

A BIOPSYCHOSOCIAL AND ETHICAL ESSAY

TOUCH

between body and soul

On social contact, the brain, therapy,
intimacy, abuse and grounding



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Professional edition | 2026

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Touch Between Body and Soul

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First professional edition, 2026

Text and compilation: Gerard Feller

Cover and infographics: specially created for this edition

Reader's Guide and Editorial Note

This essay is written for interested readers, pastoral workers and healthcare professionals. It connects anatomy and neuroscience with the relational, sexual, trauma-related and ethical dimensions of touch. The articles supplied by the author served as background material and were critically supplemented with recent literature.

MEDICAL NOTICE

This text provides general information and is not a substitute for medical, psychological or sexological diagnosis. New sensory disturbances, severe pain, suspected nerve injury, sexual violence or immediate danger require professional assessment.

CORE PRINCIPLES

- Touch is never merely a stimulus to the skin; context and consent help determine the experience.
- Therapeutic touch may provide support, but the evidence and indications differ by application.
- Boundaries and warmth are not opposites: clear boundaries make safe closeness possible.
- In trauma, choice takes priority over exposure; freezing or becoming silent is not consent.

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Introduction - when touch moves us

Touch is the first sense to develop and often the last channel still available in illness, old age or dying. A hand on a forearm can welcome, set a boundary, comfort, examine or say goodbye. Yet the same movement can humiliate, seduce, dominate or open a traumatic memory. Touch can therefore never be described solely as pressure on the skin. It is a bodily signal given meaning by a relational and cultural context.

The two articles supplied by the author rightly emphasize that physical contact is more than a technique. They describe the need for closeness, the influence of chronic pain on body and mind, and the danger that professional or pastoral touch without sensitivity may become a violation of boundaries. This essay builds on them with current knowledge from neurophysiology, pain science, developmental psychology, trauma care and sexology.

The central question is: under what conditions does touch become a source of connection and regulation, and when does it become manipulative, damaging or pathological? The answer does not lie in one hormone or one neural pathway. Touch emerges within a system of skin receptors, nerve pathways, brain networks, expectations, power, memories and mutual consent. This layered nature makes the subject both deeply human and medically relevant.

1. The skin as boundary and organ of encounter

The skin is the tangible boundary between self and environment, but it is not a sealed wall. It protects against fluid loss, temperature changes and pathogens while continuously receiving information. Hair receptors, free nerve endings and specialized mechanoreceptors convert deformation of the skin into electrical signals. In this way pressure, vibration, stretch, texture, warmth, cold, itch and pain can be distinguished.

The hairless skin of the palms and soles contains receptors particularly suited to precise discrimination. Merkel complexes encode edges and sustained pressure; Meissner corpuscles respond to light movement and low frequencies; Pacinian corpuscles to rapid vibrations; and Ruffini-like receptors to stretch. Fast, myelinated A-beta fibres carry much of this information to the spinal cord and brain. They let us recognize a coin in a coat pocket or regulate the force of a handshake.

Touch is also two-way traffic. When touching another person, we simultaneously feel their skin, temperature and muscle tension. This makes touch a direct form of feedback: the hand may notice whether someone relaxes, stiffens or withdraws. But bodily feedback never removes the duty to use words. Silence, freezing or compliance is not reliable consent.

