14

From Soemmerring's *On the organ of the soul*

EDITOR'S INTRODUCTION

In 1796 the physician and anatomist, Samuel Thomas Soemmerring[1] (1755–1830) published an eighty-page treatise entitled *Über das Organ der Seele* (*On the Organ of the Soul*),[2] in the first part of which he described the anatomy of the human brain by detailing the path of the nerves from the various regions of the body to their endings in the brain's ventricles and the liquid they contain. He discussed the role of the ventricular liquid in terms of the traditional psycho-physiological concept of the *sensorium commune* (common sensory organ), in which the different sensory data converge and combine. In the second part of the work Soemmerring went on to speculate about the vital properties of the ventricular liquid and its function as the "seat" (*Sitz*) or "organ" (*Organ*) of the soul, thereby pursuing the specific localization of psychic entities in the anatomy of the human brain.

Prior to publication Soemmerring had sent the completed manuscript of his work to Kant, indicating his intention to dedicate the work to Kant. Kant responded with a letter to Soemmerring dated 10 August 1795[3] that contained his thanks for the planned dedication and included as an insert a detailed statement on Soemmerring's work,[4] to be used as Soemmerring saw fit. Soemmerring thanked Kant for the statement and the permission in a letter dated 22 August 1795, in which he also stressed his caution in using the terms "seat of the soul" and "common sensory organ" and greeted with enthusiasm Kant's speculations on the organizational properties of liquids, specifically of the "brain water" (*Hirnwasser*).[5] In a second letter to Soemmerring, dated 17 September 1795,[6] Kant added the following reflection to his earlier statement:

> The main problem concerning the common organ of the senses is this: to bring unity of aggregation into the infinite manifold of all sensory representations of the mind, or rather, render that unity comprehensible by reference to the structure of the brain. This problem can be solved only if there is some means of associating even ***heterogeneous*** but temporally contiguous impressions: e.g., associating the visual representation of a garden with the auditory representation

of a piece of music played in that garden, the taste of a meal enjoyed there, etc. These representations would become confused if the nerve bundles were to affect each other through reciprocal contact. But now the *water* of the brain cavities can serve to mediate the influence of one nerve on the other and, by the latter's reaction, can serve to connect in one consciousness the corresponding representation, without these impressions becoming mixed – as little as the tones of a polyphonous concerto are propagated in a mixed state through the *air*.[7]

When Soemmerring's work appeared in print in Königsberg in 1796, it bore the dedication "*Unserem Kant*" (To Our Kant) and included Kant's statement, placed at the end of the work (pp. 81–6) and preceded by the following announcement: "The pride of our age, *Kant*, had the kindness not only to grant his approbation to the idea governing the preceding treatise, but even to expand and refine it, and so to render it more perfect. His kind permission allows me to crown my work with his own words" (p. 81). In the main body of his work, Soemmerring quoted in full Kant's further reflections on the psycho-physiological function of the brain water from Kant's second letter to him (pp. 45f.).

At a methodological level, the statement on Soemmerring's work is a contribution to Kant's long-standing interest in the demarcation between different disciplines in general and between philosophy and natural science in particular. A special focus of Kant's concern with the differences in method and reach among the scientific disciplines were border disputes that involved competing claims to insight into a subject matter that is addressed by more than discipline.

The case in point in Kant's engagement with Soemmerring's work is the relation between a natural-scientific approach to the phenomenon of consciousness that reduces the latter to functions of the brain, and a philosophical account of consciousness that insists on the heterogeneity of the physical and the mental. Kant's principal objection against the localization of mental phenomena and their sum total, that is, the soul, in physiological phenomena (brain) is that states and processes of consciousness are objects of inner perception (inner sense) occurring in time, while the brain and its states and processes are objects of outer perception (outer sense) taking place in space.

At a substantial level, Kant's statement takes up Soemmerring's scientific hypothesis that the physiological basis for the combination of sensory data in one consciousness is to be located in the "brain water." Based on his indirect acquaintance with the new chemistry of Lavoisier, who had demonstrated the composition of water out of two gases (oxygen and hydrogen), Kant conjectures that the chemical decomposition and recomposition of the brain water can serve as a material basis for the mental combination of diverse sensations into the collective unity of consciousness.

Kant's substantial speculations on the organizational properties of water in the statement on Soemmerring's work build on his own earlier work on the organization of matter in living beings in the second part of the *Critique of the Power of Judgment* (1790), entitled "Critique of the Power of Teleological Judgment".[8] Two years after the appearance of his statement on Soemmerring's work, Kant published *The Conflict of the Faculties*[9] in which he addressed the methodological issue of interdisciplinary border disputes in three case studies involving the competing claims of the four faculties that made up the traditional European university (philosophy, theology, law, and medicine).

