



## Two sources for a meta-theoretical framework in psychology

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*Submitted: 10th July 2022*

*Accepted: 15th July 2022*

### Abstract

This paper is a commentary to Salvatore and colleagues (this volume) which discusses the foundation of a theoretical framework for psychology as a science. The paper argues that in general there are two fundamental sources for any theoretical frameworks in sciences, specifically philosophy and psychology. The argument is that psychology is historically the discipline that justifies an empirical approach in philosophy, whereas philosophy has traditionally only produced theoretical reasoning. This changed in the early modernity, in which philosophy and psychology became united. This unity produced different combinations of subjectivity and objectivity in philosophical reasoning. This paper presents synesthesia as a gateway to investigate the most rudimentary processing of a sense impression. From this perspective, the result demonstrates that the fundamental arbitrariness that forms intentional concepts is almost unavoidable.

**Keywords:** Synesthesia, History of Psychology, Arbitrariness, Intensional Concepts, I. Kant, F. de Saussure, L. Vygotsky, C.S. Peirce.

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*Rivista di Psicologia Clinica (ISSNe 1828-9363), n. 1/2022*  
DOI: 10.3280/rpc1-2022oa14455

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## **Introduction**

In Salvatore and colleagues (this volume), the authors discuss what kind of foundation a theoretical framework in psychology should have. The article presupposes, so to speak, a contradiction between an extensional and intensional perspective. In this commentary, however, I will argue that it is hard, if not impossible to differ clearly between extensional aspects and the mental processing of a sense impression. Synesthesia will form an example of this. Yet, synesthesia will also form an argument for how a conceptually based theoretical framework in scientific discourses in general have to be of an intensional type.

It is a widespread misunderstanding saying that psychology emerged from philosophy. It is more correct to state the opposite: Humans have always reflected on the human nature and the human mind, whereas philosophy as an academic discipline was established with the thinking of Socrates, Plato and Aristotle. Accordingly, Aristotle's thesis on the soul was not about psychology (Klempe, 2020). In contrast, in the beginning of this thesis he delineated his own project from earlier speculative reflections on psychological issues. Instead, he formulated the basis from where valid knowledge comes from; sensation and thinking (Aristotle, 1998). During the medieval time psychological speculations were provided partly by a mixture of culturally induced knowledge, medicine and common sense (Mengal, 2005; Vidal, 2011). The inclusion of psychology in philosophy appeared rather in the early modernity as a consequence of the Reformation and the theological turmoil in the wake of it. When Protestantism threw out philosophical speculations by referring to the Scripture Alone, two severe consequences appeared: The term "metaphysics" became problematic to apply in philosophy, and philosophy had to find a replacement of the fundament on which the philosophical tenets should be built. This is the modern turn, which introduced a new phase in philosophy, in which psychology gradually became a part (see Klempe, 2020).

## **Psychology intervenes philosophy**

If psychology is to be defined as knowledge of the human nature, sensation and the way sense impressions are processed in humans are

at the core of it. Consequently, the British empiricists have been presented as those who first presented sensation as the new basis for deducing valid tenets in philosophy of knowledge. However, neither Francis Bacon nor any other Brits applied the term “psychology”, which on the other side of the channel had been applied for more than hundred years before Bacon published his *Novum organon* in 1620 (Klempe, 2020). We can now refer to several publications from the beginning to the end of the sixteenth century that applied the term “psychology” and discussed different aspects of the human nature as the basis for acquiring new knowledge (Janssen & Hubbard, 2021; Klempe, 2020). The term “metaphysics” evaporated gradually, until the German philosopher Christian Wolff published a series of volumes under the label “Metaphysics” during the 1730ies. This series included one volume on *Psychologia empirica* and one volume on *Psychologia rationalis* in addition to volumes on ontology, cosmology and natural theology.

