Bridging the Gap Between Cognition Theory and Practice: A Proposal

Introduction

A lot of research that has taken place on human cognitive behaviours has been confined to the laboratory and has only focused on problem-solving. This has made it difficult to understand and analyse the complex mental processes of the human mind and their contribution to human behaviour. In general, human behaviour is shaped by the continuous thought processes that take place in the mind and the context in which this happens (Darvin, 2006). Several studies have shifted from performing experiments in highly constrained situations to analysing the human mind while performing normal everyday activities to deduce the way it functions and find its usefulness in cognitive therapy (Levaux et al., 2012). However, we are still a long way to go in finding the application of all cognitive theories in real-life situations. This paper presents a focused problem statement that defines the gap between cognitive theory and practice and poses several research questions that can help us fill this gap.

Problem Statement

The human mind is a complex and dynamic entity that is constantly subjected to an ever-changing environment. For every response, the human brain simultaneously integrates motor and multi-modal sensory signals and uses real-time feedback to guide behavioural consequences of any given situation. However, over the years, experiments in the field of cognitive psychology have been conducted in static and simulated settings which are quite far from reality. In most of these experiments, the participants are asked to lie down, given explicit instructions, exposed to artificial stimuli, and expected to deliver pre-decided responses. Although this type of study offers a lot of experimental control, it has been increasingly found that these cognitive psychology experiments are neither relevant to real-life practice, nor do they provide the accurate dimensionality of the real world (Ladouce et al., 2016).

Literature Review

Current trends in cognitive psychology research largely use a reductionist approach (Gentner, 2010), and concerns regarding its validity and usefulness have been questioned since several decades. Brunswik (1943) has suggested that cognitive psychology research is narrow and artificial, and therefore not representative of actual human cognition. Neisser (1976) pointed out that studying human cognition in an artificial environment limits our understanding to only that environment and the results cannot be extrapolated to real-world contexts. Bronfenbrenner (1977) suggested that human behaviours that arise in an artificially simulated environment are also artificial and differ from natural human behaviours.

Over the years, the interactions between the human mind and the environment have been greatly stressed. According to Chiel and Beer (1997), our experiences direct the way in which we perceive and process our environment. This is the crux of the embodiment theory which states that human cognition is heavily dependent on bodily experiences. Based on this paradigm, designing experiments that do not study the interaction of the participant with the environment doesn't have much value in real-life cognition (Ladouce et al., 2016).

Rationale of the Study

A study conducted by Verhaeghen et al. (2012) has reported that experimental findings of cognitive aging suggest that older people are unable to perform complex cognitive tasks due to their age-related limitations, whereas observations of older adults in their home environments show that they are quite well-adapted to their day-to-day life activities. This disconnect between experimental results and real-life observations is alarming because, in general, healthcare practitioners tend to depend on research findings to inform their practice. However, as cognitive psychology experiments are conducted in artificially simulated environments, the results are starkly different from what happens in the real world. In such a scenario, depending on cognitive research findings to inform current psychology practice can be misleading.

Aim of the Study

This study aims to use examples from the literature review that highlight this disconnect between experimental and real-world cognitive psychology, and using these, assess the reliability, validity, and usefulness of experimental results of cognitive psychology in real-life practice.

Research Questions

This study intends to explore the following research questions:

1. Are the results obtained from artificially simulated experiments in the field of cognitive psychology reliable to inform our current understanding of human cognitive behaviours?
2. How close are these simulated experiments to real-life contexts, and how valid are these results for understanding human behaviours in real-life experiences?
3. To what extent are the results of cognitive psychology research applied to practice in real life, and how useful are these results for informing current cognitive psychology practice?
4. What steps are being taken currently to bridge the disconnect between cognitive psychology research and practice, and what technologies have been developed to conduct experiments in a more natural setting?

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