James Jakob Liszka, A General Introduction to the Semeiotic of Charles Sanders Peirce (Bloomington: Indiana Press, 1996).

Philosophers have traditionally devoted much attention to the study of language, but have not considered the wider topic of *signs* to be worth its own discipline. Charles Peirce however once wrote:

> "...It has never been in my power to study anything -- mathematics, metaphysics, gravitation, thermodynamics, optics, chemistry, comparative anatomy, gravitation, astronomy, psychology, phonetics, economics, the history of science, whist, men and women, wine, metrology -- except as a study of semeiotic." (cited p. 7)

This book provides a comprehensive and scholarly presentation of Peirce's extremely rich semeiotic theory. Peirce is notorious for the sheer quantity of frightening-looking terminology he coined, particularly in his writings on semeiotic, and thus this book performs a valuable service for Peircean studies. Liszka does not attempt a critique of Peirce's semeiotic theory, nor a comparison of it with those of other semioticians. His goal is to reconstruct and present Peirce's theory from the welter of manuscripts the first pragmatist produced during a frenzied writing career spanning five decades, and "simply to present it sympathetically and in the best light possible." (p. x).

Two features of Peirce's semeiotic in particular could well confront the Australasian philosopher with conceptual hurdles. First of all, signs for Peirce are not restricted to the activities of the human mind, (to what Brentano called "the intentional"). Rather, Peirce claimed that every sign partakes of a particular formal structure which, though it appears in its most striking and sophisticated form in human language, is in fact suffused throughout the natural order. Peirce's approach to semeiotic differs markedly in this respect from the "semiology" pioneered by Saussure early this century, which Saussure saw as "part of social psychology" (p. 15). Some confusion on this topic can be fostered by the fact that Peirce sometimes did write popularly as if signs were purely intentional. This however he called his "sop to Cerberus", Cerberus being the beast at the mouth of Plato's cave one placates if one is to pass on wisdom without being eaten.

This first possible obstacle to understanding Peirce's semeiotic is perhaps increasingly less problematic now, post-Darwin. The second obstacle however, is that signs have an irreducibly *triadic* structure. A sign consists of not just the Quinean "word and object", but also what Peirce calls an "interpretant" ("a sign which translates and develops the original sign", p. 19.) This is just to say that a sign must represent an object such that it is capable of being understood (as such further understanding just consists in the generation of further signs). Thus, signs themselves can never be properly conceptualised on the dyadic model of (efficient) cause and effect which has characterised naturalistic study of language and the mind since the Early Modern period. This is not to say that

Peirce is antinaturalistic about language and the mind, but to say that his naturalism takes an original and potentially very challenging form.

1. The Discipline of Semeiotic

Here Liszka sets out the place Peirce saw semeiotic as occupying within a (Comte-inspired) hierarchical classification of the sciences according to which each branch of science draws laws and principles from the science(s) above it, and observational data from the science(s) below. First of all, Liszka notes that semiotics is a formal discipline, "one that aims at discerning the necessary conditions for the subject it studies (p. 1)" The profound influence of Kant on Peirce is evident here. Yet this is no mere anachronistic characterisation of science, given its likeness to the entirely contemporary Turing-led formal study of computation. In this regard, it has been suggested that Peirce's conception of the sign is to concretely realised signs as Turing's conception of the machine is to concretely realised machines (Joseph Ransdell, Peirce-l@ttacs6.ttu.edu, 1997).

Semeiotic lies above all empirical sciences, as indeed does all of the science of philosophy of which it is a sub-branch. Semeiotic lies below mathematics, however, for Peirce crowns his classification of the sciences with mathematics understood very broadly as "the science that draws necessary conclusions" (not to be confused with "the science of drawing necessary conclusions", which is logic).

Semeiotic is a normative science, given that Peirce sees signification construed even in his very broad and naturalistic sense to be irreducibly teleological. To what end is semiosis tending? It tends ultimately (in the long run) towards *truth*, again construed very broadly, as "settled" signs - signs which have ceased to contradict each other with respect to the objects they signify. Since all empirical sciences draw on the concept of truth yet do not themselves study it, they must rely (whether explicitly or *de facto*) on leading principles from semeiotic with respect to this vital notion. Liszka sums up his general characterisation of semiotics thus: "Semeiotic, as a branch of philosophy, is a formal, normative science that is specifically concerned with the question of truth as it can be expressed and known through the medium of signs..." (p. 14.)

