

## Preface

As a versatile and creative thinker, Oswald Wiener (1935–2021) developed from an artist into a researcher out of sheer necessity. Throughout his life, the academic reception of his psychology of thought has been troubled. This has various reasons, among which his doubly eccentric-seeming approach of combining explorative thinking with empirical science and, related to this, of linking computer science to introspection, is not the least.

In the 1960s, Wiener was an influential *writer* of the German-language literary postwar-avant-garde. He belonged to the first generation of intellectuals and artists who turned their partly disappointed artistic and political hopes to the new thinking of cybernetics having emerged since the 1940s. The philosophy of language and the linguistic turn increasingly did not seem to offer any promise. But the fear of looming social engineering enticed Wiener, as other thinkers originally oriented toward the humanities, to dwell in positivist, scientific, even behaviorist provocation. So in one of the conversations in this book, Wiener attributes his oscillation between the hope in and the fear of technology to a kind of “Stockholm syndrome.” He was one of the first who, as a writer and computer scientist, embodied “the two cultures” of science and the humanities in one person.

Today, Oswald Wiener’s reputation as a prescient critic of the effects of computer engineering not only on our sensibilities, but also on our behavior – on habits, customs, and our implicit ideologies – is internationally undisputed (cf. the English translations of some of his key texts in the magazine *October* 2001 and 2019). Yet, so far this has been recognized primarily in the fields of the arts and humanities.

The present volume aims to vigorously correct this by elaborating both the content and the significance of Wiener’s theory of thought for cybernetics, artificial intelligence, theoretical and engineering computer science, psychology, cognitive science, philosophy, and esthetics. We believe that an adequate reception of this theory, which

has grown over decades, and, even more, its assessment and systematic adoption as well as elaboration in these fields, is still pending. So far, it has only proven fertile in practice, namely in a considerable number of thinkers and artists who have been inspired by aspects, concepts, or even just the forward-looking spirit of Wiener's theory.

So this book was originally intended to be a guide to the development and, thereby, also to a better understanding of Oswald Wiener's theory of thought, as it still seems unusual for laypersons and cognitive scientists alike. Three conversations between the editors and Wiener elaborate on its central concepts, which are derived from an epistemology supported by theoretical computer science and from a psychology of thought based on introspection. The conversations are intended to make Wiener's ideas, especially as expounded in the 2015 reference book *Selbstbeobachtung* (Suhrkamp, Berlin; Engl.: *Introspection*), more accessible.

Two developments during the work on the book led us to modify this mediatory approach. First, Wiener was rather inclined to attempt a forward-looking text elaborating on his new ideas than to reappraise the historical development of his old ones. Second, to our great sadness, Oswald Wiener passed away on November 18, 2021, and the fragments in the estate show that he never ceased to work on the one central question: "What distinguishes human thought and feeling fundamentally from statistical stimulus-to-behavior computation?" Unfortunately, he wasn't able to elaborate these fragments to the point of publication. So what he left behind are countless thought and introspection protocols. These, just as the entire estate, are still waiting to be processed and published.

Thus, the three conversations with the editors only form the first part of the book. They each detail one of three arguable phases of development of Wiener's theory of thought. The first phase was still marked by the linguistic turn, albeit often repulsively. During the second phase (since the 1970s), Wiener attempted to consistently define historically disputed epistemological concepts with the help of the theory of automata. Finally, the last phase, from the end of the 1990s,

was dedicated to the psychology of thought and introspection and encompassed extensive discussions within an informal research group.

The second, additional part of the book is now opened by Wiener's last major essay published during his lifetime entitled "Cybernetics and Ghosts." It represents a kind of recapitulation of his life's work and, as an appendix, also contains a short glossary with explanations of some central theoretical terms, which are also used in the other chapters of the book. It is supplemented by three essays by the editors, each of which expands on a detailed problem of the theory of thought. Michael Schwarz addresses the genesis of "cognitive symbols" as a grounding of thought in the awareness of a proxy object, thus representing an *essentially* different model than deep neural networks in computational neuroscience performing "object recognition." Thomas Eder tackles the problem of memorizing texts as a model case of structuring insight learning. Finally, Tom Raab sketches out a theory of memory based on Wiener's ideas seeking to consistently integrate psychoanalytic "metapsychology" into cognitive science.

We hope that at least the consistency of the use of technical terms characterizing both the conversations and the essays will give the book an introductory, albeit still demanding character. May it further contribute to the study of the work of one of the – as we are convinced – pioneers of a new theory of thought.

Our warmest thanks go to Ingrid Wiener, who always greatly supported our joint meetings and discussions, even when the group expanded. You made our endeavor possible in the first place!

The editors, January 2023

**Thomas Eder, Thomas Raab, Michael Schwarz (eds.)**

# Oswald Wiener's Theory of Thought

Conversations and Essays  
on Fundamental Issues  
in Cognitive Science

**DE GRUYTER**

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