In other words, philosophy was in a desperate need to formulate a solid basis for philosophical valid knowledge after philosophy and theology had been separated, and psychological discussions of sensation appeared as the solution in both British and German philosophy. This formed the background for Immanuel Kant’s critical thinking. His project was to restore a basis for the philosophy of knowledge in which psychological factors were excluded as the premise. This is the background for the harsh formulation at the end of his *Critique of Pure Reason*, in which he banned empirical psychology and tried to throw it out from metaphysics (Kant, 1781/1956). The same aim forced him to revise the first edition of this Critique, as he was criticized for leaning too much on introspection (Smith, 1962), which necessarily also includes psychology. Thus, the B-edition of the first Critique debilitated the observational aspects in his method and replaced them with focusing on concepts and their transcendental status instead.

However, a clear distinction between philosophy and psychology as academic disciplines is hard to find. Since Aristotle (1998), they have apparently been intertwined, as he referred to the soul in his discussion of the sources from which humans gain valid knowledge, i.e., thinking and sensation. Both sources touch aspects of the human nature, and his thesis on the soul is not irrelevant for psychology. As mentioned, Aristotle’s aim with this thesis was most likely to form a

basis for his philosophy of knowledge, which is explicitly formulated in his metaphysics. Although he meant sensation and thinking are sources for valid knowledge, both can of course produce delusions. Thus, in his metaphysics he sorted out those concepts and axioms that cannot be doubted. This is what Kant in fact repeats with his first Critique. The only difference is that the concepts and tenets Kant presents are not only objectively, but also subjectively founded. This difference is important as it highlights the fact that the objective entrenchment had been lost when philosophy was freed from theology and religion, but it highlights also the fact that subjectivity had to form a factor in philosophy. The latter was unthinkable in medieval philosophy, but it became a crucial factor in psychological considerations that gradually emerged in the sixteenth century. Consequently, it was not Kant that introduced subjectivity to philosophy for the first time. Subjectivity in philosophy was rather a result of the gradual intervention of psychology in philosophy, which is traceable two hundred years before Kant (Klempe, 2020). It is on this basis ontology may count as a demarcation criterion for distinguishing philosophy from psychology: In psychology all imaginations and delusions are of interest to study, whereas only those ideas and imaginations that are entrenched by an ontologically justified cause are of interest in philosophy (Klempe, 2015).

## **Synesthesia**

On this basis, two almost contradictory – yet equal – sources for scientific knowledge were accepted at the entrance of modernity in Western civilization, specifically sensation and concepts. After Kant, they are still regarded as valid, although the balance between them has always been at stake. Each one of them is also embedded with contradictions, as both include subjective and objective aspects. In 1890, the Norwegian painter Edward Munch allegedly said: «I don't paint what I see – but what I saw» (Byatt, 2012). Thus, an artist's sense impression is immediately processed in many different ways in a perceiver's mind, and this process makes that the expression can be very different from the original impression. This is not only true for artists, but also for all human memory. This is well known from different types of research, not least from research on testimonials from court (Neisser,

1976). There are, however, different ways to explain the processes sense-impressions go through. Neisser (1976) found that testimonials could be comparable with dreams, as they are characterized by condensations and replacements. Another mental process with comparable outcomes, but not so much referred to, is *synesthesia*. One reason for not focusing on synesthesia is that it is very often presented as if it is a very peculiar and extraordinary capacity restricted to just a small part of the human population (Ramachandran & Hubbard, 2001). However, this question is at stake at the moment, and others argue that synesthesia is a common human capacity that reveals how an individual processes sense-impression in a preverbal stage of life (Cohen Cadosh & Terhune 2012; Simner, 2012).

Thus, the fundamental question in this context is quite simply: To what extent can synesthesia explain anything relevant for how valid metatheoretical reflections are constituted? Before answering the question, synesthesia has to be defined, and an old, but still valid definition could be; Synesthesia is a sense impression in which «one specific stimulus may arouse not only the specifically corresponding sensation, but a second sensation united with the first» (Werner, 1957, p. 86). To answer the question, there are at least three aspects that have to be pointed out: (1) Synesthesia is a result of a certain sense impression. (2) Synesthesia is a result of an internal production of a new impression incomparable with the external impression. (3) The unity of the two impressions is mandatory for a synesthete.

