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COMMENTARY

Basic income, cognitive capacity, and the workplace: The role of I-O psychology in the interdisciplinary research agenda to reduce poverty

Julie B. Olson-Buchanan[1]* and David R. Vera[2]

[1]Department of Management, California State University, Fresno and [2]Department of Economics, California State University, Fresno
*Corresponding author. Email: julieo@csufresno.edu

Recently, the field of industrial-organizational (I-O) psychology has witnessed a humanitarian awakening as the discipline has broadened its long-held primary focus on individual and organizational well-being to also include societal well-being (Olson-Buchanan et al., 2013). Over the past 10 years, the Society for Industrial and Organizational Psychology (SIOP) has been serving as a nongovernmental organization with special consultative status to the United Nations. Multiple edited humanitarian work psychology volumes have been published, and there have been several calls for I-O psychology research to explicitly focus on the underexamined, non-POSH workforce (e.g., Gloss et al., 2017). At the core of this movement is identifying how I-O psychology can serve the greater good, including, in particular, eradicating poverty. Yet, as Huffmeier and Zacher (2021) note, I-O psychology has been silent on the topic of basic income. Although the debate over the financial feasibility of basic income (or universal basic income) is beyond the scope of I-O psychology, it is clear that it can and should have a seat at the table with respect to discussion surrounding the implementation of basic income (or a version of it) as it relates to the workplace and as a possible way to address global poverty.

Although a number of other disciplines in social sciences such as sociology, economics, political science, and anthropology have already "made significant headway in the research and practice of eradicating poverty" (Ahmed et al., 2017, p. 383), I-O psychology is relatively new to examining the complex, multifaceted aspects of this global, societal issue as well as its proposed solutions (such as basic income). Developing our capabilities for such work by teaming up with researchers in interdisciplinary efforts could "result in mutual learning exchanges that facilitate shared conceptual frameworks used to inform processes of humanitarian assistance and research with those living in poverty" (Olson-Buchanan & Allen, 2017). Furthermore, as best practices indicate, tackling a "grand challenge" such as eradicating poverty or, at minimum, preparing for a reduction of jobs due to automation, calls for innovation and research through an interdisciplinary lens. Therefore, we argue that this topic would benefit, in particular, from I-O psychology taking an interdisciplinary approach. Below we illustrate how I-O psychology could be applied with other interdisciplinary efforts to examine workplace issues that are related to basic income (and financial insecurity).

Scarcity research: Poverty and cognitive function

An important potential area of examination of basic income—besides its overall influence on society—is its potential positive effects on the cognitive function and mental capacity of those

who are financially insecure or are living in poverty. Interdisciplinary work between cognitive psychology and economics ("scarcity" research) has studied how individuals under financial constraints experience an apparent decline in their cognitive resources (Mani et al., 2013). In their seminal *Science* article on this topic, Mani et al. conducted two sets of studies that were designed to examine the link between concerns about finances and cognitive functioning. In the first set of studies, they conducted four experiments where they "triggered" concerns about finances by presenting participants with financially related scenarios and told them they would later be asked how they would respond. Before identifying their responses, the participants completed two cognitive function tests: one designed to measure fluid intelligence and the other designed to measure spatial relations ability. Interestingly, participants with lower effective income performed equivalently on the two tests relative to participants with higher effective income when the scenarios concerned modest financial concerns but performed significantly worse (with respect to statistical significance as well as magnitude) when the scenarios concerned high financial concerns. These differences were magnified when incentives (for "correct responses") were added. Follow-up experiments eliminated "math anxiety" and potential order effects as the source of these findings. A second set of studies focused on Indian farmers before their harvest (high financial concerns) and after harvest (low financial concerns). Farmers scored significantly higher on both the fluid intelligence test and a numerical Stroop test during times of lower financial concerns. Follow up studies indicated physical fatigue, training effects, and uncertainty of crop yield were not contributing factors to these findings. Of note, the authors point out that these effects sizes are nontrivial. To illustrate this, they compared the effects with those from sleep studies that had used the same measure of fluid intelligence and identified that "evoking financial concerns has a cognitive effect comparable with losing a full night of sleep" (p. 980).

Financial insecurity and I-O psychology

Mani et al.'s (2013) findings suggest "monetary concerns tax the cognitive system" and "poverty-related concerns consume mental resources" (p. 976). Would reducing financial concerns, such as through the implementation of basic income, result in the *enhancement* of employees' cognitive resources in the workplace? This is a promising line of inquiry for I-O psychologists to pursue in future interdisciplinary research. The I-O psychology research literature is replete with evidence that establishes the importance of cognitive ability for nearly all jobs (e.g., Schmidt & Hunter, 2004). Cognitive functioning is anticipated to be even more crucial in the workplace in the future. For example, the World Economic Forum's (2020) top 10 work skills for the future identifies skills that are heavily cognitive in nature (e.g., critical thinking, problem solving), in part due to the prediction of a substantially decreased need for job skills that are likely to become automated. Given the anticipated need for "upskilling" to meet the demands of future jobs (50% of all workers by 2025 according to World Economic Forum Future of Jobs Report, 2020), a significant amount of workforce training will be needed as well. Previous research has established a consistent link between training success and *g (*e.g., Ziegler et al., 2011). Research that examines the relationship between basic income (or a reduction in financial concerns) and upskill training success would be another important question to address.

