A Unified Psychology as Part of a General Social Science

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Abstract

Through the unique “Algorithmic” reasoning, the author finds out that running of our thinking system leads to consequences like various psychological phenomena, therefore the thinking system and psychological systems can in principle synthesize into a wholeness where, through the same Algorithmic principles, a general social science can be established.

Keywords: Subjectivity; Algorithm; Hard-Software; Consciousness; Ego.

Introduction

Psychology, like economics, is an interesting but awkward discipline, as it is not easy to clarify its themes, and it is not satisfactorily theoretical. Psychology is vaguely related to the thinking system. However, a new thinking theory, inspired by computer principles, surprisingly resolves various theoretical puzzles both in social sciences and in psychology, thereby deductively connecting them together, toward a unified general social science where all major psychological branches and schools can play their roles. As one of the series introductions (Li, 2022a-d) of the theory, this essay outlines its psychological applications.

Algorithm Framework Theory

The theory, named “Algorithm Framework Theory” or AFT (Li, 2009-2022), as a modified computationalism, says that human uses multiple “Instructions”, as the innate universal tools in the brain, to process information to compute or think, serially, dynamically, and economically. In order to close computations in time to make decisions, besides deduction, various other Instructions are frequently and alternately used, contingent on their different functions and the contexts, to speed up the operations at the sacrifice of accuracy, thus leading to the synthesis of objectivity with arbitrariness and diverse subjectivities; and, with the combinatorial explosions happening between Instructions and data, a mixed and infinitely expansive thinking system is revealed.

The structure of “Instruction + information” as a new dualism represents the interactions between human and the environment. However, as Instructions are thoughtful entities rather than any physical or biological ones (e.g. genes), clearer meaningfully, easier to manipulate, they could have social and humanistic studies conducted within the domain of thoughts or software.

Distortive Thinking

Psychology pertains mainly to issues such as subjectivity, irrationality, arbitrariness, biases, and anomaly (Samson, 2014) that have been deemed distinct from thinking, or “rational” thinking. This dualism prevails in psychology. For example, Sigmund Freud explained how psychological irrationality happened in contrast with rational thinking, whereby he apparently regarded the thinking system as an ideal even perfect body (Freud 1922) that can be resulted from zero thinking time or infinite thinking speed. However, according to AFT, the thinking system runs and appears like psychological performances, hence they are not essentially different.

What can illuminate psychology most is the Algorithmic[1] knowledge theory: since a computational operation is feeble in information processing, plenty of knowledge stocks need to be prepared in advance, to support current computations. However, possibilities of knowledge development are infinite, hence any extant pieces of knowledge must in principle be imperfect or flawed patterns, modules (Fodor, 1983) or makeshifts, they must have been made rashly, inevitably arbitrarily, and subjectively, more or less. And, current computations cannot examine or modify them entirely in time, but only marginally, and then straightforwardly adopt them. These mean that stocked knowledge must have intervened human thinking or computations “rudely”, or abruptly. Consequently, “rational thinking”, comprised of the Instructional system and various knowledge stocks, must have never been so “rational” as expected, but “distortive” or “wrapped” like the space and the time described by Einstein.

The Hard-Software

Beliefs, attitudes and other philosophical ideas, general, fundamental but vague, exemplify the subjective knowledge. Emotions (Glinka, 2013) resemble beliefs or attitudes, which are patterned to give fixed responses to certain stimuli or input, neglecting other factors. Emotions focus on what the stimuli or input mean straightly for one’s purposes or demands, reminding the actor not obsessed in computational procedures but concerned more with his/her “final ends”, as if a greedy boy frequently asks his parents: “Is this or that yummy?” “Can you buy it for me?” As the “boy” is simple-minded, there are only several kinds of emotions discretely, occasionally, and economically regulating one’s behaviors. Emotional responses as parameters or action advice are then synthesized into further computations. Hence, one can keep calm in appearances while excited internally.

However, different from beliefs or attitudes as pure software, apparently, emotions are constituted with “hardware” that is installed in the brain innately and universally, besides the Instructional system, and starts to work as soon as one is born. Thus, emotions can be called “hard-software”, like the software installed in computers before they leave factory for their

users. Though this hard-software can be modified by manufacturers, it cannot by users themselves; therefore, emotions keep constant during one's whole lifetime, and keep alienating the thinking system that evolves quickly, so that sometimes they are deemed "irrational".

Instincts, impulses, feelings, and desires can all be deemed some kinds of hard-software. Instincts enable newborns conducting basic actions (e.g. sucking breasts) to survive before they develop or learn knowledge enough to make living. This logic evidences the necessity of innateness beyond postnatal knowledge development. Impulses and feelings urge actors to compute or act quickly and efficiently, rather at sacrifice of accuracy or perfection. Desires, as thoughtful variables, represent physiological demands, but roughly, simply, and fundamentally, like those subjective and arbitrary ideas. One could satiate one's own desires to keep healthy, but not perfectly; then, s/he adopts the acquired knowledge to improve again.

