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Focusing on the Correct Level of Analysis in Process-Based Therapy

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This letter makes several excellent points that carry the arguments for process-based therapy (PBT) in the right direction. We have begun to detail these implications in our target article and elsewhere (e.g., Hayes & Hofmann, 2017), but we appreciate this opportunity to agree with the points being made by our colleague, and to amplify them.

Real progress cannot come simply by abandoning the latent disease assumptions of the DSM if the field retains the same analytic strategies that those assumptions produced. Significantly different strategies are needed in the process-based era.

Conclusions derived from the analyses of collectives only apply to individuals if certain assumptions apply (Molenar, 2004). The most well known is that of homogeneity between individuals (even more difficult assumptions apply to time-dependent variables but we cannot address these given the space). The latent disease fantasy inside psychiatric nosology provided just enough of a fig leaf for that long-established statistical issue to be ignored due to the claim that those with a given syndromal diagnosis were “homogeneous.” That was false, and in a process-based era it is no longer possible to do avoid the issue.

We know that given biopsychosocial processes can give rise to different problems (e.g., Levin et al., 2014), and that individuals with apparently similar problems can differ on the processes that led to them (e.g., Fisher, Medalgia, & Jeronimus, 2018). Stated baldly, that means that processes of change have to be examined idiographically first, because if they are studied nomothetically first, the conclusions that result cannot be applied to individuals without violating statistical assumptions. It does not matter whether people are collected under labels having to do with syndromes, conditions, or problems – the damage is done if the research strategy ignores the fact that change processes are idiographic phenomena by their very nature.

In essence what is needed is a new form of functional analysis that will lead to the empirical identification of processes of change that apply in a person-specific way. Statistical methods such as complex network analyses are in hand that can allow valid conclusions about processes of change to be made idiographically (Hofmann, Curtiss, McNally, 2016), from which nomothetic groupings can then be empirically derived based on functional similarities (e.g., by using the Group Iterative Multiple Model Estimation or GIMME; Gates & Molenaar, 2012). Evidence-based therapy will not be based on protocols so much as evidence-based intervention kernels being applied to individuals based on coherent

theoretical models that link process-based functional analyses to procedures for particular people. The number of persons studied likely will not go down in a process-based era but the temporal density and contextual focus of assessment will need to increase substantially.

The movement to PBT implies a fundamental strategic re-examination of intervention science across an impressive range of topics (e.g., mediation, moderation, psychometrics, randomized trials, diagnosis, and so on). We agree that our target article did not touch many key areas, not because we are unaware of these broad implications, but precisely because the implications are vast.

References

- Fisher AJ, Medaglia JD, & Jeronimus BF (2018). Lack of group-to-individual generalizability is a threat to human subjects research. *Proceedings of the National Academy of Science USA*, 115 (27): E6106–E6115. doi: 10.1073/pnas.1711978115
- Gates KM & Molenaar PCM (2012). Group search algorithm recovers effective connectivity maps for individuals in homogeneous and heterogeneous samples. *NeuroImage*, 63, 310–319. doi:10.1016/j.neuroimage.2012.06.026 [PubMed: 22732562]
- Hayes SC & Hofmann SG (2017). The third wave of CBT and the rise of process-based care. *World Psychiatry*, 16, 245–246. doi: 10.102/wps.20442 [PubMed: 28941087]
- Hofmann SG, Curtiss J, & McNally MJ (2016). A complex network perspective on clinical science. *Perspectives on Psychological Science*, 11, 597–605. doi: 10.1177/1745691616639283 [PubMed: 27694457]
- Levin ME, MacLane C, Daflos S, Seeley J, Hayes SC, Biglan A & Pistorello J (2014). Examining psychological inflexibility as a transdiagnostic risk factor for Axis I disorders among first year college students. *Journal of Contextual Behavioral Science*, 3, 155–163. doi: 10.1016/j.jcbs.2014.06.003 [PubMed: 29057212]
- Molenaar PCM (2004). A manifesto on psychology as idiographic science: Bringing the person back into scientific psychology, this time forever. *Measurement*, 2(4), 201–218. doi: 10.1207/s15366359mea0204_1