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A Note on Caspar Friedrich Wolff and Georg Stahl

Many historians of science and philosophy believe that the German physician and embryologist Caspar Friedrich Wolff (1734–1794) distanced himself from the theories of Georg Ernst Stahl (1659–1734) when presenting his theory of epigenesis. The standard work on Wolff's biological theories (Shirley A. Roe: *Matter, Life, and Generation*) makes this assertion, but there is in fact no real evidence for it besides the belief of some historians that Stahl's animism was somehow retrogressive and therefore that a progressive scientist like Wolff would not want to be associated with Stahl. In fact, Wolff thought very highly of Stahl (as did Kant and Blumenbach) but criticized him for calling the cause of some phenomena in plant physiology functions of the "soul."

The argument for the assertion that Wolff distanced himself in principle from Stahl is based on the misunderstanding of a passage in Wolff's *Theoria generationis* (1759).¹ This interpretation is itself justified by a rather tenuous translation of a (Latin) remark in this work and also supported by a straight-forward misreading of a (German) passage in a later work. Roe's translation of Wolff's Latin demands that we take the verb *paterer* not in its usual meaning as *allow* but rather as *suffer* in the sense of 'feel pain'. Wolff remarks: Kind reader, if you were to impute the opinion of Stahl and his disciples to me, *I would allow it* [*paterer si Stahlii... sententiam mihi imputes*]. Roe wants to read *paterer* (1st sg imperf. subj. pass.) as "I would suffer from it."

Roe supports this reading (110) by citing a passage from Wolff's *Von der eigenthümlichen und wesentlichen Kraft*, written thirty years later, where he says (Roe's translation):

Haller has thus not been entirely correct ... when in the judgment of my work he put forward the essential force as the main point, remembering all that properly belongs to this theory almost with no words and then deliberately mentioning that this thing is called by me the essential force, but which I completely separated from the soul of the Stahlans; about which indeed exactly so much as nothing was said. (1980, 21)

Roe takes the second last clause ("but which I...") not to be indirect discourse like the clause before it and thus not as presenting Wolff's report of Haller's (wrong) interpretation, but as Wolff expressing his own position: "which I completely separated from the soul of the Stahlans." But both clauses are in the subjunctive, indicating indirect discourse; thus, Wolff actually says that Haller (wrongly) emphasized the name *essential force* and (wrongly) claimed that Wolff had completely separated it from the soul of the Stahlans. My translation of Wolff's admittedly wooden German reads:

Merely citing a cause or giving it a name matters little. Mr. von Haller was thus not quite right or certainly did not get the point right, when in the evaluation of my book, he presented the

¹ "Si igitur circa haec mentem meam interpretari velles; in eo L[ector]. B[enevole]. errare posses facile. Et certissime quidem & maxime paterer, si Stahlis, aut quam de eo receptam & mutatam paulo proposuit Whytt & alii recentiores, sententiam mihi imputes, qua scilicet functiones, in corpore nostro peractae, arbitrio attribuuntur animae immaterialis, sive directricis & libere agentis, sive ex incommodo, ipsi illato, coactae." (130–131)

Roe reads: "If therefore you should wish to interpret my mind on this, benevolent reader, you could easily err in this. And certainly indeed and especially I would suffer from it, if you should impute to me the opinion of Stahl, or that received from him and slightly altered that Whytt and other more recent scholars have proposed, in which, namely, the functions that occur in our body are attributed to the power of an immaterial soul, whether acting directly and freely, or coerced by the inconvenience inflicted upon it." Taking *paterer* to mean 'suffer from' instead of 'suffer' or 'allow' (the dictionary meaning) makes Wolff say the opposite of what he clearly intends.

essential force as the main point, hardly lost a word on anything which properly belongs to the theory, and then deliberately remarked that this thing was called [*subjunctive*] by me the essential force, which, however, I completely separated [*subjunctive*] from the soul of the Stahlans; precisely something that, as a matter of fact, wasn't said at all.

So wenig kommt auf die bloße Angabe einer Ursache, oder auf ihre Benennung an. Herr von Haller hat also wohl eben nicht so ganz recht gethan, oder doch die Sache gewiß nicht recht getroffen, wenn er bey Beurtheilung meiner Schrift die wesentliche Kraft als die Hauptsache vorstellte, an allem, was eigentlich zu dieser Theorie gehörte, fast mit keinem Worte gedachte, und dann wohlbedächtig erinnerte, daß dieses Ding bey mir die wesentliche Kraft *hieße*, die ich aber von der Seele der Stahlaner völlig *trente*; welches denn freylich gerade so viel wie nichts gesagt war. (§91, p. 50 fn; *italics* PM)

Given that Wolff's report of Haller's words is actually fairly accurate, there is no reason to take him – against the grammar of the sentence – to be distancing himself from Stahl. Indeed, Haller's review does not accuse Wolff of being a disciple of Stahl's; rather it praises him a bit for not appealing to a soul.² Haller writes in his review of *Theoria generationis*:

Mr. Wolff's book deserves the greatest attention in as much as, if there is no mistake in his reasoning, he almost proves the opinion of Needham³ and, instead of all other forces that form the new plant or animal, [he] makes merely a certain motion the only instrument, which he calls *vis essentialis*, and which he does not further specify, but indeed separates from the soul.

