



BRI
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CRITICAL FORMULATION

A Non-Western Approach to Psychological Formulation

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ABSTRACT

Critical Formulation is a psychological technique, completely separate and in direct opposition to therapy. Unlike it, it shifts the central question from "What is wrong with you?" that is deeply embedded, although often not overtly, in mainstream therapeutic modalities to "What was done to you and by whom?"—requiring examination of social structures, power relations, biological conditions, history, and even the technique and the psychologist themselves, rather than locating pathology within individuals and their biological makeup or shortcomings of cognitions and affect.

This paper presents the theoretical foundations, methodological principles, and practical roadmap for Critical Formulation. Drawing from critical realism, post-colonial thought (particularly Fanon and Freire), and biosemiotics, Critical Formulation retains the scientific rigor and hypothesis-driven approach of classical psychological formulation while rejecting the philosophical prejudices, epistemological violence, and cultural domination embedded in Western therapeutic frameworks.

We articulate what Critical Formulation rejects—including reductionism, relativism, cultural norm-setting, scientism, the cognition-emotion split, medicalization of mental health, and trauma theory that obscures perpetrators—and what it affirms: scientific rigor without reductionism, hypothesis-driven assessment of social structures, cultural context without relativism, addressing power structures and exploitation, and integrating biological aspects without medicalization.

The paper outlines a roadmap for developing Critical Formulation practice, including how to identify and train practitioners, how to structure the work, and how to explain it to those seeking help. We acknowledge significant challenges, including practitioner resistance to abandoning Western-centric narratives and patient resistance to questioning their own loyalties. Despite these challenges, we propose that Critical Formulation could be particularly effective for minorities and cultures who have imported Western therapeutic culture, could serve as training to make therapists less authoritarian, could provide a framework for legal work and patient advocacy, and could offer an anti-bioethics framework for understanding medicine.



We conclude by announcing plans for a pilot trainee programme to begin experimental implementation of Critical Formulation. This work represents a necessary alternative to existing therapeutic frameworks—one that addresses sources of distress rather than symptoms, that is scientific but not scientistic, rigorous but not reductionist, and culturally responsive but not relativist.

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I. INTRODUCTION

1. WHAT CRITICAL FORMULATION IS AND ISN'T

What we call Critical Formulation is a psychological technique, completely separate and in direct opposition to therapy. It employs the basic assumptions of classical psychological formulation (Eells, 2007), such as being scientific and hypothesis-driven, but at the same time rejects purely subjective foundations of western therapy, psychiatry and mainstream psychology, namely: any philosophical prejudices, such as reductionism, or relativism, cultural norm-setting, scientism, and the epistemological violence (Teo, 2010). When unaddressed, all of these perpetuate mental suffering, making it worse.

For example, we refuse to acknowledge the purely spiritual/philosophical split of cognitions vs emotions, which lies at the very heart of modern day mental health culture (for example in CBT; Beck, 2011), not only on the grounds of insufficient scientific proof (Cuijpers et al., 2014), but also because we identify it as abusive and perpetuating western-centric cultural domination (Fanon, 1952).

We reject the utterly unscientific medicalisation of the so-called mental health issues, pointing once again to the lack of any convincing biological correlates (Solmi et al., 2020) and also the abysmal results of the discipline of psychiatry (Rush et al., 2006). We do not reject it in an attempt to put the mental health issues into the realm of the subjective experience, as in it being a "soul" issue. We simply point out that these splits—between the subjective and objective, between science and spirit, between environment and organism (Hoffmeyer, 2008)—are issues only for people of western and/or advanced cultures, and

cease to be meaningful once one steps outside of these historical frames (Husserl, 1970). In other words, mental suffering and distress is, in our view, *biological, but is not medical*. Doctors are not scientists, they are technicians, and should have as much to say about these realities as is established by unbiased evidence-based research grounded in realist science (Bhaskar, 1975), not by cultural or aristocratic heritage or knowledge exchanges that serve power interests.