In terms of its focus on the interaction between body and mind ("soul"), Kant's piece on Soemmerring also goes together with a number of his works on issues of psycho-somatics, namely *Observations on the Feeling of the Beautiful and Sublime* (1764), *Essay on the Maladies of the Head* (1764), *On the Philosophers' Medicine of the Body* (1786) and *Anthropology from a Pragmatic Point of View* (1798), all of which are contained in the present volume. The translation of *Aus Soemmerring Über das Organ der Seele* is based on the presentation of the work in AA 12: 31–5 and was undertaken by Arnulf Zweig. The title of Kant's small work is not original with Kant but describes the original publication situation.

From Soemmerring's *On the organ of the soul* [1]

12: 31 You ask, worthy man, for my opinion of your completed work concerning a certain principle of the vital force[a] in animal bodies, a principle which, considered from the side of the faculty of mere perception, is called the *immediate* sensory organ[b] (*proton Aistheterion* πρῶτον Αἰσθητήριον[c]) but which, if considered from the side of the unification of all perceptions in a certain part of the brain, is called the *common* place of sensation[d] (*sensorium commune*).[2] As one not wholly unfamiliar with *natural studies*,[e] I acknowledge the honor you do me with many thanks. – But there remains bound up with it a question presented to *metaphysics* (whose oracle, as they say, has long since fallen silent); and that question perplexes me, making me wonder whether I should accept this honor or not. For there is also in it the question concerning the *seat of the soul* (*sedes animae*), both with regard to its *sensory receptivity*[f] (*facultas sensitive percipiendi*)[g] and its faculty of motion[h] (*facultas locomotiva*). Hence a response is sought over which two faculties could get into quarrel because of their jurisdiction (the *forum competens*[i]), the *medical* faculty, in its anatomical-physiological division, with the *philosophical* faculty, in its psychological-metaphysical division. As happens with all *coalition attempts* unpleasantries arise between those who want to base everything on *empirical* principles and those who demand *a priori* grounds (a case which still occurs in the attempts of unifying the *pure* doctrine of law with politics as *empirically conditioned* doctrine of law, as well as between the *pure* doctrine of religion and the revealed one as equally *empirically conditioned*) – unpleasantries which rest solely on the conflict of the

[a] *Lebenskraft.*
[b] *Sinnenwerkzeug.*
[c] Greek for "first sensory organ."
[d] *der gemeinsame Empfindungsplatz.*
[e] *Naturkunde.*
[f] *Sinnenempfänglichkeit.*
[g] Latin for "capacity of perceiving through the senses."
[h] *Bewegungsvermögen.*
[i] Latin for "competent forum."

faculties regarding to which of them the question belongs, if an answer is sought from a university (as the institution encompassing all wisdom). – Whoever, in the present case, sides with the *physician*[a] as a physiologist spoils things with the *philosopher* as a metaphysician; and vice versa, whoever pleases the latter offends the physiologist.

Actually, however, it is the concept of a *seat of the soul* that occasions the disagreement of the faculties concerning the common sensory organ and this concept therefore had better be left entirely out of the picture, which 12: 32
is all the more justified since the concept of a seat of the soul requires *local presence*,[b] which would ascribe to the thing that is only an object of the inner sense, and insofar only determinable according to temporal conditions, a spatial relation, thereby generating a contradiction. By contrast, a *virtual presence*,[c] which belongs only for the understanding, and which just for that reason is not spatial, provides a concept that makes it impossible to treat the question posed (regarding the *sensorium commune*) as a merely physiological task.[d] For even though most people believe that they can feel the thinking in their head, this is merely an error of subreption, namely taking the judgment about the cause of the sensation in a certain place (the brain) for the sensation of the cause in this place; and then afterward having the traces in the brain of the impressions made on it, under the name *material ideas* (Descartes),[3] accompany the thoughts according to *laws of association*, which, even though they are very arbitrary hypotheses, at least do not require any seat of the soul and do not confuse the physiological task with metaphysics. – Hence we are only concerned with the matter that makes possible the unifying of all sensory representations in the mind.*,[e] – But the only matter that qualifies for this (as *sensorium commune*), according to the discovery you have made by

* By *mind* one means only the *faculty* of combining the given representations and effectuating the unity of empirical apperception (*animus*), not yet the substance (*anima*) according to its nature, which is entirely distinct from that matter and from which is abstracted here; by this we gain that, with regard to the thinking subject, we must not cross over into metaphysics, which is concerned with the pure consciousness and with the latter's *a priori* unity in the synthesis (*Zusammensetzung*) of given representations (i.e., concerned with the understanding); rather we are concerned with the power of the imagination, to whose intuitions, as empirical representations (even in the absence of their objects), there can be assumed to correspond impressions in the brain (actually habits [*habitus*] of reproduction), which belong to a whole of inner self-intuition.

[a] *Medizimer.*
[b] *lokale Gegenwart.*
[c] *virtuelle Gegenwart.*
[d] *Aufgabe*; here as well as later on in the text Kant uses this Germanic word rather than the more technical, Greek-based term *Problem* in the sense of a formally posed task or problem to be solved.
[e] *Gemüt.*

your deep anatomical research,[a] is the matter contained in the cavity of the brain, and is mere water as the immediate organ of the soul which, on the one hand, *separates* the nerve bundles that terminate there so that the sensations coming from different nerves are not mixed up, and which, on the other hand, effectuates a thoroughgoing *community* among them so
12: 33 as to prevent any of these sensations, received by the same mind, from being outside the mind (which would be a contradiction).

