

The Neurological Basis of Typology

Typology is a field that is full of seemingly conflicting models, all with different uses and nuances, which seek to explain how weighted elements of the personality produce the person. Some people, then, have been led to wonder: can these models be unified into one holistic view? The thing about typology is it tries to reduce the brain's ridiculously nuanced and very interconnected patterns into a few fundamental properties and different arrangements / weights of them. The systems of the brain itself are so combinatorically complex and multilayered that this can always be approached in many, many, many different ways, which will almost always overlap in nonlinear ways.

If anyone here is familiar with Linear Algebra, you can think of the brain as a gigantic matrix. A neurological system (neural network) can be represented as a matrix, regardless of its function. This is a fact that is exploited heavily in the realm of deep learning, stuff like ChatGPT for instance (hence the T, which stands for "transformer," in this case a matrix). Taking this line of thought, from what I can tell, what typology attempts to do is decompose that matrix into a set of simpler matrices that each have some specific property interaction.

No one approach to typology even agrees on what this matrix itself is (more conceptually, none agree on what the limits of "personality" are in the brain. Are they only those concerned with social behaviors, or the holistic brain?). It does this not by mathematics, though, but by guessing what kinds of conceptual subcomponents the brain-matrix might be decomposable into, so they are likely to face problems with even self-consistency and internal overlap. Not to mention how insanely complex and multifaceted this makes the process of actually typing a person (hence how tricky it is). If one wanted to produce an "objective" decomposition of the brain's functions, they would want to decompose this matrix (which would be an enormous undertaking, since the matrix representing an entire human brain would likely be inordinately large). Perhaps from there, one could devise an algebra to simplify the operations between such elementary matrices, much like a typology system.

Also, as I mentioned, naturally constructed typology systems (that is to say, systems that have been created independently and which are based on intuitively deduced functions) are very likely to overlap in nonlinear ways. That is to say, different systems of typology will have different constructions to them which perhaps explain more of some or other level of connection in the brain than another, and perhaps some parts of the same system within the brain will be repeated throughout the model's functions.

Perhaps more concretely, naturally constructed typology systems are modeling different parts of the same whole, at different levels of detail, and it's made even more complicated by the fact that those different parts could be (and very likely are) actually overlapping. For example,

Enneagram has the type 5, which explains different things on a different level of abstraction than certain combinations of MBTI cognitive functions, like Ti and Ne, yet has undeniable overlap in very intricate and inconsistent ways.

If you are familiar with string theory, this is actually INCREDIBLY analogous to the different overlapping string theory types, which interact and overlap in strange and nonlinear ways, yet are all representations of a greater, unifying theoretical model (Which is called M-Theory). However, the situations with the different typology systems is even more dire, because we don't even know the neural systems or sets of interactions which correspond to cognitive functions, and we likely never will, because they exist on such high, non-elementary subsystem levels.

Given all of this, there are uncountably many possible systems of typology, and they will never agree, let alone be "objective," pretty much mathematically guaranteed, unless you find some way to literally map out someone's brain as a mathematical matrix and decompose it into its elementary subcomponents. Even if you could, there's still the problem of "what parts of the brain / psyche exactly should typology encapsulate?" And who's to say the actual function of those elementary matrices would even be clearly ascertainable? You just can't. The internal elementary functions of the brain are likely quite intricate and not easily categorized. And hence, typology will remain in the state it's in pretty much indefinitely, without perhaps the aid of theoretical neuroscience.

In fact, typology and theoretical neuroscience actually have some surprising tie-ins at the systems neurological level. As far as I can tell, what typology is attempting to do is to subcategorize the different ways the brain collects and processes information. Well, theoretical neuroscience does the same thing for very small scales, categorizing different neurological systems that occur in the brain by their function in the bigger-picture processes happening around them.

To summarize, the cognitive functions themselves likely have very high-order but somewhat distinct neurological structures whose dynamics correspond to them. This would be an interesting, albeit likely insanely difficult (and probably presently impossible, due to how intricate and interconnected neural cognition is), line of study. Furthermore, I'm inclined to believe that there exist countless different systems of typology, with increasing levels of detail, with different classes of cognitive functions which correspond to both smaller and perhaps equally-sized neural systems throughout the possible combinatoric space of neural systems within the brain (this is the direct physical allegory to the different levels of "matrix decomposition" I was referring to previously). This line of thought has many implications for the field of typology itself, as well as for how we might approach understanding the mind at a neurological level. The ideas are rich for exploration. □

Typology and the Neuroscience of Consciousness: A Brief Investigation

Understanding typology itself at the neurological level would be synonymous with understanding how the behavior of the brain gives rise to the person. Phrasing it that way exposes just how profound this idea really is...

When one suggests tying typology to theoretical neuroscience, they suggest a way of connecting the person, the mind -- and, by extension, I have explored, the experience of living itself -- to the dynamics of the brain as a system. Tying the time-forward and intricate self-state-inputting systems of the brain to the experience of awareness itself, both internal and sensory. The dynamics of sensing and processing things, and the interactions with internal memory ... neural systems which arrange information in a time-forward continuum, processing sensory and working memory in the cerebrum to produce the present experience, storing the results, accessing it as needed, and continuing the process ... these themselves are enough to produce the conscious experience.

Perhaps unfortunately, this also suggests that achieving the most "objective" possible, unified scientific model for typology would involve explaining consciousness itself with neural system dynamics. I'm not saying typology research itself can't come up with a good working model as time goes on. I'm saying that, to reach the ultimate pinnacle of it, it will have to be unified with our understanding of the brain, simultaneously completing the holistic picture of the human mind on the systems level.

Framing the problem this way is perhaps helpful to the achievement of that end goal, however. It prompts a thought process that suggests the way that neural systems might be used to eventually explain the mind itself would be via codified interactions between maximally separate neural groups that perform processes similar to "cognitive functions." □