Lastly, we reject the trauma-theory of mental distress, although we appreciate the direction it set in demedicalising it (Herman, 1992). The term trauma, while adequately describing the state of the victim, completely dissociates the other side of the equation—that of the perpetrator. In other words, trauma-theories give the rightful spotlight and dignity to the victims of human evil, but still obscure and dissociate the public recognition of the source of that distress—violence, greed, and exploitation (Freire, 1970).

Critical Formulation, then, is not a new therapy modality. In fact it is a refusal of the therapeutic mindset of mainstream western psychology. We simply do not engage in philosophical/quasi-religious interpretations of nature, which western psychiatry and psychology are, and by extension so is therapy. We have as little loyalty to the ancient Greeks as to Bertrand Russell—negative one.

2. PURPOSE AND SCOPE

This paper serves as a foundational document for Critical Formulation, listing its theoretical underpinnings and planning for an outline of its methodological principles. Here, we aim to clearly delineate what Critical Formulation is and what it stands against.



This work is intended for practitioners, researchers, and scholars who find themselves dissatisfied with existing frameworks and who recognize their cultural biases, such as the Cartesian split between mind and one's embodiment (Descartes, 1641/1984). It is for those who recognize the political inclinations of all narratives to find fault with either one's actions or so-called biological makeup, and never with the evaluating system itself. But most of all, it is for those who

recognize that the current mental health system, despite its claims to universality, is deeply embedded in cultural assumptions and power structures. These structures make the interest of a patient as a full biological being only tangential to the interest of a doctor as a carrier of that exchange—an exchange that functions as the resource-management mechanism of advanced societies.

II. THEORETICAL FOUNDATIONS

1. CLASSICAL PSYCHOLOGICAL FORMULATION: CORE PRINCIPLES

Classical psychological formulation (Eells, 2007) represents an attempt to bring scientific rigor to understanding mental distress through hypothesis-driven processes that seek to explain why this person, in this context, experiences these difficulties. However, the theories classical formulation employs are deeply embedded in Western philosophical traditions that obscure rather than illuminate the sources of psychological distress, such as overreliance on deductive reasoning (Russell, 1931) as the source of truth—which we take to be a religious argument, not embedded in real life (Husserl, 1970). And we do not deal with religion. Another example is a blind belief in statistical analysis as driving truth-statements (Open Science Collaboration, 2015; Ritchie, 2020).

Critical Formulation retains the scientific spirit of classical formulation while fundamentally refusing its spiritual assumptions mentioned above.

2. SCIENTIFIC AND HYPOTHESIS-DRIVEN APPROACH

Science, properly understood, does not require reducing human experience to ever-more-atomised mechanisms or cognitive processes (Ritchie, 2020). That is a spiritual proposition of the western culture (Kapferer, 2005). Instead, we deal with real people. In this sense, someone who practices Critical Formulation is more of a scientific detective than a parrot for p-values. Our work is deeply critical of all power structures, statuses-quo, and inherited knowledge. In this sense it is deeply biosemiotic (Hoffmeyer, 2008).

For example, the hypothesis that depression as a concept is maintained by cognitive distortions is only testable if the one administering the test believes in Bertrand Russell's version of science (Russell, 1931)—it is not testable in any other context of epistemic loyalty (Fricker, 2007). By contrast, a hypothesis about a particular client is detective work: what he is, what is his ultimate end, what brought him about, what powers influence him, what powers he is part of, what exploits him, what he exploits, etc. Scientific rigor requires examining all relevant factors such as these and testing hypotheses against evidence with



humility but with piercing insight. It requires not inflating the psychologist's importance with pretenses of ultimate knowledge through Western science-as-religion, but serving one's client—a deeply moral duty for one who presents himself as an expert to another. This stands in contrast to scientism—the belief that only biological or cognitive explanations are valid. When probed, these explanations collapse downward: to neuroscience, to biochemistry, to organic chemistry, to general chemistry, to physical chemistry, to physics, ultimately to fundamental forces—of which the scientist cannot say anything but "they are" (Nagel, 2012). Yet this humility is not propagated back to the more abstract sciences (Moncrieff et al., 2022).