In this way we can compare psychologies with thoughts: they are technically different, but fundamentally similar. Logically, the similarity can allow interpersonal innate differences, and even the inheritance of acquired knowledge, to a certain extent, because the inherited interpersonal differences can be complemented or adjusted again by the following acquired knowledge. Nonetheless, as thoughts change easily and volatilely, some critical psychological or physiological functions (e.g. heartbeat) that pertain to the safety and stability of one's life have been "designed" to fulfill with hard-software, automatically and/or unconsciously.

Consciousness and Ego

Only from the angles of feeble computational operations and their serial connection can we understand what consciousness is, and why it moves, loiters as we feel about it. Consciousness and attention refer to the computational operation that has limited capacity with limited temporary memory. For economic considerations, it must hesitate, jump, or shuttle among various divisive or programmed choices, appearing chaotically but really logically (Li, 2022c). In addition, it must authorize many programs to run automatically upon certain stimuli, within certain scope, without prompt re-examinations of them, until it feels necessary to interrupt them again. This authorization mechanism could mislead observers to allege too much "autonomy" or "unconsciousness". In this sense, consciousness is the leader and governor in the brain.

From the Algorithmical perspective we can be easy to understand the terms such as purpose, motivation, value, ethics, morality, institution, organization, ego, and "social psychology". Limited consciousness resembles a cart to be pulled or pushed, from which a purpose or motive is identified as the single or finite factor(s) among many, to simplify computations. Final purposes or motives (e.g. desires) are derived or distorted into the thoughtful and instrumental aims or values, to guide or regulate computations. A computation is unable to compute itself, as the "itself" has not been finished. However, sequentially, the following operation can compute on the memorized data of the finished previous "itself", in this way one can approximately think about oneself as a composite of enormous "itselfs" except the current ongoing "itself", thereby approximately forming the concept of "ego".

Social Psychology

As one is limitedly sized and located at a place, s/he can objectify others elsewhere. Lacking direct neuro connections, people have to use physical symbols, the spoken or written languages, to communicate with each other, where the universal Instructional system embeds both interpersonal uniformity and differences. Various antenatal and postnatal subjectivities gather into a person's body, thereby shaping one's unique and complicated personality. Internal communication of a person is much easier and quicker than that between persons, which determines the differences between an individual and a group of people, then arousing various social issues. Individual free wills, stemming from abundant computing subjectivities, entails interpersonal negotiations, stipulations, agreements, enforcements, fights, and so on, then furtherly to the birth of institutions and organizations. Ethics and morality as "informal institutions", like the internal rules of one's own, imperfectly regulate social interactions, and evolve slowly but constantly. Similarly, the other social psychologies can also be explained or understood once the individual psychology is Algorithmically established.

Enormous personalities of enormous people will evolve over time, along with knowledge development, since a large part of them is acquired. However, the society has to economically decide on how long a person should be educated in his/her lifetime, or how much knowledge should be filtered, condensed, discarded, or specialized. This computational economic consideration structurally affects one's nonlinear but continuous psychological development (Piaget, 1971).

Conclusion: the Methodology

In brief, AFT as a concise thinking theory, with its abundant inferences, can endogenize a comprehensive thoughtful world where all psychological branches and schools can reside, or connect with. This unified system entails synthetic and general studies first, then the detailed, applied, and specialized ones, where the discipline of psychology can be confined in the study of hard-software, in accordance with the Algorithmic understanding of disciplinary division and cooperation. It can be conjectured Algorithmically that there must be multiple stereotypes of personality (Jung, 1923) that lead to different styles of behaviors; therefore, the empirical study of them, and of other psychological phenomena, is needed, definitely. Algorithmical theoretical studies can lead themselves logically into empirical studies.

When lacking thinking theories, behaviorism prevailed understandably to pursue analytical rigor (Watson, 1924). Computers have provided an accurate and successful model of human thinking for long time; however, cognitive psychologists, in my opinion, disappointingly failed to find the proper and effective route to adoption of it. Instructions are really human's assets, only simulated by computers, which lie at the core of AFT, to pair information to constitute a wholesome, linguistic software framework, and then hopefully able to overturn behaviorism. Consequently, AFT would significantly theorize psychology, guide its experiments, clarify its various ontological and methodological issues, and extend it to the general social science, and the unitive humanities – although the hardware approach to psychology, as a psychological branch, still characterizes the method of natural science.

Footnotes

[1]"Algorithmic(al)" means "of AFT", "under AFT", etc.

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