

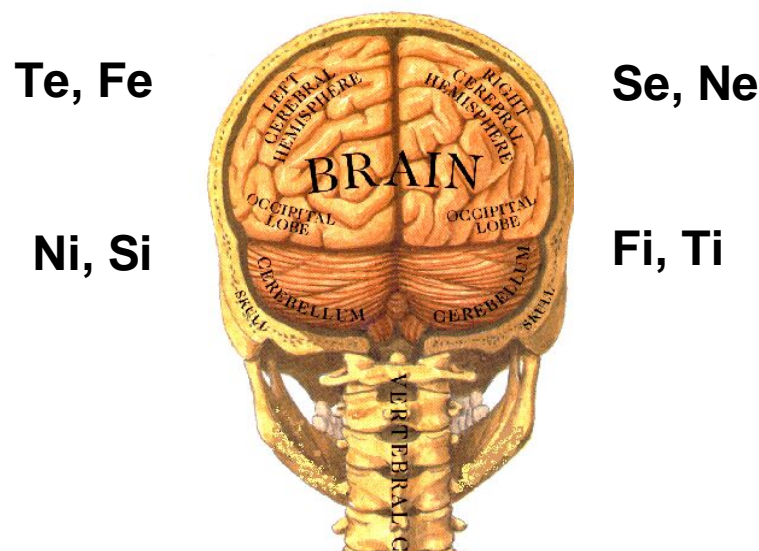
Implications of Beebe's Model from a Neurological Standpoint

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Virtually all neurological research indicates that nearly every mental operation we have exists in both brain hemispheres, offering two different ways to process the same information. This phenomenon is so well documented that it has become something of a cliché. The left hemisphere takes an analytic, one-thing-at-a-time, temporally sensitive approach to data (tending toward verbal abstraction and linearity), whereas the right hemisphere takes a holistic, contextually oriented approach (tending toward spatial abstractions and cyclical patterns).

Recent studies have concluded, moreover, that response-selection in one brain hemisphere interferes with response-selection in the other. That is, although no cognitive operation can be localized in one part of the brain, the left and right cerebral hemispheres appear to be incapable of selecting motor actions independently and simultaneously.

When I was writing my book, *Personality Type: An Owner's Manual*, I was concerned to point out that the 8 functions specified by MBTI theory are entirely compatible with this prevailing understanding of brain circuitry. Although the map I offered to illustrate this compatibility was elementary enough to be misleading, it was designed to show that Introverted and Extraverted versions of the same function can be roughly associated with brain quadrants in different hemispheres in so far as tasks that implicate them activate particular routes between neuron and muscular activation.



This map does not imply that the functions are literally located in the brain, occupying their separate quadrants in splendid isolation from one another. Rather, it suggests that certain areas of the brain are crucial to the tasks we associate with standard functional terms.

For example, the cognitive processes that enter into an Extraverted Judging preference can't be located in one area of the brain. Discrimination and decision-making, whether personal or impersonal, depend on working memory, emotional investment, and the sort of abstract representation permitted by the hippocampus.

But the fact remains that if the left frontal lobe of the brain is anesthetized, discrimination and

Implications - 2

executive judgment are rendered impossible. The frontal cortex is crucial to the tasks we associate with the terms Te and Fe.

If the right back hemisphere is anesthetized instead, executive judgment remains possible, but it occurs without reference to real subjective experience, spatial awareness, and evaluation, aspects that we generally associate with Introverted Judgment. Apart from that input, the left brain will simply fabricate whatever appears to "explain" how consequence is related to cause.

The crux of the matter is not that there are structural entities in the brain that can be defined as the causal source of T and F. Rather, Te and Fi, as we've come to define them, strike us as opposites for good neurological reasons, as do the motivational conflicts we recognize between Te and Ti and Fe and Fi.

As research with split-brain patients has made clear, the two halves of the brain share their different "takes" on data by sending signals across the corpus callosum, which both divides and connects them. The left hemisphere interprets these signals in terms of a constructed world view, the right in terms of changes in expected patterns. Without the latter input, the left brain ignores change relevant to its interests, but without left-brain input, the right brain responds to every pattern change as though it were a crisis.

On the other hand, communication between the two hemispheres doesn't always occur directly. The front and back hemispheres cannot send information diagonally to each other across the corpus callosum.

This neurological template supports a good deal of what Jung said about the functions. For example, it's clear from the little brain map that the inferior function always implicates the brain quadrant diagonally opposed to the dominant. Activity in diagonally opposed quadrants can, of course, occur in tandem; however, conscious awareness of the inferior function's contribution to a project is likely to occur, initially, by way of projection in the outside world.

