Reflections on an application of realism in psychology

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Abstract
This comment on “Scientific Realism and the Issue of Variability in Behavior” (Arocha, 2021) succinctly summarizes the features of the positivist background that are found in the standard model of research implemented in psychology; moreover, this comment emphasizes that this model is unable to move the psychological sciences toward discoveries. Arocha (2021) put the realist paradigm forward as an alternative for psychology researchers. This paradigm changes the ontological, epistemological, and methodological assumptions of psychological sciences. It emphasizes the interconnectedness of the sociocultural and mental mechanisms of psychological functioning. The comment concludes with an outline of some objectives of realist psychological research.

Keywords
epistemology, methodology, ontology, operationalism, realism, statistical positivism

There is no escape from philosophical assumptions for researchers. Whether we like it or not, and whether we are aware of them or not, we cannot avoid such assumptions. And, sometimes, the assumptions that we make lead us into error. (Hammersley, 1992, p. 43)

Arocha (2021) has put another nail in the coffin of the statistical and behaviouristic positivism that underlies most of mainstream psychological research. In their desire to implement “real” science and to be seen as “hard” scientists, many mainstream psychologists continue to adhere to this paradigm of positivism, which was abandoned by natural scientists many decades ago. In this work, Arocha (2021) disentangled and depicted how positivism is applied in the standard research practice model in psychology. The features of this model are: extreme empiricism and operationism (a strong

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emphasis on data collection and their formal analyses at the expense of a theoretical investigation and a conceptual analysis); causality framed in terms of empirical conjunctions of events and often based on statistical covariances; the “true reality” of behaviour is found in aggregate statistical parameters that are believed to be applicable to every individual; participants’ behaviour is explained from the researcher’s perspective, ignoring the perspectives of those being studied. Moreover, the standard positivist psychological science model is strongly antimetaphysical, meaning that it rejects the existence and importance of the theoretical entities that function behind empirical regularities. This model is built on only two modes of inference: induction and deduction. This leaves no space for the retroductive inference—“the inference that makes science” (McMullin, 1992) and generates new knowledge. Arocha (2021) rightly stated that the progress of psychology should be associated not with the further refinement of measurement tools and the sophistication of statistical analytic techniques; rather, it should occur by changing its philosophical paradigm to realism, the paradigm that natural scientists and many social scientists endorse. Arocha sketched some propositions of realism, and I want to elaborate more on this paradigm in general, and on its application to psychology, in particular.

**Ontology**

According to Popper (1978), the universe where humans live consists of three worlds/realities: physical/natural, sociocultural, and mental (see also Martin & Sugarman, 1999). The natural world is physical and material; it existed for millions of years before humans evolved and it will continue to exist after humans become extinct. The sociocultural world is created by human communities. It coevolved with the development of exclusively human cognitive, social, and moral capabilities (Tomasello, 2014) and it exists prior to each person’s birth and functioning (Schutz & Luckmann, 1973; Tomasello, 2019). The sociocultural world is socially constructed by interacting community members. It is real and powerful in its ability to regulate people’s actions and experiences. The mental world of human beings is also real and it exists independently of any researcher’s understanding of it. It is given to individuals through their subjectivity, their first-person perspectives, and their selfhood. This world of thoughts, feelings, dreams, and desires exists independently of our accessibility to and understanding of it. It cannot be wishfully removed or ignored, and it causes our actions and experiences. These three worlds interact with each other; sociocultural and mental ones are mutually constitutive by enabling and constraining each other (Martin & Sugarman, 1999).

These worlds are not chaotic and they do not function at random: the regularities in their functioning are governed by causal mechanisms (Bhaskar, 1975/2008; Bunge, 1997; Salmon, 1984). These mechanisms (which constitute the intransitive aspect of science; Bhaskar, 1975/2008) are unobservable (metaphysical) entities, and researchers can infer them through retrodiction based on established empirical regularities. The purpose of science is to examine these realities, to uncover the causal mechanisms that govern them, and to explain the phenomena (Craver & Darden, 2013; Hedström & Ylikoski, 2010; Wright & Bechtel, 2007).
Epistemology

A formulation of knowledge about mechanisms in statements and propositions constitutes scientific theories. These theories (which are the transitive aspect of science; Bhaskar, 1975/2008) are socially constructed, fallible, and never certain. Existing theories represent inferences to the best explanations (Lipton, 2004) of a phenomenon that subsist at a particular time. A recent example of applying realist thinking is the shared intentionality theory that explains the mechanisms of the phylogenetic and ontogenetic development of humans (Tomasello, 2014, 2016, 2019). Several theories can exist to explain the same phenomenon by postulating different mechanisms. Knowledge of these mechanisms opens possibilities for their practical applications. If a theory is well-supported by empirical evidence and is applicable, then it has a high probability of representing real mechanisms.