2. Two systems: discriminating and experiencing

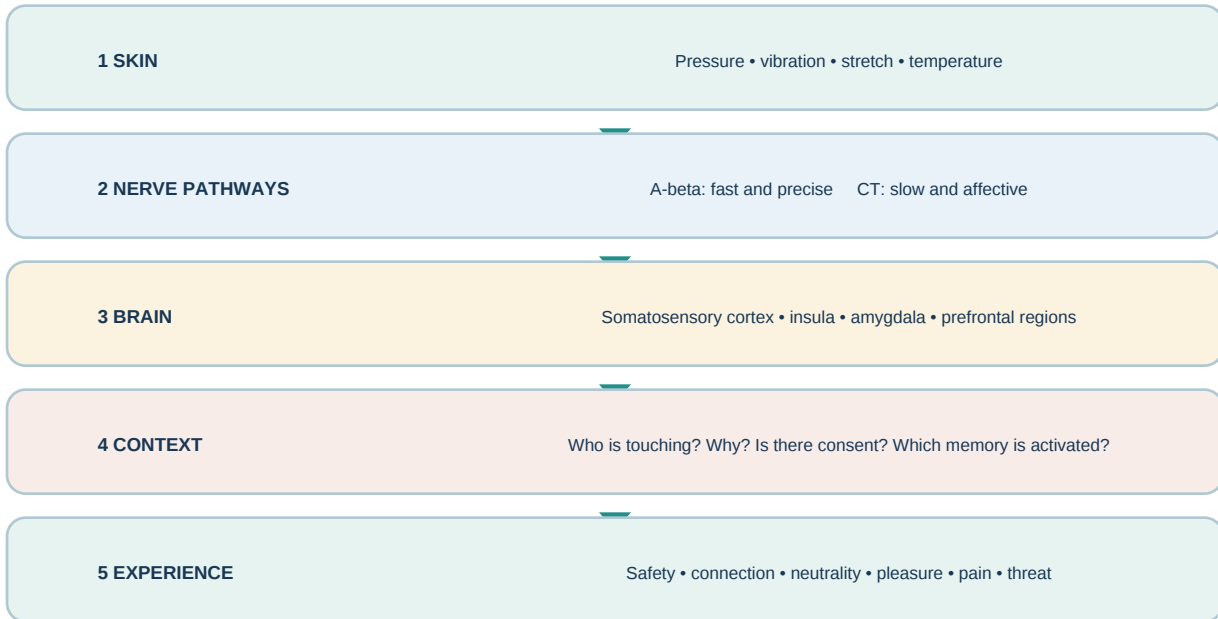
Researchers often distinguish discriminative from affective touch. Discriminative touch answers questions such as: where am I being touched, how strongly, how quickly and with what texture? Through the spinal cord and thalamus, this information reaches the primary and secondary somatosensory cortex, where the body is represented topographically. Attention and movement continually refine this map.

Affective touch concerns the emotional value of contact. Slow stroking over hairy skin activates unmyelinated C-tactile afferents in many people. These fibres generally respond strongly to gentle movements of about one to ten centimetres per second and to skin-like temperature. Their signals are associated with the posterior insula and wider networks for bodily feeling, meaning and social safety. CT fibres are not a 'cuddle nervous system' that makes every touch pleasant. Palms without classic CT density can also experience pleasant touch, and context can make a physically identical stimulus welcome or repellent.

That nuance is essential. The brain combines bottom-up information from the skin with top-down expectations: who is touching me, do I trust this person, what happens next, can I stop? Touch is therefore not a simple telegram from skin to brain, but a prediction that is continually revised.

From skin to meaning

Touch is both a sensory signal and a relational event



Meaning arises from the interplay of body, brain, relationship and history.

Figure 1 - From skin to meaning: from mechanical stimulus to personal experience.

3. Touch in the brain

The somatosensory cortex locates and characterizes touch. The insula integrates signals with the state of one's own body; the amygdala helps assess emotional meaning and safety; orbitofrontal and medial prefrontal regions weigh reward, social meaning and expectations. The anterior cingulate cortex may contribute to attention, pain and affective meaning. None of these regions works in isolation. Experience arises from dynamic networks.

With trusted touch, perceived threat may decline. Autonomic responses can shift: heart rate and muscle tension may fall and parasympathetic regulation may increase. Oxytocin and endogenous opioids are often mentioned, but popular claims are frequently too strong. Oxytocin is not a universal 'cuddle hormone'; effects depend on person and situation, measurement methods are limited, and peripheral values do not simply reflect what happens in the brain.

Touch can also modulate pain. Mechanical input through fast tactile fibres can influence nociceptive processing in the spinal cord and brain, while attention, expectation, safety and connection help shape the pain experience. This does not mean that pain is imagined. Pain is a real protective experience arising from bodily signals and central interpretation.

4. Social contact: a grammar without words

A handshake, pat on the shoulder, embrace or held hand has a social grammar. Duration, pressure, location, timing and reciprocity carry meaning. In close relationships, a larger part of the body is generally considered touchable than in relationships with strangers. Body-map research shows that permitted touch is systematically related to emotional closeness. Culture influences the rules, but differences within one culture are also substantial.

