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Decades of research suggest purpose in life is a coveted resource. Purposeful individuals – those who possess a sense of direction and engage deeply in daily worthwhile activities – exhibit greater health and well-being (Kim, Sun, Park, & Peterson, 2013; Ryff, 1989), more generativity (Hill, Burrow, Brandenberger, Lapsley, & Quaranto, 2010), have stronger and even more abundant social ties (Stiepoe & Fancourt, 2019), and even greater resilience to stress (Burrow & Hill, 2013), relative to counterparts. While the importance of possessing a sense of purpose is unmistakable, whether individuals are able to maintain it amid extreme environmental uncertainty is woefully unclear. How do people preserve a sense of purpose when our ability to meaningfully engage with activities in previously reliable settings is profoundly disrupted? The current moment provides a formidable test of this question, as widespread transmission of Covid-19 and intense efforts to slow it drastically transform our environment. Here, we consider how the experience of purpose may be impacted by disruptions in three key person-environment interactions: how we engage with work, how we engage in education, and how we manage physical proximity. We hope to motivate critical thinking about how this pandemic, and our collective responses to it, influence the experience of purpose and delineate a research agenda that may inform how individuals’ can preserve a sense of engagement and contribution.

Given this circumstance, we draw attention to three person-environment interactions that have been acutely disrupted by Covid-19 and consider their probable impact on the experience of purpose: how we engage with work, how we engage in education, and how we manage physical proximity. Notably, these domains of interaction have been central to environmental and ecological perspectives in psychology (e.g., Sundstrom, Bell, Busby, & Asmus, 1996; Winkel, Saegert, & Evans, 2009) as well as to the study of purpose in life (e.g., Ryff, 2014). As uncertainties surrounding this biological hazard continue to proliferate, we briefly underscore how Covid-19 might impact each person-environment interaction in ways that are detrimental to maintaining, developing, or enacting purpose. In doing so, we aim to motivate a broader research agenda for understanding the environment – purpose relationship both in the near term and foreseeable future.

1. How we engage with work

As public health guidelines prescribe physical distancing to slow the spread of Covid-19, many people are working remotely via virtual technologies. This requires establishing and navigating new physical spaces as work settings that are absent the tangible and intangible resources of typical workspaces. Of course, remote work is not possible in every industry, leading to employees having to manage their occupations in increasingly unpredictable and vulnerable settings, or many having to deal with losing their jobs altogether. Importantly, where, how, and what we decide to do for work are foundational for meaningful engagement; work environments are vital spaces for collaborative productivity and creative expression (McCoy, 2002) and crafting one’s sense of contribution to the world (Wrzesniewski & Dutton, 2001). Studies suggest that work affords individuals the ability to perceive their daily tasks as personally meaningful, which promotes a broader sense of coherence and belief that they can make a positive impact (Steger, Dik, & Duffer, 2012). Parallel evidence exists in studies of retirement or work-preventing injuries, wherein discernible declines in sense of purpose have been found among those who no longer or are...
unable to work (Hill & Weston, 2019; Saunders & Nedelec, 2014).

The current widespread transition to remote work presents an opportunity to investigate individuals’ adaptation to new technologies, while maintaining purpose. To reconcile person-organization fit in these new environments, organizations may need to identify ways to remind employees of how their contributions align with an overarching mission, as more traditional signals of collective performance may be less evident. While virtual meetings and online workspaces are not novel, future research might identify a range of individual differences that may inform who is most likely to remain engaged with work activities when they are mandated to occur remotely (Kissmer, Knoll, Stiegitz, & Gross, 2018). Moreover, for those who lose jobs or live in regions with disproportionately high levels of unemployment, the challenge of preserving a formerly held sense of purpose may be even more formidable.

Past research has suggested that individuals higher on conscientiousness—a disposition toward being hardworking, organized and achievement striving—is predictive of greater losses in well-being following job loss (Boyce, Wood, & Brown, 2010); given the conceptual connection to purposefulness, studies are needed to understand whether sense of purpose may itself be a risk factor for people dealing with job loss. Income loss, concerns over labor-market security, and limited opportunities to socialize about work experiences are likely to undermine well-being and sense of purpose (Clark, Knabe, & Rätzle, 2010; McKee-Ryan, Son, Wanberg, & Kinicki, 2005).