This line of scarcity research suggests a strong connection between poverty and cognitive resources and indicates that a reframing of such resources may be contextually bound. Because individuals who are stretched financially can face difficulties in making decisions—due to attentional demands—it is possible that basic income could affect productivity via increased cognitive capacity. Low-income individuals who are no longer concerned (or less concerned) with the means to cover basic needs could become more productive workers, and in theory, employers would benefit from the resulting positive externality. This is a novel view of the influence of basic income on the labor market and on firms, which contrasts with the

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standard hypothesis that suggests that basic income would lower the supply of labor for low-paying and less desirable jobs, making it more challenging for organizations to meet their labor needs. Beyond task performance, I-O psychology research has also established a (negative) association between measures of *g* and some measures of counterproductive behaviors (e.g., Dilchert et al., 2007) and a (positive) moderate association between *g* and organizational citizenship behaviors (e.g., Gonzalez-Mulé et al., 2014). Thus, an examination of financial concerns and these important organizational outcome measures is warranted as well.

Basic income field experiments: Opportunities for interdisciplinary work

Another potential opportunity for interdisciplinary research would be for I-O psychologists to collaborate on field experiments where basic incomes are being implemented. For example, one interesting recent example of the implementation of basic income comes from the experiment that was conducted in the city of Stockton, California, between February 2019 and February 2020 (the Stockton Economic Empowerment Demonstration). In this program 125 randomly selected residents of Stockton received $500 per month for 24 months. The cash was unconditional, with no strings attached and no work requirements. The researchers (West et al., 2021) used a mixed-methods approach from a social work and social policy lens. West et al. found that participants in the $500 monthly stipend group, relative to a control group, experienced (a) reduced income volatility, (b) higher success in finding full-time employment, (c) improved health outcomes (less depression and anxiety and enhanced well-being), and (d) "alleviated financial scarcity creating new opportunities for self-determination, choice, goal-setting, and risk-taking" (p. 1). We note that this program used the term guaranteed income rather than basic income to reflect that the $500 would not cover basic needs. The findings do not explicitly identify an improvement or increase in cognitive abilities; however, we would argue that some of the positive outcomes are clearly tied to cognitive improvements related to the decrease in monetary concerns that tax the cognitive system.

Although the Stockton basic income experiment ended, there is now a wider initiative, Mayors for a Guaranteed Income, in which cities across the United States are piloting similar programs. Mayors for a Guaranteed Income, a coalition of city mayors pushing for the implementation of federal guaranteed income, currently includes seven pilot programs in 57 participating cities (https://www.mayorsforagi.org/resources). To date, the research has not examined the effects of such pilot programs on participants' work-related behavior beyond attaining full-time employment, such as job performance, motivation, and job satisfaction. Yet, these variables reflect areas of concern (e.g., effects on employee motivation, labor supply) that are often raised about the possibility of implementing a basic income (or implementing financial buffers in general). These programs would be intriguing opportunities to incorporate an I-O psychology lens by introducing organization-related variables of interest such as job engagement, job withdrawal, and training success, among others.

We note that the Stockton experiment had a $500 award, which was not enough for individuals to survive without continuing to work at some level. This experiment looked closely at how individuals spent the additional $500. Results indicate that most of the award went to pay for necessities: food, followed by sales/merchandise, which were likely also food purchases at wholesale clubs and larger stores (West et al., 2021). Although the award did not cover all basic needs, the results suggest that individuals still benefited from having a financial buffer and showed improvement in their overall well-being. We would also argue that these field experiments, although not a "full" basic income, are very informative, as we would also expect the effects of basic income on the labor market to be context specific. For example, in the US where health benefits are generally tied to employment, the actual implementation of basic income (one that would cover all basic needs) would exert a lower bound on the drop in the supply of labor.

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Conclusion

A considerable amount of debate has centered on the economic feasibility of implementing a basic income in certain countries or a universal basic income globally. Regardless of whether this full implementation can or will become a reality, the questions such a proposal raises about how poverty and/or proposed solutions may affect individual, organizational, and societal well-being are important ones to ask. As is clear from the research on poverty and cognitive resources in economics and cognitive psychology and the burgeoning basic income field experiments, interdisciplinary approaches to these provocative questions can stimulate meaningful advancements within and across disciplines and ultimately contribute to a fuller understanding of the effect of enhancing financial security on individuals, businesses, and society as whole.

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