Touch can communicate emotions when words fall short: support in grief, joy at reunion, reassurance in fear. In babies, skin-to-skin contact is part of early regulation and attachment. For older people, isolated individuals and the seriously ill, respectful contact may counter invisibility. Yet 'everyone needs touch' is never a licence. Some people prefer connection through presence, voice, eye contact or practical care.

Digital communication does not fully replace physical contact, but it is too simple to blame social media for touch deprivation. Online connection can be valuable, especially for people who are isolated, ill or neurodivergent. The better question is whether someone's network contains enough safe, reciprocal forms of recognition - physical and non-physical.

5. The development of touch and connection

Early touch contributes to body awareness, stress regulation and social attunement. Care consists of thousands of small interactions: lifting, feeding, washing, comforting, playing and giving space. A child learns not only that it is touched, but that its signals matter. A caregiver who slows down when the child becomes tense and responds to turning away implicitly teaches that boundaries have meaning.

Development is not a simple sum of cuddles. Temperament, prematurity, illness, autism, parental stress and culture influence what is appropriate. Some children seek deep pressure but avoid light stroking; others are quickly overstimulated. In autism-spectrum presentations, tactile defensiveness may coexist with atypical processing of affective touch. Support should therefore not force 'normal' touch, but increase predictability, choice and self-regulation.

Touch deprivation and abuse may have lasting effects, but deterministic language causes harm. Not every deficit leads to the same outcome, and recovery remains possible. Protective relationships, appropriate treatment and new experiences of control can teach the nervous system different expectations.

6. Manipulative touch and power

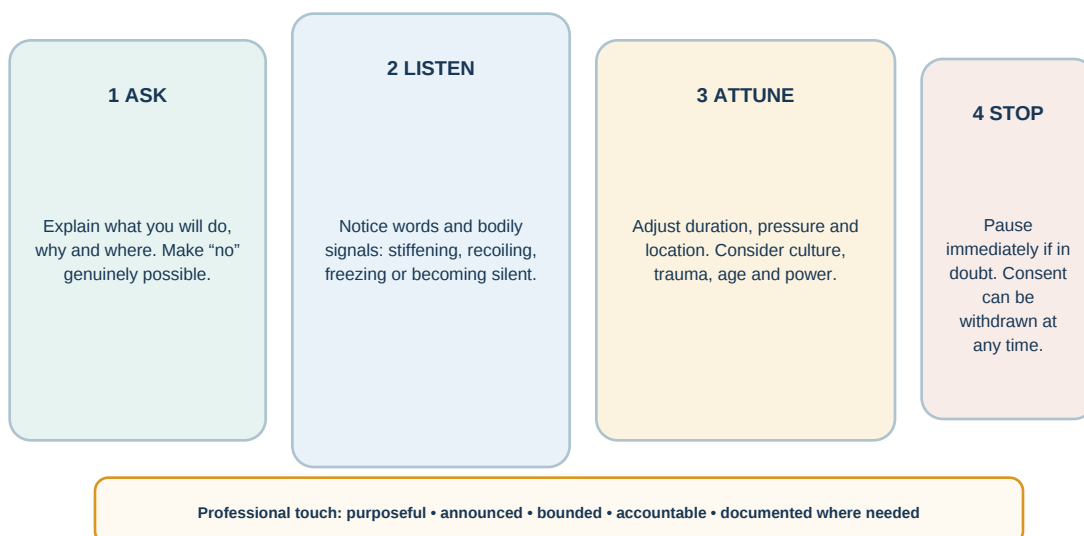
Manipulative touch uses physical closeness to exert influence without open reciprocity. It can appear charming and warm: the hand that holds someone during a photograph to project trust, the embrace intended to neutralize criticism, or the touch with which a leader tests personal boundaries. The question is not only whether the gesture looks friendly, but who benefits and whether refusal is safe.

Differences in power change the meaning of consent. A patient, student, employee, congregation member or client may say 'yes' because of dependence, fear of rejection or a need for approval. Grooming often proceeds step by step: minor boundary violations are normalized, secrecy is encouraged, and responsibility is shifted to the person being touched. Transparency, peer review and clear professional standards are therefore essential.