Now however a great scruple comes in: that, since *water*, as a fluid, cannot be thought of as organized, yet no matter which lacks organization, i.e., which is without the purposive disposition of its parts in an enduring form, could serve as the immediate organ of the soul, that neat discovery may not reach its goal.

A continuous matter is *fluid* whose every part within the space it occupies can be moved from its location by the smallest force. This property appears however to contradict the concept of an organized matter, which one thinks of as a machine, consequently as *rigid** matter resisting the displacement of its parts (and hence also the alteration of its inner configuration) with a certain force. But to think of that water as partly fluid, partly rigid (like, perhaps, the crystalline moisture in the eye) would also to some extent destroy the aim in assuming that property of the immediate organ of the soul, which was to explain its function.

How would it be if, instead of the *mechanical* organization, based on the juxtaposition of the parts for the formation of a certain shape, I proposed a *dynamical* organization, based on chemical principles[b] (just as the former organization is based on mathematical ones) and which is thus compatible with the fluidity of that matter? – Just as the *mathematical* division of a space and of the matter occupying it (e.g., of the cavity of the brain and of the water filling it) can go to infinity, so the *chemical* division, as a dynamical one (separation of different kinds of matter dissolved by each other in a given matter), might be such that it, too, goes to infinity (*in indefinitum*), as far as we know. – Pure ordinary water, which until recently was still held to be a chemical element, is now, through pneumatic experiments, being separated into two different kinds of air.[c] Each of these kinds of air contains in itself, besides its base, also the caloric
12: 34 matter,[d] which nature perhaps can decompose into light matter[e] and

* To the *fluid* (*fluidum*) must actually be opposed the *rigid* (*rigidum*), as the contrast with the former is also put by *Euler*.[4] The opposite of the *solid* is the *empty*.

[a] *tiefe Zergliederungskunde.*
[b] *Prinzipien*
[c] *Luftarten*
[d] *Wärmestoff*
[e] *Lichtstoff*

other matter,[a] as light can be further decomposed into different colors, etc. If one also considers what an immeasurable manifoldness of partly volatile matters[b] the realm of plants produces from that ordinary water, presumably through decomposition and other kinds of connection, then one can imagine what manifoldness of tools the nerves encounter at their ends in the water of the brain (which might be nothing more than ordinary water) where they terminate, in order to be receptive to the world of sense and in turn also to be able to act back on it.

If now one takes as a hypothesis that a faculty of the nerves underlies the mind in its empirical thinking, i.e., in separating and combining given sensory representations, a faculty that decomposes the water in the brain cavity into those primary matters[c] according to the differences of the sensory representations, thus a faculty allowing a play of different sensations by setting free one or another of the elements (e.g., those of light, by means of the stimulated optic nerve, or those of sound, by the auditory nerve, etc.), yet in such a way that these matters[d] immediately recombine when the stimulus ceases; then one could say that this water *were being* continuously organized without ever being organized. Which would yet achieve the same result aimed at with the permanent organization, namely to make comprehensible the collective unity of all sensory representations in a common sense organ (*sensorium commune*), but rather in terms of its chemical dissection.[e]

The actual task, as formulated by *Haller*,[5] is still not solved by this. It is not merely a physiological task but is supposed also to serve as a means of figuring out[f] the unity of the consciousness of oneself (which belongs to the understanding) in the spatial relationship of the *soul* to the organs of the brain (which belongs to the outer sense), hence the *seat* of the soul, as its *local* presence – which is a task for metaphysics, yet one that is not only unsolvable for the latter but also in itself contradictory. – For if I am to render intuitive[g] the location of my soul, i.e., of my absolute self, anywhere in space, I must perceive myself through the very same sense by which I also perceive the matter immediately surrounding me, just as it happens when I want to determine my place in the world *as a human being*, namely I must consider my body in relation to other bodies outside me. – But the soul can perceive itself only through the inner sense, while it perceives the body (whether internally or externally) only through outer senses, and consequently it can determine absolutely no location 12: 35

[a] *Materie*
[b] *flüchtige Stoffe*
[c] *Urstoffe*
[d] *Stoffe*
[e] *Zergliederung*
[f] *vorstellig . . . machen*
[g] *anschaulich*

for itself, because for that it would have to make itself into an object of its own outer intuition and would have to place itself outside itself, which is self-contradictory. Thus the required resolution of the task regarding the seat of the soul, with which metaphysics is supposed to come up, leads to an impossible magnitude ($\sqrt{-2}$); and one can say to the person who undertakes to provide it, with the words of *Terence: nihilo plus agas, quam si des operam, ut cum ratione insanias.*[a] Still the physiologist, who is content to pursue the merely dynamic presence, where possible, up to the immediate one, can also not be reproached for having summoned the metaphysician to supply what is still lacking.

[a] Terence, *Eunuch* 1, i. 17f.: "You would not accomplish anything more than if you set out with your reason to become mad."