The metaphysical mechanics of the mind

Gustav Jahoda on the German philosopher and psychologist Johann Friedrich Herbart, and his view of the mind as a starry sky of Newtonian forces

Unlike the Second World War historians of psychology everywhere had high praise for Johann Friedrich Herbart (1776–1841), describing him as ‘a great thinker’ and his ideas as ‘epoch-making’. Since then his star has been eclipsed, especially in anglophone as contrasted with German-speaking circles. Yet such neglect is undeserved, since Herbart set the agenda for 19th-century psychology and its educational applications. For example, his texts on psychology (Herbart, 1891a) and education (Herbart, 1901) were widely used in America. Herbart was born in the north-German city of Oldenburg and went to university in Jena, where the philosopher Fichte kindled his interest in psychology. He then took up a post as tutor to the children of a Swiss family, an experience that led to his interest in pedagogy. His first academic post was at Göttingen, and in 1809 he was offered and accepted Immanuel Kant’s chair at Königsberg.

Unlike Kant, Herbart believed that there can be a psychological science along the lines of Newtonian physics: ‘The lawfulness of the human mind [Geist] is exactly the same as that of the starry sky’ (Herbart, 1816/1891a, p.373). His model for psychology was therefore physics, which later in the 19th century came to be replaced by biology. For Herbart, the underlying unity of all mental activity was a function of the soul. One might suppose that by beginning with the soul he would have landed himself in trouble. Yet he managed to avoid that by declaring that the soul itself is unknown and unknowable, except through its indirect manifestations. Science is only concerned with the latter, so that the mystery of the soul is irrelevant. On the other hand, when it came to indirect manifestations of the soul, Herbart used the term Vorstellung, which resists simple translation. For him it appeared to mean a thought or idea, or an imagined object, and he also applied it to emotional states.

Herbart rejected the ‘faculty psychology’ that was particularly prevalent from the mid-18th to the mid 19th century. This postulated that the mind consisted of separate innate capacities of ‘faculties’, such as memory, perception, learning or the will. Phrenologists believed that each faculty had a corresponding ‘bump’ on the skull. For Herbart the task of psychology was that of explaining how simple Vorstellungen like ‘sweet, small, red, or heavy’ could give rise in combination to complex modes of thought.

Herbart conceived Vorstellungen as embodying Newtonian-type ‘forces’, with motions capable of being represented by sets of equations which lay at the heart of his mathematical psychology. Accordingly he viewed them as existing in two modes, mechanics and statics. Mechanics referred to the forces being capable of producing motions of several different types, the simplest being that Vorstellungen can rise above the threshold of consciousness or sink below it over periods of time. Additionally, different Vorstellungen tend to interact in various ways. Thus they might combine and thereby become strengthened, or they may be in opposition and as a result some become impeded [gehemmt] for a time; or they may be pushed altogether below the threshold of consciousness. Statics refers to a state of temporary equilibrium when different Vorstellungen either inhibit each other or combine.

In sum, Vorstellungen were seen by Herbart as active forces, a cluster of
dominant ones constituting an ‘apperceptive mass’ open to congruent Vorstellungen, but presenting obstacles to others. If a new and related Vorstellung is apperceived, it can be anchored and its meaning thereby rendered more fully accessible. This theory of ‘apperception’ formed the cornerstone of Herbart’s educational psychology.

The concept of ‘apperception’ had first been put forward by Leibniz; but Herbart used the ideas of Pestalozzi, which departed radically from the then prevailing mechanical system of education and sought to make use of the child’s innate powers of observation and natural interests. Herbart began with the perceptual processes of the infant, which gradually build up a set of relationships between physical and other objects. These Vorstellungen gradually become what he termed an ‘apperceptive mass’, the sum total of relevant past experiences, to which the new percept is assimilated. He was therefore a constructionist somewhat in the style of Piaget.

The implications for teaching methods may be illustrated with regard to geography. The traditional method had been to get children to copy maps, which, Herbart argued, conveyed only a confused mass, the sum total of relevant past experiences, to which the new percept is assimilated. He was therefore a constructionist somewhat in the style of Piaget.

The quasi-mechanical systems of forces were initially regarded by Herbart as self-contained within any given individual, which had two significant consequences. Since direct access to the processes was not feasible, it meant for him as it had for Kant that experiment was not possible in psychology. Secondly, the method he advocated was that of ‘controlled introspection’, a paradigm he created and which remained central for most of his century. Herbart also took over from Locke and his followers the view that there are no innate ideas, so that cognitive Vorstellungen must come ultimately from the external world, in other words from experience, and be incorporated by individuals.

While Herbart had always been clear about the importance of humans being members of society, he did not at first regard that as relevant for psychology. In the first (1816) edition of his Textbook of Psychology he maintained that only the individual is of concern to psychology. It is the business of ‘practical philosophy’, he suggested, to deal with large or small groups of people. But already at that time he had regarded the then prevailing psychology as unduly narrow. He suggested extending observations to people of different ages, educational levels, occupations, nations and earlier times in so far as relevant information was available. In addition he mentioned children, the mentally ill, and even animals. The emphasis was still on individuals, albeit on their differences.

By the second edition he had adopted a radically different stance: ‘Psychology will remain one-sided’, he wrote, ‘as long as it considers man standing alone’ (Herbart, 1834/1891b, p.424). Accordingly, he elaborated what might be called a psychology of society viewed more or less as the psychology of individuals writ large, somewhat in the manner later adopted by Ruth Benedict (1934).

The first indication of a similarity between mind and society, he noted, is the fact that it is language which holds society together. Although Herbart did not follow Wilhelm von Humboldt in considering the relationship between language and thought, he did point out that verbal communication transmits ideas and feelings from one individual to another. He went on to develop an analogy between individual and collective psychology: hence it is clear that the whole web of societal life not only consists of the threads woven by individuals, but that it must also cohere in the same way as individuals bring together their own ideas, attitudes and decisions; for that collective life is made up of individuals, and outside their minds it simply does not exist... When in society people contradict one another in their opinions, this repeats on a larger scale what we can observe in ourselves in the play of our own thoughts... We see...a two-fold fundamental similarity between society and the individual human mind; namely inhibition of conflicting elements, and binding of that which is not inhibited. (Herbart, 1821/1890, p.29)

The shifts, divisions, and conflicts manifest in public opinion, he claimed, parallel those of Vorstellungen in the individual mind. Herbart also anticipated Wilhelm Dilthey in stating that we are creatures of history, a discipline that should complement psychology. Herbart himself attempted a kind of reconstruction of the stages the development of humanity, beginning with small isolated bands for whom any stranger was an enemy. Then he proposed what we would call ‘intra-group processes’ in the course of which inequalities of status emerged.

It will be evident even from this brief sketch that Herbart touched upon many topics that still preoccupy us, even aspects of cross-cultural issues: he asked how many of us concerned with psychology have been to New Zealand? How many of us have had occasion to observe the savages in their home setting? (Herbart, 1825/1892, p.16). Admittedly his was not a coherent account, rather such short passages dealing with issues that concern us today are scattered throughout his writings. Nonetheless he worked a rich seam of ideas that became extremely influential and remained so throughout the 19th century. The first version of Völkerpsychologie by Lazarus and Steinthal was inspired by him, and that in turn inspired Wundt’s better-known one. It is therefore readily understandable that in German-speaking countries Herbart is regarded among other things as the founder of social psychology. He was an important transitional figure, bridging metaphysical and empirical psychology.

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