Even well-intentioned touch can become manipulative when the person touching fails to recognize their own need for intimacy, recognition or spiritual authority. The test is simple but demanding: does the contact demonstrably serve the other person's well-being, is its purpose clear, can they refuse without consequences, and could the same action be justified to colleagues or loved ones?

The compass for safe touch

Consent is an ongoing process, not a one-time formality



7. Consent: asking, observing and asking again

Consent must be freely given, specific, informed, current and revocable. 'May I touch your shoulder to examine where the pain is?' is better than a vague question or an unexpected action. Intimate or sensitive areas require extra explanation: which location, for what purpose, for how long, what alternatives exist and who may be present. A chaperone can increase safety but does not replace the patient's voice.

Non-verbal signals deserve attention. Recoiling, stiffening, holding the breath, nervous laughter, looking away or suddenly becoming silent may indicate discomfort. They do not prove what someone is thinking, but they are reasons to pause and ask openly. A freeze response may temporarily prevent speech or movement. The absence of resistance is therefore not consent.

Trauma-informed care returns control: announce each step, limit exposure, offer choices about position and practitioner, ask whether the person wants explanation during the procedure, and confirm that stopping is always possible. This approach is not only for known trauma survivors; because many experiences remain undisclosed, it is a sensible universal precaution.

8. Therapeutic touch: what do we mean?

Therapeutic touch can refer to different things. In mainstream healthcare it includes functional contact during examination, washing, mobilization, wound care, massage and physiotherapy. Body-oriented psychotherapies and complementary practices also use touch.

An intervention is not beneficial merely because it contains touch. Quality depends on indication, competence, dosage, hygiene, consent, evaluation and boundaries. Massage may provide short-term relief for some pain conditions, but a large 2024 systematic review found no conclusions supported by high-certainty evidence; only a minority reached moderate certainty, and superiority over active treatments was rare. Massage may therefore be supportive, but it is not a universal treatment.

For chronic complaints, passive care alone is often insufficient. Where appropriate, effective rehabilitation combines education, sleep, graded activity, psychological support, medication management and treatment of underlying conditions. Touch can provide an entry point for experiencing movement as safe again, but should not reinforce dependence on the practitioner.

9. Touch, body and mind

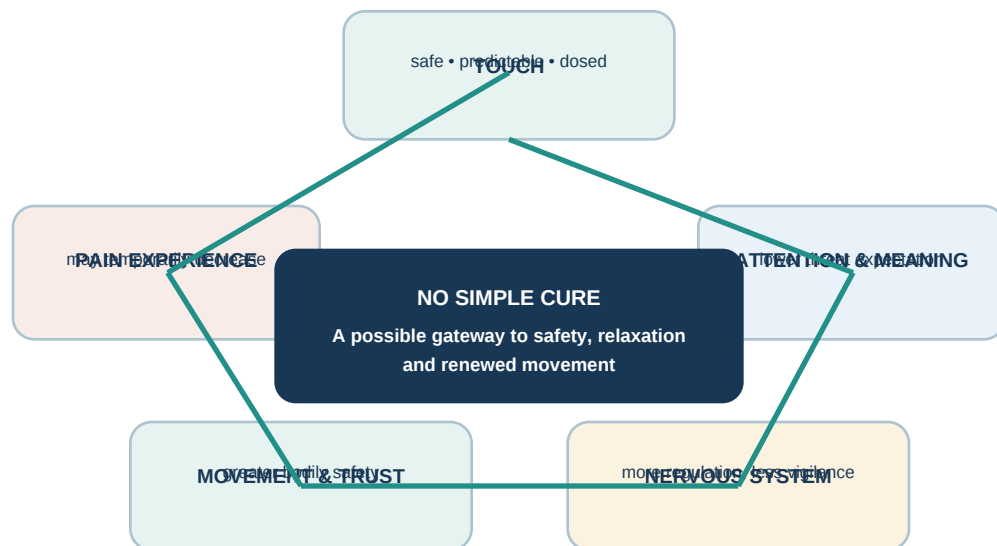
The classic opposition between 'physical' and 'psychological' does little justice to pain, tension and touch. The autonomic nervous system, hormones, immune processes, attention and learning connect both domains. Stress can alter muscle tension, sleep and pain sensitivity; pain in turn may intensify anxiety, low mood and social withdrawal. This is a reciprocal loop, not an accusation.