Methodology

Causal mechanisms function within corresponding entities: there are natural kinds (atoms, molecules, cells, genomes, organisms), sociocultural kinds (cultural communities, societies, social groups), and psychological kinds (individuals and their minds). Therefore, the primary approach to studying the corresponding mechanisms is to examine the representatives of these kinds; in turn, this means applying a case-based approach. Researchers should look for subsequent mechanisms within the entities that are governed by them: cells, communities, or individuals. Realist researchers apply conceptual analysis and retroductive inference to discovered empirical regularities and generate hypotheses about underlying causal forces and powers. Consequently, they test these hypotheses through realist experimentation. Unfortunately, Arocha’s (2021) work did not touch upon the application of realism to sociocultural and mental realities; thus, I want to elaborate on them here.

Sociocultural realities

Here, the questions to ask are: what is the nature of these realities and what are the mechanisms of their functioning and relations to humans’ mentalities? These realities are not natural; rather, they are socially constructed emergent kinds that are created by cultural communities to regulate the social lives of their members. Ontologically, these realities are collectively intentional and collectively intersubjective entities. They exist either in the forms of collective representations (Durkheim, 1912/2008), or systems of typification and relevances, and social stocks of knowledge (Schutz & Luckmann, 1973), as social representations (Moscovici, 2001), cultural models (D’Andrade & Strauss, 1992; Shore, 1996), or sociocultural models (SCM; Chirkov, 2020). These representations/systems/models are the sociocultural regulators of people’s social actions. They exist because of people’s physical and linguistic interactions that are guided by these models. Persons create these models and they are guided by them in their everyday functioning. By internalizing SCM, individuals transform into socialized and enculturated persons who fit their communities. As a result of this socialization, community members acquire regulative prescriptions for
uniform social actions and practices. According to this conceptualization, in order to understand social actions, researchers first need to uncover these communal regulative mechanisms and their appropriation by individual members; second, investigators need to examine their functions regarding people’s behaviours and experiences.

One of the functions of SCM is that they supply members of a community with uniform systems of meanings through which they can interpret and apprehend the world, other people, and themselves. These systems constitute the primary mental mechanisms that regulate human actions (Harré & Secord, 1972). These models also facilitate the emergence of self in individuals; in turn, this allows people to develop a potential for the agentic self-interpretation of being-in-the-world. Therefore, agentic, self-interpreting, and reflective individuals are embedded into collective systems of meaning that are represented in persons’ minds through their internalization (Martin et al., 2009). The idiosyncratic and biographical experiences of people within existing communal systems of meanings and practices constitute the secondary layers of mental regulation. Therefore, the mental reality is contingent on the sociocultural reality that supplies the communal systems of meaning and that facilitates the development of the self. Consequently, people acquire the power for agentic self-reflections and interpretations that construct their individualized mental models of the sociocultural worlds. Thus, sociocultural and self-agentic mechanisms comprise the important objects of realist psychological research. Correspondingly, the objectives of realist psychologists could be twofold: (a) they aim to develop conceptual and theoretical frameworks to understand these mechanisms and (b) they strive to elaborate methodological tools to investigate them. Methodological multiplicity (Danemark et al., 2002; Sayer, 1992) provides researchers with a wide variety of options in terms of designs and techniques for achieving their goals. Although statistics and a variable-based approach can be incorporated into realist research, they probably should be last on this list and only done to complement other approaches.

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Valery Chirkov is interested in the topics of the philosophy and methodology of psychological and sociocultural research (he focuses on the application of the realist paradigm in psychological studies); mechanisms of cultural regulation of human behavior, as well as psychology of acculturation, human motivation, and the problem of agency. His recent publications include “The Sociocultural Movement in Psychology, the Role of Theories in Sociocultural Inquiries, and the Theory of Sociocultural Models” in *Asian Journal of Social Psychology* (2020) and “An Introduction to the Theory of Sociocultural Models” in *Asian Journal of Social Psychology* (2020).