In this context, any subtle distinction between genuine and not genuine synesthesia is unnecessary. The former is defined as enduring and constant unities, whereas in the latter synesthetic concords may vary. What counts in this discussion is all occurrences of mandatory combinations of incomparable sense-impressions. In Luria's study on the *Mind of a Memonist* (1987), synesthesia seems to be a highly productive factor for Sherashvsky's extraordinary memory. As a young man, Mr. S as Luria called him, worked as a journalist. In this job, he never took notes, but memorized what was said and recalled every detail when he had to write out the report. Therefore, just one small quote from Mr. S may open an informative gate into this mysterious world of synesthesia:

When I was about two or three years old I was taught the words of a Hebrew prayer. I didn't understand them, and what happened was that the

words settled in my mind as puffs of steam or splashes ... Even now I see these puffs or splashes when I hear certain sounds (Luria, 1987, p. 22).

Here we may find several factors that bring us deeper into this mysterious world of synesthesia. The “puffs and steam or splashes” he refers to is most likely associations very few, if any recognize. These associations, therefore, must be characterized as (1) completely private and subjective. What he hears is the sound of Hebrew words he does not understand, which (2) are external sense impressions that trigger the production of an internal image. What happens in the boy’s mind is that (3) incomparable entities are united, but also that one phonetic sound is differentiated from other phonetic sound. This process of differentiation and unification form a primordial type of categorizations and synthesizing. The fact that he did not understand the Hebrew words, but still differentiated between them by means of certain associations, implies that (4) for the preverbal child, language consists of differentiated sounds that stand in opposition to each other and the oppositions are produced by synesthetic associations. Thus for the child, (5) language appears as an arbitrary compilation of sound elements that are differentiated by means of synesthetic associations. After Mr. S had attended ceremonies in the Synagogue for while, he most likely learned what the prayers were about. Thus (6) the meaning of the words are not embedded in the words themselves, but a result of how the sounds are disposed and used in a social and cultural situation. One term that may exemplify this process of meaning making is the expression “Alleluja”, which is impossible to translate, but nevertheless all people in the Christian world know the meaning of.

In line with this, synesthesia may tell us something about the process of meaning making that might be of general validity. It reveals a highly subjective component, which is active in categorizing and synthesizing sense impressions. It reveals also that these processes of categorizing and synthesizing are not acceptable unless they are aligned with a conventionally given cultural and social system of how the different sounds should be disposed. All the different languages and musical systems that in fact exist in this world envisage an almost inconceivable broad specter of sounds and systems. Moreover, every newborn baby, no matter where it is born in this world, has the potential of acquire and apprehend all these systems of sound. However, after

having achieved the capacity of mastering some few language and musical systems, the door to other languages and musical systems are closed for most of us.

### Vygotsky, Saussure and Peirce

If this is true, i.e., that the most fundamental logical operations like categorizing and uniting are already present in a preverbal and immediate processing of sense impressions in human minds, then thinking can be separated from language. This separation is what Lev Vygotsky (1987) ended up with in his investigation of the development of thinking and speech and stated that they must have different roots. The point of departure is the egocentric speech, which is normally understood as an incomplete type of speech. No, says Vygotsky, egocentric speech is comparable with thoughts, in which words refer to much more than just their references: «Thought is always something whole, something with significantly greater extent and volume than the individual word» (Vygotsky, 1987, p. 281). Although the child uses just single words and the language appears as if it is poor, the meaning embedded in each word exceeds normally what an adult is able to grasp. Accordingly, this is what characterizes an adult's inner speech and thinking as well since «thought's flow and movements does not correspond directly with the unfolding of speech» (p. 280). Thus, the inner speech and thinking «is a process that involves the evaporation of speech in thought» (p. 257). In other words, thinking goes beyond language, of which synesthesia may count as an example.