In psychosomatic medicine, 'psychosomatic' does not mean that symptoms are invented. It means that biological, psychological and social factors jointly influence onset, persistence and recovery. A careful conversation first acknowledges the physical reality. Only then can it explore how overload, traumatic memories, avoidance or relational tension may increase the burden.

Touch may restore body awareness, but it can also be too much. Gentle pressure helps some people notice where they hold tension; others become overwhelmed or dissociate. The therapeutic question is therefore not 'does touch work?' but: for whom, for what purpose, at what dose, by whom, and how will the effect be measured?

Touch and chronic pain

One possible route of influence without placing pain "between the ears"



10. Chronic pain and central amplification

In chronic pain, the alarm system may become more sensitive. Peripheral nociceptors, spinal circuits and brain networks can transmit signals more strongly; expectations and avoidance may maintain a protective state. Terms such as sensitization and nociplastic pain describe real neurobiological changes. They do not replace a diagnosis and do not automatically exclude tissue damage or inflammation.

Safe touch can temporarily provide competing sensory information, direct attention and reduce threat. Some people find slow or deep pressure calming. In others, even light touch causes allodynia: a normally harmless stimulus becomes painful. Fibromyalgia, neuropathy, complex regional pain syndrome, migraine and scar tissue each require a different approach.

A good practitioner starts small, asks about the effect both during and after a session, and does not push through pain without a clear reason. The goal is greater freedom of action: sleeping, moving, participating and trusting signals more effectively. A pleasant feeling on the treatment table is too limited an outcome if daily functioning does not improve.

11. Erogenous zones, intimacy and individual variation

Erogenous zones are body regions where touch may evoke sexual arousal or pleasure. Body-map studies show that the genitals, breasts and anus are often rated as strong zones on average, but a much larger part of the body can potentially be experienced erotically. The map is not a fixed anatomical scheme: relationship, desire, mood, previous experiences and manner of touch all change it.

Sexual touch is multisensory. Smell, voice, gaze, fantasy, trust and reciprocity influence the same skin stimulus. The brain derives meaning from the whole. Areas that are pleasant for one person may be neutral, hypersensitive or aversive for another. A recent questionnaire study among women even found that some zones were frequently reported as both erogenous and unpleasant, for example because of pain or hypersensitivity.

Sexual knowledge should therefore not become a manual that treats bodies as identical. Good intimacy requires attunement, explicit agreement and room for change. Pain, numbness or a sudden change may have medical causes, including skin disease, hormonal change, nerve injury, medication effects or pelvic-floor problems. Professional assessment may then be appropriate.

12. Abuse and the pathology of touch

Abuse turns contact into an instrument of power. Sexual violence, physical abuse, forced care, humiliating touch and grooming can damage the basic association between closeness and safety. Possible consequences include post-traumatic stress, shame, depression, dissociation, sleep problems, physical symptoms, sexual pain, avoidance or risk-taking behaviour. There is no uniform response, and no single response proves abuse.

The nervous system may later predict threat from touch more quickly. A smell, position, hand on the wrist or unexpected movement can trigger an alarm response without conscious choice. A person may fight, flee, freeze, appease or dissociate. These are protective strategies, not character flaws.

Recovery does not begin by learning to 'cuddle again', but with safety, recognition and choice. Trauma-focused psychotherapy may help; specialized sexological, physiotherapeutic or medical care is sometimes needed. Body-oriented interventions must be introduced carefully and never used to force memories. In immediate danger or suspected abuse, professional safeguarding and support structures are essential.

13. Tactile pathology and sensory vulnerability

Not all difficulties with touch are relational. Peripheral neuropathy may cause numbness, tingling or burning pain. Skin disorders, scars, nerve entrapment, stroke, spinal-cord injury and diabetes can alter touch. Allodynia means pain from normally harmless contact; hyperalgesia is an amplified pain response. Loss of protective sensation increases the risk of wounds and burns.