The map also supports the Jungian premise that attitudinal opposition between two versions of the same function is as critical an issue as functional opposition. So I found myself wondering, at the recent Columbus conference, "Building Bridges," whether the map would be compatible with Jungian analyst John Beebe's model, which links the functions to specific complexes in the personality. In this model, each Ego-syntonic functional complex in a personality (the top four in Beebe's hierarchy) has an Ego-dystonic Shadow (the bottom four) in the opposing attitude.

For example, this is the model John Beebe uses for an INTJ personality:

Ni - Hero
Te - Parental Complex
Fi - Puer/Puella
Se - Anima/Animus

Ne - Oppositional Personality Complex
Ti - Senex/Witch
Fe - Trickster
Si - Demon

Implications - 3

Complexes, of course, are neither skills nor strengths. Rather, they take form as instinctual responses to life, earmarked for a generic human agenda, are delimited by way of the personal: talents, temperament, and experience in a particular time and place. In other words, the complex diverts energy generated by collective instinctual responses to the willful aims of the individual. By linking function and complex, Beebe's model is able to show where the universal collides with the particular in the establishment of individual identity.

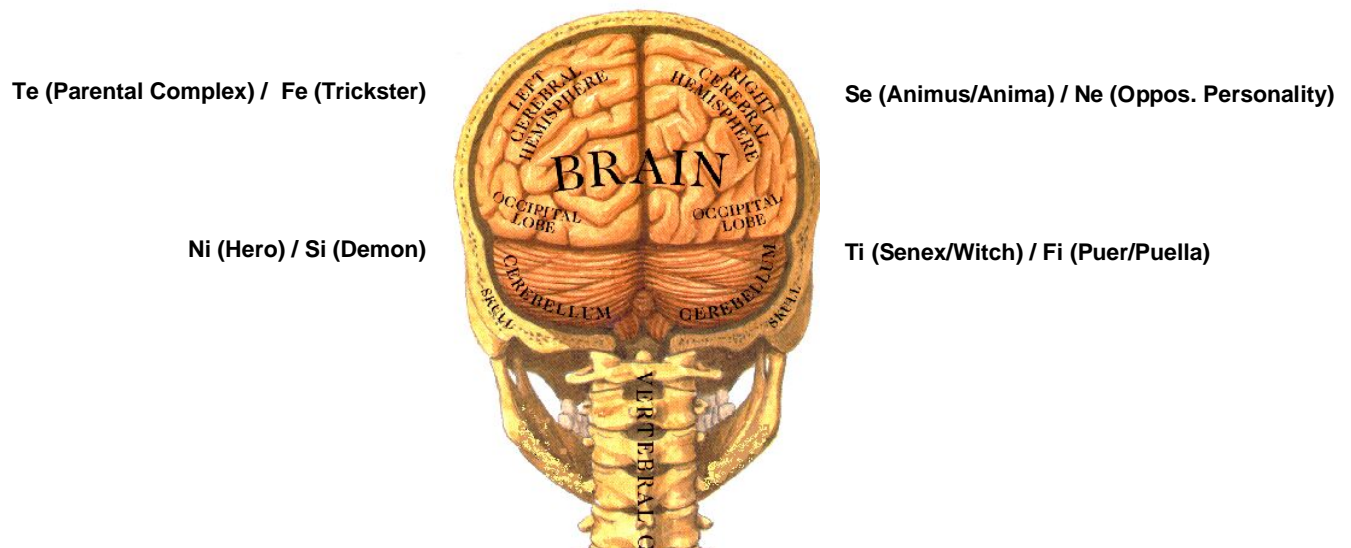
If the functions are understood as four essential ways of cross-referencing the impressions that reach awareness, type preference means that some data are habitually signaled as more important than others, determining the consistent investment of instinctual energy in a specific agenda. This interpretive process, however, is not inherently cognitive in nature. It occurs even at the level of bacteria in the most basic of all choices, eat or be eaten.

Consciousness, the sort of consciousness that exists in any housecat or antelope, appears to be a byproduct of having a nervous system that amplifies survival-friendly patterns by attaching them to strong affective incentives. Add human cognition to the mix, and the Ego is the next emergent level of consciousness, stabilizing a history of habituated perceptual patterns as an identity.

One might suggest, for this reason, that Jung's theory of psychological types wasn't concerned so much with temperamental constraint as with our ability to commandeer the energy generated by hard-wired instinctual demands for purposes that nature did not anticipate. If anything, this ability, as Genesis suggests, interferes with natural individuation, which necessarily involves the entire organism.

