, suggesting these afferents act at a level at or just below perception. And, remarkably, though unsure whether they had been touched or not, they described whatever had happened as being pleasant; the system had partially dissociated the perception of touch from that of pleasantness (Olausson et al., 2002).

When scanned in a functional MRI machine during soft brush stroking the areas of the brain activated were those associated with affective and emotional processing of sensations rather than areas involved in light discriminative touch. The latter projects to the first and second somatosensory cortex (SI and SII), while CT fibres appear to project to the insula, (Olausson et al., 2002, 2008a), an area also receiving input from interoceptive and visceral systems and so pertinent to a broad set of bodily feelings like pain, itch, hunger and sexual desire. It has been suggested that there may be two touch systems; large myelinated exteroceptors conveying discriminative touch and projecting to the first and second somatosensory cortex (SI and SII) and the CT system conveying affective, pleasantness of touch projecting to the insula, (see Morrison et al., 2010). These two systems will of course interact under normal circumstances. The fact that effective stimulation of the CT system is so difficult to perceive suggests that it may act as a selector, picking out affective touch for further hedonic processing, and so act in concert with the $A\beta$ system.

The relevance of this to intimacy lies in showing that for the skin, at least, there may be a special system which has evolved in a manner which allows social and intimate touch to be discriminated (see Morrison et al., 2010). But, whilst this may be underpinning intimacy, it is not sufficient. A caress from a family member may be welcomed and enjoyed, but the same sensation abhorred if unwelcome or from a stranger. Its perceptual valence and pleasantness depend on so much more than the afferent sensation alone. CT fibres are also absent from the hand, which is still an important body part for affective touch, where other, top down mechanisms for saliency and pleasantness may come into play; context, interpersonal relatedness etc. And in other senses, e.g. vision and hearing, one would not expect different channels for affectively valenced inputs; such an interpretation will come later in brain processing rather than in the nerve channels underpinning the perception. But, by showing that affective touch may be organised differently in the brain, it does offer some insights into the neural basis for somatic sensory intimacy.

In the remainder of this paper I will leave neurons and scans and go to the experience of those with impairments of the body to reflect on its importance for intimacy.

3. Impairment and intimacy with one's own body

Recently, reacting to overly cognitive approaches to mind, and self, phenomenologically informed writers such as Clark and Chalmers, 1998, Gallagher, 2005, Noë, 2006 and Thompson, 2010, have argued that the mind is distributed in brain, body and beyond

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