2. How we engage in education

Another person-environment interaction being drastically disrupted concerns education. Schools and universities are closing their physical campuses, forcing instruction online. As virtual teaching replaces face-to-face interaction, educators and students must navigate sustaining learning while safeguarding trusted and supportive relationships. When schools prioritize these relationships, they can be instrumental settings for purpose development (Brock, 2013; Koshly & Mariano, 2011), especially when teachers, coaches, and mentors are responsive to student interests and scaffold opportunities for achievement. Remote learning environments pose obvious challenges to this type of responsiveness: without in-person contact, the sparks of early interest and curiosity that may otherwise proliferate to become purposes may be less visible (Kashdan & Yuen, 2007; Zhang & Bonk, 2006). Of course, virtual technologies can offer several benefits, including providing students with cost-efficient and time-saving access to materials and alternative ways to visualize content and engage with content (Henderson, Selwyn, & Aston, 2017). Yet, such benefits have largely emerged when instructors have deliberately chosen to implement online components to learning—not when they are mandated by external imposition.

In adapting to virtual instruction, whether teachers are able to cultivate student purpose may depend on their ability to creatively foster connections to students at distance, and tailor them to the diverse ways students may be oriented to learning in virtual settings (Misra & Stokols, 2012).

Maintaining purpose is equally important for educators as it is for students. That teaching is perceived as a calling for many in the profession has been well-established (Day & Qing, 2009; Palmer, 1998), thus helping students achieve must be recognized for its potential to fulfill important life aims. Yet, as physical and social constraints obscure familiar practices and roles, the current pandemic stands to also alter how teachers feel, identify themselves, and pursue their aims. There is evidence to suggest that teachers tasked with transitioning to remote instruction undergo a transformative process ranging from initial resistance to embracing new pedagogical modifications to help students (Redmond, 2011). Yet, such transformation may be muddled for teachers abruptly forced to adopt remote instruction practices, without an opportunity chose how they can be meaningfully aligned with their unique style and educational aims. Thus, teachers’ sense of role and contribution represent a critical target for inquiry in understanding how the landscape of education is currently being transformed. There are likely to be key individual differences in teachers’ abilities and willingness shift to remote instruction that are in need of discovery and assistance through helpful intervention.

3. How we manage physical proximity

Perhaps the most vital alteration to person-environment interactions at present concerns how people manage their physical proximity to one another. Keeping sufficient distance from others minimizes the likelihood of infection, but in doing so creates an iatrogenic impediment to social connection. Perceiving support from others correlates strongly with feeling purposeful (Weston, Lewis, & Hill, in press), and engaging with a purpose often necessitates making an impact beyond oneself (Damon, Menon, & Cotton Bronk, 2003). This can be challenging when interpersonal interaction is limited. Being unable to visit in close proximity with friends, family, or neighbors is a painful sacrifice in the context of Covid-19, and risks lowering individuals’ sense of purpose. Indeed, reliable social connections, evidence of belonging, and sense of familiar place have all been found to be robust predictors of purpose (Lambert, Stillman, Hicks, Kamble, Beumester, & Fincham, 2013; Steptoe & Fancourt, 2020).

In this moment, the crucial need to feel connected to others compels serious effort and investment in establishing resources that help people maintain a sense of closeness, either by working on shared projects or simply expressing warm regards and assurance. In one sense, the issue of physical proximity pervades those previously discussed insofar that it questions how we can maintain sense of purpose, in the absence of our typically close associates who recognize and appreciate our efforts. However, the absence of physical proximity to others presents additional unique challenges, insofar that social isolation and ostracism prove problematic for a sense of purpose (Stillman et al., 2009), likely because we feel less engaged with life. Indeed, though the media has focused on the economic toll of the physical distancing guidelines, the limitations on in-person contact hold broader consequence for purposefulness in the pandemic, which may prove difficult to mitigate solely through virtual connections.

Among the compelling reasons to consider the impacts of Covid-19 on physical distance, its pernicious effects on youth socialization and community involvement may most important. Adolescents who are engaged in voluntary activities in their communities show the greatest level of engagement as young adults (Barber, Mueller, & Ogata, 2013). At a particularly formative developmental period for cultivating a purpose and identity (Burrow & Hill, 2011; Malin, Ballard, & Damon, 2015), restrictions on social gatherings could be deleterious for future participation in activities such as sports, volunteering, or political campaigns (Burrow, 2015; Sumner, Burrow, & Hill, 2018). Future research should also consider the impacts of Covid-19 on the developmental process and aspirational content of youth purpose. Moreover, it is important to avoid solely assuming a “deficit” perspective, insofar that the current context may actually inspire young people to influence social structures in a wide variety of constructive ways.