This point of view is very nicely reflected by Beebe's model. The complexes associated with the "top" four functions, as indicated, support the experience of individual identity. The "bottom" four are their Ego-dystonic Shadows. One can't integrate these complexes into the Ego. Rather, in the process of individuation, these complexes help to integrate the Ego with the essential Self, the center of the whole organism.

When the lateralized brain map is superimposed on Beebe's hierarchy of complexes, the INTJ result looks like this:



Implications - 4

What we have here is a kind of Hero's Journey in miniature, modified by temperamental preferences. Although any of the complexes houses sufficient instinctual energy to support an Ego position, the Ni Hero complex, by virtue of the type's skills, interests, experience, and options, is drawing energy from the others in order to set conscious goals and to sustain a continuous note of self-awareness.

Thus, a zero-sum relationship exists between the two complexes in each quadrant. For example, an INTJ's Ni Hero may "borrow" so much energy from the complex associated with Si that it falls out of consciousness, where it can promote an instinctual agenda in conflict with the type's willed intentions. Hence, the Demonic character of that complex from the Ego's point of view.

In the first half of life, to be sure, the Hero's task is to consolidate an Ego-identity strong enough to maintain direction and self-esteem, but this self-assertion must be reconciled with responsibility to others in the resolution of the Parental Complex. The Beebe model shows how a specific type is likely to experience the particulars of this Hero's Journey in his or her own way.

For example, an Ni dominant type requires some form of executive judgment in order to do battle with the dragons of regressive consciousness, accommodate his gifts to the community, take responsibility for his choices, and so forth. Te, the INTJ's auxiliary function, implicates the same brain hemisphere as the Hero complex, so that the Parental Complex works in conjunction with Heroic self-assertion in the course of epigenetic development. This suggests good reason for the standard type model, in which the dominant and auxiliary functions are naturally allied.

As the Te Parental Complex becomes more integrated into an INTJ's sense of identity, more input becomes available from the Se Anima, which sets up horizontal lines of communication with the opposing brain quadrant. This supports Jung's idea that the Anima is first likely to be projected on to an unknown "other," who calls the Hero out of his parents' sphere into the larger world of romance and adventure.

The map also indicates that the Ni Hero makes direct contact with the opposite hemisphere by way of the Fi Puer complex, the proverbial child within, which is not fully under his control. Indeed, a Hero whose sense of identity has been localized in terms of left-brain operations may heed the right-brain Puer largely when Ego boundaries are relaxed enough to tolerate a change in a familiar pattern or threatened enough to interfere with mature Ego defenses. Behaviorally, the first will look like irresponsible overindulgence; the second will look like adversarialism.

Quenk's understanding of "being in the grip" would suggest that the locus of self-awareness may even shift, temporarily, to a less conscious complex under stress. That is, when the Ego can't handle what's coming at it, the energy that rightly belongs to the Hero falls into the unconscious, and it infuses a less-developed complex in one of the weaker quadrants, motivating defenses that are over-ripe with emotionality and a kind of infantile sense of entitlement.

Ultimately, one recognizes in the map an Ego-syntonic circle of hemispheric communication. The Hero is relating directly to the Parental Complex; the Parental Complex is relating directly to the Anima; the Anima is relating directly to the Puer; and the Puer is relating directly to the Hero. This is Beebe's upper hierarchy of four functional complexes in action.

The other four complexes, the Oppositional Personality, the Senex/Witch (the proverbial destroyers of new life), the Trickster, and the Demon, have created their own compensatory circle

Implications - 5

of communication -- outside of conscious awareness. These complexes are triggered primarily when the psyche anticipates damage to the Ego, and they have a primitive, instinctual quality. For example, the Demon may thwart the Ego's goals in the interest of psychological balance, and the Trickster places the Ego in a double-bind in order to protect it from trauma.

From this standpoint, most of what type theorists talk about as individuation is actually something closer to Ego maturation. It represents a good integration of the Ego-syntonic circle of complexes. Individuation, on the other hand, entails the Ego's differentiation from the Ego-dystonic complexes as well, so that they aren't compulsively roused to action outside conscious awareness, and can serve as messengers of the Self to consciousness.

Here, John Beebe's model makes its considerable contribution, showing graphically how the transfer of energy from the instincts to an Ego-driven agenda establishes the Shadow complexes. In conjunction with the admittedly simplistic neurological map, his model suggests that epigenetic schemes of conscious development have a genuine relationship to the way the brain actually works.

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