2. Semeiotic Grammar

Liszka now begins explicating Peirce's complex semeiotic architectonic. Trichotomies abound. The chapter is divided most broadly into a discussion of signs' "formal conditions", their "typology" and "classification". Formal conditions of signhood are just those characteristics that make something a sign in the first place. "A sign must correlate with or represent an object", it must do so "in some respect or capacity", it must "determine (potentially...or actually) an interpretant", and "The relation among sign...object and interpretant must be *triadic*" (pp. 18-19). The three aspects of this triadic relation are discussed in detail.

The typology of signs covers the multi-dimensional natural kinds into which Peirce thought signs fell. Just one notable example is the three sign types "icon", "index" and "symbol". Icons signify their object by possessing some sort of structural resemblance to that object, as maps do. Indices signify by direct causal interaction with the object in question, a paradigmatic case here being a footprint. Symbols however are only associated with their object *via* a habit of some form, for an example of which we need go no futher than words. The classification of signs is somewhat similar to the typology, except that, (Liszka claims somewhat vaguely) "it is an attempt to organise types in a way that shows their affinities (p. 43).

3. Critical Logic

Critical Logic concerns itself with the subset of sign-use which may be called "reasoning" or argumentation, and the question of how inferences may be made as truth-preserving as possible. Thus, Peirce calls it the study of "the formal conditions of the truth of symbols" (p. 53) To this end Peirce devoted a great deal of energy to tracing out the "anatomy" of arguments. He though that though arguments are living entities with an organic structure, one can discern within every successful argument a "leading principle", premises, "colligation", "involvement" and a conclusion. Of course Peirce also produced a detailed, multiply layered typology of arguments, of which the highest-level trichotomy concerns their "leading principles" (their source and type of validity): deduction, induction and (the less familiar) abduction.

4. Universal Rhetoric

Where semeiotic grammar studies the formal conditions of *signs qua signs* , and critical logic studies the formal conditions of *truth*, this branch of Peirce's thought, which is also called "speculative rhetoric", studies the formal conditions of *inquiry* (that is, the attainment of truth). How is this achieved? Liszka admits that this is the least developed area of Peirce's thought, yet claims that, "Once it is understood what Peirce meant by universal rhetoric, it becomes clear that a great deal of his work is dedicated to it (p. 78)." Under this heading Liszka discusses Peircean formal conditions of community, of communication, and the famous four methods of settling opinion.

The writing of this book must have been arduous given the wealth of references to manuscripts spanning Peirce's career scattered across every page. Most of the book consists in the careful definition of Peirce's many semeiotic neologisms, and the delineation of the place of each one of them in Peirce's semeiotic theory -- a *tour de force* of scholarship. Yet this is the source of my only query with respect to this book's value.

Peirce was indeed an extremely systematic philosopher, in search of the ultimate classification of human knowledges, and the *organon* which would breathe life into the structure in a new and surprising way for the next 2000 years. He is the last (or perhaps just the latest?) of the great system-builders of the Western tradition. And yet, an interesting question is whether presenting a "general introduction" to Peirce's semiotic thinking in such a purely scholarly way (the way that the great system-builders are presented to undergraduates today) somehow misses the point of his thinking. It is arguable that one cannot understand Peirce aside from his pragmatism, which was nothing more than an attempt to bring to philosophy the thinking which sent the natural sciences into the Scientific Revolution. Which is just to say that Peirce invented his many semeiotic concepts only that they might be *used*, in genuinely problematic situations, to discover things nobody knew before. Perhaps a general introduction to his semeiotic which could introduce the reader to such a use of semeiotic terms would do an even better job at conveying their meaning.

This is not the book to spark an interest in Peirce in a philosopher who has not previously been introduced to him. However, for someone who already has this interest, and would like to follow it into the heart of Peirce's thinking, this careful, thorough book should prove most helpful.