

tors are section and subdivision numbers rather than page numbers. But because section and subdivision numbers are not printed at the top of each page, the reader may waste time in trying to locate the needed information in the text. This minor flaw in the presentation will hopefully be corrected in a next edition. One would also expect to find from this textbook a separate glossary of important terms, with clear definitions.

The book in A4 size, with its convenient typographical design and attractive get up is easy to handle and use. With very few exceptions (e.g. on page 188, item 2, 1970s is printed as 1980s), it is free of misprints and typographical blunders.

As were the previous ones, this third edition of the Aitchison and Gilchrist book is appropriate as a self learning manual to craft a thesaurus and to understand its theoretical underpinnings and varied uses. This third edition deserves to reign supreme in the field, as did the earlier two. This reviewer hopes to see more editions in the 21st century, as thesauri will remain relevant in information retrieval in the near future.

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ABBOTT, Robert. *The world as information : overload and personal design*. Exeter: Intellect, 1999. 155 p. ISBN 1-871516-75-7

The world as information is a polemical observation on information overload, particularly in the world of technologically transferred information, as it has affected and continues to affect the individual. Abbott's narrative relies on his fascination with and adulation for the author Thomas Wolfe, an individual who wanted to "know" everything, but lacked the organizational capacity and wherewithal to do so. Wolfe wanted a perfect list of all the things he had seen in his life and all the places he had been, much like "trainspotters" (a British allusion which Abbott, from England, uses throughout the book). To propose a solution of sorts, Abbott relies on Karl Popper's "Three Worlds" as a first effort to conceive of, organize, and explain the world of information. He then adds his own observations on recent efforts to create a further, "fourth world," that may or may not resolve the crisis of overload. As I will point out, while Abbott's premiss regarding the difficulty of organizing so much information is valid — i.e. there really is too much to understand — his reliance on the neo-

utopian sanctity and "responsibility" of the individual to create his or her own information world can only prolong the confusion.

Popper's "worlds" include World 1, the physical world without meaning, things as they are, such as rocks, mountains, electricity; World 2, individual thought and experience, as in what is in the mind rather than the brain; and World 3, information that has been engineered, recorded, and manipulated in order to be transferred to others. Worlds 1 and 2 feed into each other as meaning is created (to become the World 2 realm of ideas), while World 3 is the world of writing, recording, libraries and databases.

As it is, Popper has created a straightforward enough epistemology, except that it does not take into account the degree to which we rely on others for our own ideas — to the extent they can be called our own — or how we negotiate meaning as members of groups. Therein lies Abbott's own problem and the greatest problem faced by the information society: the fact that we are a society and not a group of individual minds connected by databases and other World 3 apparatuses.

In the end, Abbott cites efforts to bring into play the "world brain" (e.g. Bacon, the encyclopaedists, and more recently the Xanadu project, the WWW and the Internet) and the responsibility of individuals to organize their own "fourth world"; but there can be no true "world brain" without global co-operation, equity, holistic governance, interoperability, and a society-wide construction, shaping, and negotiation of technology. What kind of world brain — or more pointedly, society — can there be if, as Abbott ironically suggests, some of us must "also care for and accommodate those, perhaps the majority, who do not want to, or cannot, play its most intensive games, whether *driven* [my emphasis] by politics, economics, technology...". Whose brain belongs to whom under such deterministic conditions? And why not negotiate a society in which "perhaps the majority" would and could want to play?

Compounding the problem of the inability to participate is so-called free-market competition in the selling of information as a commodity. There will be many people who never get past Popper's World 2, who will never even know that information, if they know what that is, can be organized and shared and understood and used to benefit everyone. Abbott's sterile overly structured bewilderment at the supposed potential for everyone to know everything, or at least know how to find and understand all information, won't get us very far into the fourth world. It is only on the last page of the book that Abbott acknowledges with any seriousness that we may need

a pluralist view in favour of the non-players of the world and not just a sterile Popperian package of ordered physicality. Pity. If he had started on the other foot, perhaps he would have arrived at a societal conclusion where the world brain might agree to connect and not wait to be thrust onto others.

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HEINRICHES, Johannes. *Reflexionstheoretische Semiotik. 2. Teil: Sprachtheorie. Philosophische Grammatik der semiotischen Dimensionen* [Reflections on theoretical Semiotics. Part 2: Theory of language. A Philosophical Grammar of Semiotic Dimensions]. Bonn : Bouvier Verlag Herbert Grundmann, 1981. ISBN 3-416-01625-4.

Although Johannes Heinrichs had already written the second volume of the treatise on a "Theory of sense processes" in 1981, this book has not lost any of its importance today. While volume 1 focussed on a theory of human action, the second volume presents a systematic theory of semiotic processes and dimensions. Heinrichs' intention is to arrive at a deeper understanding of logic. It is a self-reflective logic, combining classical transcendental logic with modern logistics, that refers to empirical manifestations of "logos" [Λόγος] in everyday language.

With this theory of language, Heinrichs aims at establishing links between philosophy and empirical linguistics. The integrative power of philosophy is used by him for uniting divergent linguistic theories of descriptions of linguistic phenomena and to present a theory that is capable of organizing all kinds of semiotic processes and linguistic phenomena into a systematic, multi-dimensional typology.

Based on the classic semiotic theory of Charles Morris, Heinrichs distinguishes four major dimensions, by having added a fourth one (i.e. sigmatics):

Sigmatics
Semantics
Pragmatics
Syntactics

By applying the system theoretical method of dialectical subsumption, Heinrichs arrives in a four dimensional model at $4^4 = 256$ cases of mutual systematic application.

At first sight, the model looks like a kabbalistic system based on the "magical" number four, but Heinrichs' method of dialectical subsumption has the

power to put each linguistic phenomenon into a specific "box" of this framework.

The first sentence in the introductory chapter stresses that we are able of "looking behind" language, that language is in fact constantly looking behind itself. Heinrichs points out that he wrote these sentences before he got hold of Elmar Holenstein's remarkable book (*Die Hintergebarkeit der Sprache*, 1980) dedicated to this assertion that we can look behind the mirror of language and reflect on linguistic phenomena from an external observer's point of view, even though we use language to present these observations. Heinrichs deplores the current paradigm of linguistics and analytical philosophy of language that considers itself caught in what he calls a "lingua-cage" where linguists cannot escape the self-immanence of language. But semiotics is essentially nothing but constant self-transcendence of signs in referring to other signs, i.e. in four directions that correspond to the four dimensions mentioned above:

- To elements of reality (sigmatic dimension)
- To what is meant (semantic dimension)
- To the communication partner addressed (pragmatic dimension)
- To the concrete structural form of expressing sense (syntactic dimension)

The four dimensional typology presented by Heinrichs is not meant to distinguish linguistic phenomena in a separatory and analytical way, but to reconstruct and synthesize them and relate them to each other in a complex framework in a dialectical, dialogical procedure between a theory of language and the practice of discourse.

The four dimensions are also the four directions where such a semiotic theory of language is capable of going beyond (transcending) mere linguistic meaning: language is mediating concrete reality, general meanings, interpersonal communication and sense as such. This mediation process is in fact a process of constant self-reflection, language becomes a kind of "meta-action": human action by using signs is regulating itself by constantly using meta-signs that manifest themselves in the syntactic dimension. Heinrichs considers this semiotic action as the most advanced and most complex form of human action.

The integrative model that Heinrichs presents here is a valuable contribution to ongoing discussions in linguistic and semiotic theory, philosophy and epistemology.

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