Saussure's thesis of the arbitrary sign can also be seen in this perspective (2011). Language is characterized by the embedded paradox that it is apparently stable, but still changes over time. The reason why it is apparently stable is the «*[c]ollective inertia toward innovation*» (Saussure, 2011, p. 73, original italics). Language is a sort of social institution, but it is different from all other social institutions, as it is never changed by an individual but by a collective agreement through the use of it over time. Thus, language is a result of both synchronic and diachronic factors, which place the aspect of collectivity in those two dimensions. So when language changes anyway, it is a result in a gradual “*shift in the relationship between the signified and the*

*signifier*” (p. 75, original italics). The distinction between the signifier and the signified is crucial, as this distinction allows the signifier, and not the signified, to be the one that produces meaning. “Experiment” is for example primarily associated with natural sciences, and the term produces certain ideas in our mind. However, when talking about a “psychological experiment”, we will imagine something different, and there has been a shift in the relationship between the signifier “experiment” and what it signifies. The opposition between the two signifiers is what produces the differences in significations. This forms the main argument for the thesis of the arbitrary sign, and this results in languages as systems that constitute themselves through the actual disposition of sounds.

There are parallel thoughts in Charles Sanders Peirce’s early considerations around logic. Whereas Saussure is associated with semiology and French structuralism, Peirce is related to American pragmatism and semiotics. For many decades now, semiotics has been established as a generic term to cover both traditions. This is for good reasons, as the two traditions may have much more in common than what often has been communicated. In his early writings from the 1860ies and 70ies, Peirce emphasizes that logic «belongs to a community» (Peirce, 1869/1984, p. 271) but also that logic «is rooted in the social» (Peirce, 1878a/1986, p. 284). These statements imply that according to Peirce, logic does not have an independent ontological status, but is instead conventionally founded. This implies that systems of thinking also may reflect great differences, as is true when we compare strict deductive logic with mythical thinking, for example. If we go back to Vygotsky again, both types of thinking are present in the inner speech – in addition to many other forms of reasoning. Moreover, Peirce went quite far in his psychologistic way of anchoring his philosophy of science. Especially in the famous article «The Fixation of Belief» (Peirce, 1878b/1986), he states that our motivation for doing research is entrenched in an «irritation of doubt» (p. 247) and an ambition «to attain a state of belief» (p. 247). Thus, the criterion he presents for having achieved a true result is simply «the feeling of believing» (p. 247). Then we are left with Kant again, as he faced the crisis metaphysics met when philosophy was no longer under protection of religion and theological doctrines (Kant, 1781/1956, A849/B877). Although Kant tried to avoid psychology, we see that Charles Sanders Peirce hundred years later did not.

## Conclusion

To summarize and conclude these considerations, we have to bring this back to the discussion about the foundation of a metatheoretical framework in psychology. We must say that the Western intellectual history tells us that both psychology and philosophy form a basis for scientific discourses in general. This happened after the entrance of modernity. However, the challenge is that psychology and philosophy contradict each other in the sense that psychology focuses on subjectivity, which may *include delusions*, whereas philosophy focuses on objectivity, which *excludes delusions*. The psychological process of synesthesia exemplifies how sensation is strongly and intimately connected with illusory ideas that really have genuine subjective origins. On the other hand, synesthesia illustrates at the same time how the most fundamental rational production of categorizing and synthesizing are embedded in the delusions synesthesia produces. The latter forms an unavoidable prerequisite to the transformation process in which randomly chosen sound combinations end up in motivated meaningful concepts. The latter is a consequence of a common use of common sound combinations, which are completely conventionally founded, and in this sense *in principle* arbitrary. However, the collective inertia toward innovations in the use of language is at the same time a collective warranty against unacceptable delusions. This makes that the intensional mode of defining concepts is the only way to retain this warranty for objectivity in scientific discourse.

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