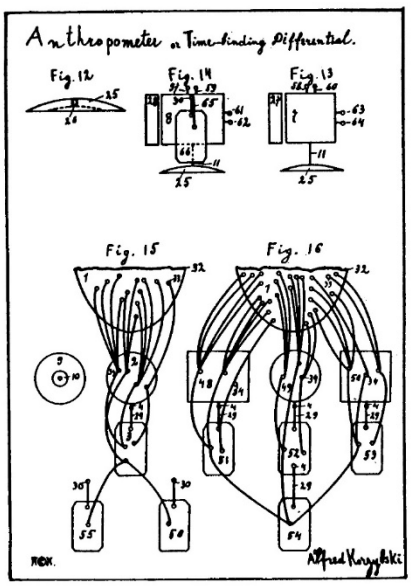
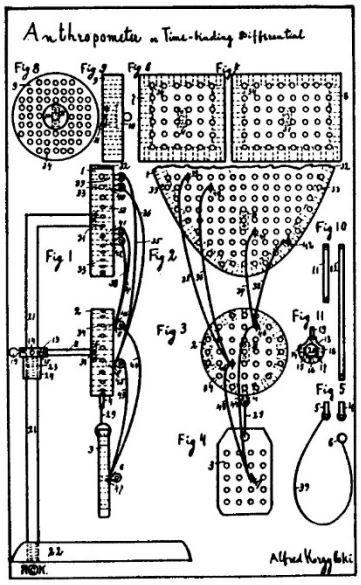
Knowing how to look is a way of inventing

by Niklas Hageback

Integrating Korzybski's structural differential to enhance the process of abstraction in artificial intelligence and enable computational creativity





The introductory quote by the legendary Spanish painter Salvador Dali is indeed to the point, knowing how to look is a way of inventing as creativity often comes down to visualisation of various aspects of an object or matter. This ability to perform ocular abstraction, if only at the imaginary level, is not only a success factor for aspiring artists but also Albert Einstein testified how the ability to visualise creative elements always preceded his capacity to articulate it in text or formulae, in fact he viewed it as a pre-requisite.

The ability to abstract is a key part of human intelligence, however often easier said than done, this as it typically requires elevated cognitive levels. And in the ambition to develop artificial general intelligence, by emulating the human mental faculties, the capacity to originate and formulate quality creative thoughts is an important piece of this puzzle. Thus, to master abstraction will be a pivotal part in establishment of computational creativity, however few efforts have as of yet rendered much notable progress.

One auspicious approach is Alfred Korzybski's notion about structural differential as a semantic tool to highlight inconsistencies in language and how it can be deployed to differentiate layers of abstraction in a structural way, hence the name. He constructed a remarkable contraption (as depicted) to facilitate the insights and discovery process of layered levels of abstraction applicable on any phenomena.

By digitising and integrating it with the more traditional means of abstraction, it provides an alternative path to achieving computational creativity and develop a tool to augment the innovation process. Do you want to know how?

Well, this is one of many interesting topics that is part of '***A Practitioner's Guide to Computational Creativity***' which due for publication in 2021. Watch this space for more information on how to pre-order your copy of the book, a definite 'must' for the professional and layman alike with an interest in the advancement of artificial intelligence!