so verdient dennoch des Hrn. Wolfens Arbeit, die größte Aufmerksamkeit, indem er, wann kein Fehler in seinen Schlüssen ist, die Needhamsche Meinung fast erweist, und anstatt aller andern das neue Gewächse oder Thier bildenden Kräfte bloß eine gewisse Bewegung zum einzigen Werkzeuge macht, die bey ihm *Vis essentialis* heißt, und die er nicht weiter bestimmt, von der Seele aber allerdings trennet." [GGA, 1760, 1227; Wolff *Theorie von der Generation*, 1764, p. 136]

We should also take note of the fact that, although in the later work, *Von der eigenthümlichen und wesentlichen Kraft*, Wolff has very little positive to report about anyone in the field, he nonetheless does occasionally praise Stahl or at least make excuses for him. In fact, scarcely anyone comes off better than Stahl in Wolff's comments. Here are some examples of Wolff 'distancing' himself from Stahl (*my italics*):

The force peculiar and essential to plant and animal substance thus brings about the actual vegetative processes without the assistance of organization and without the assistance of external forces. And it seems to be this peculiar and essential force, which, if I am not mistaken, Albinus was looking for, *whose existence Stahl very well recognized, but which he wrongly, as I think, attributed to the soul*. It consists of nothing further than a certain kind of attractive and repulsive force. (§77, p. 42)

§77 Die der Pflanzen und Thiersubstanz eigenthümliche und wesentliche Kraft bewürkt also ohne Zuthun der Organisation und ohne Zuthun fremder Kräfte die eigentliche vegetabilische Verrichtungen. Und diese eigenthümliche und wesentliche Kraft scheint es zu seyn, die, wenn ich nicht irre, Albinus suchte, deren Daseyn Stahl sehr wohl erkante, die er aber mit Unrecht, wie ich denke, der Seele zuschriebe. Sie besteht in weiter nichts als in einer besondern bestimmten Art von Anziehungs- und Repulsionskraft. (p. 42)

Thus, there is only one force in animals and plants, which is essential to the animal and vegetable substance and peculiar to it, and on which all its vegetable processes depend: Digestion, sanguification, secretion, vegetation or production and formation of new parts, generation itself, and also essentially (communication of the air with the blood) respiration. It could be called the soul of plants and the vegetative part of animals; but, well understood, not in the

² Haller tended to divide the medical world into two factions: those who, like Stahl, (wrongly) attributed physiological phenomena to a soul and those who didn't do this. Wolff was one of those who didn't, but he nonetheless thought that Stahl was on to something.

³ John Turberville Needham (1713–1781) representative of epigenetic embryology in the generation before Wolff.

philosophical sense of this word, but in the sense in which it means nothing more than that basic force from which all the effects that together make up the life of a thing derive. *If I am not very much mistaken, it will be the very same soul which Stahl and the defenders of his opinion have acutely noticed in the vegetative processes, but have incorrectly mixed up with the soul of the animal*, which is found in secretion especially, and in the apparent feeling or taste of the excretory channels, (§97), which is inexplicable for all mechanics, seems to show so clearly, but which is then, of course, no other than just that which I have explained in this treatise, and reduced to the attracting and repelling force, consequently, however, very simplified. (§ 124, pp. 69/70)

§ 124. Es giebt also nur eine, der animalischen und vegetabilischen Substanz wesentliche und ihr eigenthümliche, Kraft in Thieren und Pflanzen, von welcher alle ihre vegetabilische[n] Verrichtungen: Digestion, Sanguification, Sekretion, Vegetation oder Produktion und Bildung neuer Theile, die Generation selbst, und auch dem Wesentlichen nach (Communication der Luft mit dem Blute) die Respiration, abhängen. Man könnte sie die Seele der Pflanzen und des vegetabilischen Theils der Thiere nennen; aber, wohl verstanden, nicht im philosophischen Sinn dieses Worts, sondern in dem Sinne, in welchem es nichts mehr, als diejenige Grundkraft bedeutet, von welcher alle Wirkungen die zusammengenommen das Leben eines Dinges ausmachen, herrühren. Wenn ich nicht sehr irre, so wird sie eben dieselbe Seele, seyn, welche Stahl und die || Vertheidiger seiner Meinung in den vegetabilischen Verrichtungen scharfsinnig bemerkt, unrecht aber mit der Seele des Thieres vermischt haben, die sich in der Sekretion besonders, und in dem anscheinenden Gefühl oder Geschmack der Absonderungskanäle, (§ 97.), der für alle Mechanick unerklärbar ist, so deutlich zu zeigen scheint, die denn aber freylich keine andere als eben diejenige ist, die ich in dieser Abhandlung erklärt, und auf die anziehende und repellirende Kraft reducirt, folglich allerdings sehr simplificirt habe. (pp. 69/70)

It is not possible to mistake a characteristic property of the soul in animal irritability, and, insofar as it flows together with the vegetative repulsive force, also in the latter, and therefore *it is all the less surprising that Stahl has mixed up these essential forces with the soul and attributed their effects to the soul.* (§ 153, p. 86)

§. 153. Es ist nicht möglich, in der animalischen Irritabilität, und, insofern sie mit der vegetabilischen Repulsionskraft zusammenfließet, auch in dieser, eine charakteristische Eigenschaft der Seele zu erkennen, und daher um so weniger zu bewundern, wenn Stahl diese wesentliche[n] Kräfte mit der Seele vermischt, und ihre Wirkungen der Seele zugeschrieben hat. (p. 86)

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