4. Conclusion

We are confronted with the formidable problem of retaining a sense of purpose in the midst of a pandemic of still unrealized magnitude and unknown duration. Such a task is central to longstanding investigations of environmental psychology (e.g., Brown & Westaway, 2011; Saegert & Winkel, 1990) – forecasting how people will interact within these new environmental challenges, and whether they design ways of pursuing those things that imbue their lives with purpose even in the midst of disaster. It is important to acknowledge that unlike other calamities, no damage to the built environment has been sustained. Indeed, the schools, neighborhoods, and workplaces in which individuals have cultivated their sense of purpose remain intact. Yet, certain aspects of
these and the activities that take place within them are less accessible to people in ways that require sincere consideration. The challenge then is to meet this moment with a rigorous research agenda designed to inform how individuals can feel purposeful when opportunities to engage meaningfully in their daily activities have been so formidably altered.

To fortify this research agenda, we offer the following testable hypotheses to guide inquiry into how disruptions caused by Covid-19 should impact purpose immediately and in the future. First, as obstacles to engaging with work diminish our sense of contribution, those who are better able to leverage remote technologies to maintain engagement in daily tasks should feel more purposeful. Second, as virtual instruction challenges learning and limits educators’ ability to recognize student interests, activities that allow students to personalize their learning and connect with teachers to share insights should afford richer prospects for cultivating purpose. Third, a sense of purpose should be greatest among those who exploit opportunities to engage collaboratively and in community with others within the confines of physical distancing policies. Those for whom physical proximity is less tethered to social proximity should be expected to retain a sense of belonging and that they can contribute to others. Finally, just as contending with this pandemic is likely to change societies in profound and permanent ways, we call for an openness to a change in the kinds of questions researchers ask about purpose – questions that will need to more fully incorporate features of the environments in which people’s lives unfold. As a salubrious resource for life engagement, we look forward to sustained attention to these person-environment interactions and discovering enduring ways of helping people maintain a sense of purpose.

References
Barber, C., Mueller, C. T., & Opatu, S. (2013). Volunteerism as purpose: Examining the long - term predictors of continued community engagement. Educational Psychology, 33(3), 314–333.
Boyece, C. J., Wood, A. M., & Brown, G. D. (2010). The dark side of conscientiousness: Conscientious people experience greater drops in life satisfaction following unemployment. Journal of Research in Personality, 44(4), 535–559.
Brong, K. C. (2013). Purpose in life: A component of optimal youth development. New York: Springer.
Brown, K., & Westavay, E. (2011). Agency, capacity, and resilience to environmental change: Lessons from human development, well-being, and disasters. Annual Review of Environment and Resources, 36, 321–342.
Burrow, A. L. (2015). Illuminating pathways to civic purpose. Journal of Applied Developmental Psychology, 31(2), 173–179.
Burrow, A. L., & Hill, P. L. (2011). Purpose as a form of identity capital for positive youth development. American Journal of Community Psychology, 47(4), 1196.
Burrow, A. L., & Hill, P. L. (2013). Derailed by diversity? Purpose buffers the relationship between ethnic composition on trains and passenger negative mood. Personality and Social Psychology Bulletin, 39(12), 1610–1619.
Clark, A., Knabe, A., & Ritsel, S. (2010). Boon or bane? Others’ unemployment, well-being and job insecurity.Labour Economics, 17(1), 52–61.
Damon, W., Menon, J., & Cotton Brok, K. (2005). The development of purpose during adolescence. Applied Developmental Science, 7(3), 119–128.
Day, C., & Qing, G. (2009). Teacher emotions: Well being and effectiveness. Journal of Emotional and Social Development, 18(1), 92–109.
Henderson, M., Selwyn, N., & Aston, R. (2017). What works and why? Student perceptions of ‘useful’digital technology in university teaching and learning. Studies in Higher Education, 42(8), 1567–1579.
Hill, P. L., Burrow, A. L., Brandenberger, J. W., Lapley, D. K., & Quaranto, J. C. (2010). College student purpose orientations and well-being in early and middle adulthood. Journal of Applied Developmental Psychology, 31(2), 173–179.
Koshy, S. I., & Mariano, J. M. (2011). Promoting youth purpose: A review of the literature. New Directions for Youth Development, 132, 13–29.
Redmond, P. (2011). From face-to-face teaching to online teaching: Pedagogical transitions. Proceedings ASCILITE 2011: 28th Annual conference of the Australasian society for computers in learning in tertiary education: Changing demands, changing directions (pp. 1050–1060). Australasian Society for Computers in Learning in Tertiary Education (ASCILITE).
Steptoe, A., & Fancourt, D. (2020). An outcome-wide analysis of bidirectional associations between changes in meaningfulness of life and health, emotional, behavioural, and social factors. Social Science & Medicine, 103, 1–12.
Sumner, R., Burrow, A. L., & Hill, P. L. (2018). The development of purpose in life among adolescents who experience marginalization: Potential opportunities and obstacles. Current Psychology, 37(6), 740.
Sundstrom, E., Bell, P. A., Busby, P. L., & Asmus, C. (1996). Environmental psychology. San Francisco: Jossey.
Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The work and meaning inventory (WAMI). Journal of Career Assessment, 20(3), 322–337.
Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. Academy of Management Review, 26(2), 179–201.
Zhang, K., & Bonk, C. J. (2006, October). The R2D2 model for effective online teaching and enjoyable online learning. Proceedings of the 2007 International Conference on Information and Technology: Coding the Future. Retrieved from http://www.cs.cmu.edu/~philz/papers/redwood06.pdf.