Sensory over- or under-responsivity occurs in various neurodevelopmental profiles and psychiatric conditions, but should not be attributed to a single cause without assessment. Practical support may include predictability, adapted clothing, deep pressure if desired, environmental adjustment and occupational therapy. Coercion often increases resistance.

Self-touch also deserves attention. Rubbing a painful area, folding the hands or wrapping the body in a blanket can be regulating. Compulsive scratching, skin picking or self-injury, by contrast, calls for assessment of underlying tension, dermatological factors and psychological distress. The function of the behaviour must be understood before change is possible.

14. Touch in care, pastoral ministry and dying

In care settings, the body is often dependent on others. Washing, turning, injecting and examining are functional forms of touch, but remain personal for the patient. Dignity is created when the caregiver announces actions, preserves covering, adapts the pace and does not speak about the body as if the person were absent. With dementia or communication difficulties, consent should still be sought as far as possible through words, behaviour and representation.

At the bedside of a dying person, holding a hand can offer closeness when speech becomes difficult. Yet some people want silence without contact, while others seek pressure or warmth. Family members may hesitate for fear of doing something wrong. Simple guidance - 'you may hold her hand if that suits her' - can help without making touch an obligation.

In pastoral ministry, touch has symbolic dimensions: blessing, laying on of hands, comforting. That is precisely why boundaries matter. Spiritual authority can make refusal difficult. Openness, consent, the presence of others where appropriate, gender sensitivity and accountability to a team protect both the recipient and the pastoral worker.

15. Touch and grounding: two different concepts

In practice, 'grounding' is used in two ways. Psychological grounding is a set of techniques that bring attention back to the here and now during panic, dissociation or overwhelm. Feeling the feet on the floor, naming five visible things, holding a cool object or consciously noticing the support of a chair uses touch, proprioception and attention. The aim is not to suppress feelings, but to restore orientation and choice.

Walking barefoot in a safe natural environment may be pleasant because of movement, daylight, attention, temperature, texture and relaxation. Such benefits do not prove that electrical earthing is the cause.

16. An ethics of proximity

An ethics of touch begins with human dignity. The body is not an object that a professional, partner or spiritual leader may use at will. Closeness becomes good when it increases the other person's freedom: they can agree, adjust, stop and speak afterwards about the experience without shame.

Four questions offer a practical compass. First: what is the purpose? Second: who has power and who bears the risk? Third: is consent truly free and continuous? Fourth: what do the consequences show? Good intentions matter, but are not decisive if the other person feels diminished, confused or dependent.

Boundaries do not mean coldness. Clear boundaries are precisely what make warm closeness possible. An announced hand on the shoulder can be more humane than detached care; a respectful 'no' can make the relationship safer than automatic agreement. Mature love tolerates difference.

17. A Christian perspective on touch

Biblical narratives present a view of humanity in which the body is not incidental. Jesus touches people who are ill, takes children in his arms and allows himself to be touched by those excluded from society. These actions are not a technique and do not license religious healing claims. They show a closeness that sees and restores the other person without using them.

Christian mercy therefore calls for both warmth and truth. Comfort can take practical, embodied form, but love is not self-seeking and does not harm. In a church context, this means that prayer and touch never occur under pressure, complaints are investigated seriously, and forgiveness is not used to bypass safety or justice.

The most careful question is not 'may a Christian touch?' but: does this touch reflect the serving love of Christ? Where that question is asked honestly, humility, consent, protection of vulnerable people and willingness to be accountable naturally belong together.

Conclusion - touching with open hands

Touch is physiology and biography at once. Receptors register pressure and movement, while the brain interprets these signals in light of relationship, expectation, culture and memory. Touch can therefore connect, ease pain and support regulation, but it can also manipulate, sexualize and traumatize.

Good touch is not necessarily gentle; firm, predictable pressure may be calming. Nor is it necessarily physical; for some people respectful distance is the most loving form of closeness. The criterion is attuned reciprocity.

Anyone who touches in professional, pastoral or private life bears responsibility for purpose, consent and consequence. Anyone who is touched retains the right to choose. In this double truth - closeness without appropriation - touch becomes human: not a grasp, but an open hand.

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About the author

Gerard Feller writes about the relationship between body, mind, faith and care. In this essay, his earlier articles have been integrated with current scientific literature and brought together as a new publication following editorial revision.