

So Barbara is the first-figure form using *all* in each statement. Some of the other letters show how some forms can be derived from Aristotle's self-evident forms. For example, "s" tells us to switch the order of the letters in a "some A is B" or "no A is B" statement, a procedure called *simple conversion*. So the Barbara verse not only lists all of the valid syllogism forms but also shows how to derive the nonbasic ones from Aristotle's axioms.

**Later Developments.** Many later logicians contributed further to syllogistic logic. For example, Leonhard Euler (1707–1783) diagrammed "all A is B" by putting an A-circle inside a larger B-circle. William HAMILTON (1788–1856) added forms like "all A is all B" (which says that all A is B and all B is A) and "all A is some B" (which says that all A is B but not all B is A). George Boole (1815–1864) represented syllogisms as algebraic equations. John Venn (1834–1923) gave diagrams for testing syllogisms. Christine Ladd-Franklin (1847–1930) introduced related antilogism forms. And Jan Łukasiewicz (1878–1956) put Aristotle's syllogistic into a strict formal system, using Polish notation and tools from modern logic.

**Modern Logic.** Modern symbolic logic takes syllogisms to be part of a wider area of logic, called *quantificational logic*. It symbolizes "all A is B" as " $(x)(Ax \supset Bx)$ " (for all x, if x is A then x is B) and "some A is B" as " $(\exists x)(Ax \cdot Bx)$ " (for some x, x is A and x is B). So valid syllogisms can be proved using quantificational methods. However, many logic teachers prefer, especially for introductory courses, to teach syllogisms separately, as an easier preliminary to symbolic logic.

SEE ALSO DEDUCTION; INDUCTION; LOGIC, HISTORY OF

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## SYMPATHY

The English word *sympathy* comes from the composite Greek term συμπάθεια (σύν "together" and πάθος "passion"). According to this etymology, *sympathy* means "to suffer together" or "to feel compassion." In common parlance, sympathy always includes positive feelings toward another.

Sometimes *sympathy* and EMPATHY are used as synonyms. However, there are important differences between these two terms. As Edith STEIN (1891–1942) explains in *On the Problem of Empathy* (1916), empathy is the capacity to recognize someone else's sensations, emotions, and actions as human (it is also possible to empathize with animal sensations and emotions). This capacity is immediately rooted in the experience of our lived-body (McIntyre 2006, 77). Sympathy, in contrast, is not simply awareness of another individual, because it entails the capacity to feel *with* the other. Sympathy, therefore, is not empathy, but a consequence of it.

Sympathy, as derived from empathy, implies two functions: understanding and imitating. This understanding is not so much a rational action as an emotional comprehension of the other. Imitation refers here to the capacity to share in another's situation from a living or practical point of view (Gallese 2007). This relation with the other as a human being, who is both different from and equal to us, has led some eighteenth-century philosophers, such as Adam SMITH (1723–1790), to attempt to base MORALITY on sympathy.

In *The Theory of Moral Sentiments* (1759), Smith maintains that sympathy is a completely natural feeling, but it is not moral because it comes from SELF-INTEREST: I feel sympathy with weak people because if I were in their situation, I, too, would like to be the object of sympathy. There is another kind of sympathy that may be called *rational sympathy*. It is not natural, but moral. Although rational sympathy is also an indirect identification with the other, it arises within an impartial observer, not an egotistical subject. When I see a person helping an old woman to cross the street, I feel sympathy for the one helping her because he is doing a good action. Smith, however, thinks that the evaluation of another's action is possible only because we are not indifferent toward his or her action: for example, we feel shame or pride in another's action, as if those actions were our own.

Although there are other eighteenth-century authors who dealt with this subject, such as Smith's friend David HUME (1711–1776), who examined it in his *Treatise on Human Nature* (1739–1740), the study of sympathy did not become a key subject in moral philosophy until the twentieth century with the advent of PHENOMENOLOGY, as represented by such authors as Edmund HUSSERL (1859–1938), Martin HEIDEGGER (1889–1976), Max SCHELER (1874–1928), Dietrich von HILDEBRAND (1889–1977), Edith Stein, and others. Perhaps the most well-known phenomenologist on the topic of sympathy is Scheler. In *The Nature of Sympathy* (1912), he modifies Smith's thesis, such that sympathy is neither a "shared feeling" nor a feeling that has another's action or emotion as an object; rather, it is a "feeling-with." This means that in sympathy there are two distinct, nonsimilar affective states. Further, sympathy is a *moral* act that is not rational; rather, it is prerational because it is, in fact, possible to understand the pain or the joy of another without being affected by this understanding. Human beings do not relate to others on the basis of internal representations of an external world. Rather, they enact a human world inseparable from their own lived-body.

The claimed discovery in the late twentieth century of mirror neurons, that is, the existence in our brains of neurons that respond to the actions of others (e.g., grasping, manipulating, holding, etc.) by reflecting these actions, has renewed interest in Smith's thesis. Some authors, like Vilayanur Ramachandran (2000), believe that mirror neurons can explain human morality completely. According to this argument, moral values are based on sympathy, which in turn is caused by mirror neurons.

In the final analysis, neither sympathy nor mirror neurons have to do with ETHICS directly (Malo 2012). Only human actions are moral, because they are intentionally free. INTENTIONALITY does not come from feelings but from reason and WILL, because it requires the apprehension of an end as an end and of the means as means, as well as the capacity to put them into effect. This is not to say, however, that there is no relationship at all between sympathy and morality, because, as Michael Boylan (2008) shows, there is affectivity in a true good. Likewise, sympathy helps us to understand better the anthropological role of otherness in human behavior and, as a consequence, the importance of relationships in morality (Agosta 2010).

SEE ALSO NEUROSCIENCE, PHILOSOPHICAL RELEVANCE OF

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## SYNTHETIC A PRIORI JUDGMENT

According to the *Critique of Pure Reason* (1781) by Immanuel KANT (1724–1804), all human experience has a necessary structure because of the way our cognitive faculties work: we must experience substances interacting according to causal laws in one space-time. This structure can be known through what Kant calls *synthetic a priori judgments*, which fall into one of three types of judgments that result from overlaying Kant's distinction between a priori and a posteriori judgments with his distinction between synthetic and analytic judgments. (There are three and not four types because analytic a posteriori judgments are impossible.)

Kant's account of synthetic a priori judgments is based on his rejection of David HUME's (1711–1776) claim that "All the objects of human reason or enquiry may naturally be divided into two kinds, to wit, *Relations of Ideas*, and *Matters of Fact*" (*An Enquiry concerning*