Letter to the Editor
Journal of Environmental Psychology 69 (2020) 101436

Kim, E. S., Sun, J. K., Park, N., & Peterson, C. (2013). Purpose in life and reduced incidence of stroke in older adults: ‘The health and retirement study’. Journal of Psychosomatic Research, 74(5), 427–432. https://doi.org/10.1016/j.jpsychores.2013.01.013.
Kissmer, T., Stieglitz, S., Knoll, J., & Gross, R. (2018). Knowledge workers’ expectations towards a digital workplace. Americas Conference on Information Systems. Retrieved April 10, 2020. From https://www.researchgate.net/profile/Tobias_Kissmer/publication/325809547_Knowledge_Workers__Expectations_Towards_a_Digital_Workplace/links/5b0eeca535d08515c9eb5260a45/Knowledge-Workers-Expectations-Towards-a-Digital-Workplace.pdf.
Koshy, S. I., & Mariano, J. M. (2011). Promoting youth purpose: A review of the literature. New Directions for Youth Development, 132, 13–29.
Lambert, N. M., Stillman, T. F., Hicks, J. A., Kambel, S., Baumeister, R. F., & Fincham, F. D. (2013). To belong is to matter: Sense of belonging enhances meaning in life. Personality and Social Psychology Bulletin, 39(11), 1418–1427.
Malin, H., Ballard, P. J., & Damon, W. (2015). Civic purpose: An integrated construct for understanding civic development in adolescence. Human Development, 58(2), 103–130.
McCoy, J. M. (2002). Work environments. In R. B. Bechtel, & A. Churchman (Eds.). Handbook of environmental psychology (pp. 445–460). John Wiley & Sons Inc.
McKee-Ryan, F., Song, Z., Wanberg, C. R., & Kuncick, A. J. (2005). Psychological and physical well-being during unemployment: A meta-analytic study. Journal of Applied Psychology, 90(1), 53–76.
Mistras, G., & Stokols, D. (2012). A typology of people-environment relationships in the Digital Age. Technology in Society, 34(4), 311–325.
Palmer, P. (1998). The courage to teach. San Francisco: Jossey.
Redmond, P. (2011). From face-to-face teaching to online teaching: Pedagogical transitions. Proceedings ASCILITE 2011: 28th Annual conference of the Australasian society for computers in learning in tertiary education: Changing demands, changing directions (pp. 1050–1060). Australasian Society for Computers in Learning in Tertiary Education (ASCILITE).
Steptoe, A., & Fancourt, D. (2012). The dark side of conscientiousness: Conscientious people experience greater drops in life satisfaction following unemployment. Journal of Research in Personality, 44(4), 535–559.
Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The work and meaning inventory (WAMI). Journal of Career Assessment, 20(3), 322–337.
Steptoe, A., & Fancourt, D. (2019). Leading a meaningful life at older ages and its relationship with social engagement, prosperity, health, biology, and time use. Proceedings of the National Academy of Sciences, 116(4), 1207–1212.
Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. Academy of Management Review, 26(2), 179–201.
Zhang, K., & Bonk, C. J. (2006, October). The R2D2 model for effective online teaching and enjoyable online learning. E-Learn: World conference on E-learning in corporate, government, healthcare, and higher education (pp. 1547–1553). Association for the Advancement of Computing in Education (AACE).

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