SENSE IS COMPLEX

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Boundary theory: Touch both connects and separates.

Touch is unique in that you cannot objectively tell the difference between input and output. The "i/o" of all of our senses is confounded, we make arbitrary partitions that define what is "coming in" and what is "going out". This is relatively easy for sight and hearing because, on the surface, they appear to be inputs into our consciousness. In fact, what we hear and see is equally determined by what our minds tell us to hear and see. That is, they are output devices that define a perception. This division, however, is internal to our physical bodies, and we thus freely confuse what is really going on. Touch however, does not permit this confusion. It is very obviously both "input" and "output" at the same time.

This is to say, our senses are a system that is not partitioned by the *cut concept* that defines one side as *in* and one side as *out*. Touch makes this overt.

We need to differentiate the sensors in the skin.

From the *Physiology Coloring Book*, a listing of all the Sensory Receptors:

MECHANORECEPTORS
- light touch
  - meissner's corpuscle
  - merkel's disk
  - hair root plexus
- deep pressure
  - pacinian corpuscle
- crude touch
  - Krause's endbulb?
  - Ruffini's ending?
- muscle length, tendon and limb position
  - muscle spindle
  - Golgi tendon organ
  - joint/kinesthetic receptor
- hearing and balance
  - hair cells
- blood pressure
  - aortic and carotid baroreceptors

NOCICEPTORS
- pain
  - free nerve endings

THERMORECEPTORS
- warmth
  - free nerve endings?
- cold
  - free nerve endings?
- internal temperature
  - hypothalamic thermostat

CHEMORECEPTORS
- odor
  - olfactory neurons
- blood O2 CO2 H+
  - aortic and carotid bodies
  - medullary chemoreceptors
- blood glucose
  - hypothalmic glucoreceptor
- osmolarity levels
  - hypothalmic osmoreceptor
- taste
  - gustatory cells of taste buds

PHOTORECEPTORS
- light
  - rods and cones