3. EPISTEMOLOGICAL FRAMEWORK

In this sense, the detective work we described must be established in critical realism (Bhaskar, 1975) and post-colonial thought (Fanon, 1952; Freire, 1970; Husserl, 1970), as these two aspects of the technocratic state we are in deeply influence our ability to be good detectives for our clients. Critical realism recognizes reality independent of our knowledge. We reject the peculiar insanity of western thought that even questions the existence of objective reality, and we refuse to enter a philosophical dialogue about it, as we are not loyal to the epistemology that demands such questioning (Lyotard, 1979). And most importantly, even outside of that, any form of realism is the only stance wherein expert-interventions can take place morally (McGrath, 2011).

From post-colonial thought, we take the recognition that knowledge is not neutral—it's produced within relations of power, and Western knowledge systems

have often served to maintain colonial domination. This means we must examine power relations embedded in knowledge claims, recognize whose knowledge counts, and learn from those excluded from dominant systems, especially as it pertains to vulnerable populations and minorities (Fricker, 2007).

4. THE ROLE OF EVIDENCE

Evidence in Critical Formulation is not limited to randomized controlled trials or laboratory observations. It includes testimony of those who experience distress, historical records of exploitation and violence, patterns of inequality, and material conditions. The evidence that matters is about sources of distress—what has been done to people, by whom, and under what conditions. We do not separate the biological from the subjective, the environment from the organism (Hoffmeyer, 2008), therefore in that umbrella of potential clues are genomics, biological systems, and modern biomedicine, however these are not sufficiently explanatory in themselves (Ghaemi, 2009). By the same token, those clues also lie in the evolutionary lineage of human beings and other animals, and in the anthropological path that our ancestors took to bring us to the point where that particular client's life is manifesting. All that is a story of a human being.

This expanded understanding requires methodological pluralism and some fluency in life sciences, history, anthropology, and psychology. What is more, it is detective work—it necessitates critical examination of how evidence is produced, interpreted, and used, and how that evidence can again be used to and for the client. Critical Formulation is evidence-based but understands evidence more broadly—seeking evidence about whole stories, sources of distress, and patterns of relating.



III. A ROADMAP FOR CRITICAL FORMULATION

Critical Formulation requires practitioners who can think systematically, who can examine evidence from multiple sources, who can understand distress in relation to its sources rather than as individual pathology, and who are fluent in life sciences and counter-claims of mainstream psychology and psychiatry. This chapter outlines how to identify and train practitioners, how to structure that work, and how to explain it to those who seek help.

1. FINDING PRACTITIONERS

The practitioners we need are those who can engage in systematic inquiry without reducing complex human experience to simple mechanisms, in other words people who at least can be made non-loyal to the prevalent narcissistic culture and its economic and technological "awe". For this they must be comfortable with uncertainty, with provisional understanding, with the recognition that formulations evolve as new evidence emerges. Most importantly, they must become literate in subjects that decrease the awe and draw of violence-allowing socio-technological structures. They must be willing to examine power structures—for example, in therapy and psychology itself, in cultures, homes, churches, and laboratories—because they will be the last line of defense against these for their clients.

These practitioners may come from various backgrounds—psychology, social work, anthropology, history, engineering, or other fields that engage with human experience. What matters is not their professional credentials but their willingness to enter real science with self-authority and yet humility, to examine evidence systematically, and to understand distress within its social, historical, and material context.

In Critical Formulation the practitioner does the detective work themselves and presents it to the client, believing the truth lies outside the both of them. In this, the work also requires moral and intellectual

courage, since to get these answers wrong would be to the detriment of both the client and themselves directly. For precisely this reason, no structure of organisational supervision should exist, as these serve to offset the responsibility onto an abstract entity—such is the case in most therapy modalities where supervision frameworks create shared liability that diffuse individual accountability (Thomas, 2007). Ultimately it is you, as a practitioner, who says things to a client, not the author of the modality, and not the ancient Greeks who made the language that describes "psyche"—a term derived from the Greek *psykhē* meaning "soul, mind, spirit" that has shaped Western psychological discourse (Harper, n.d.).

2. WHAT WE OFFER TRAINEES

Training in Critical Formulation involves several components. First, trainees learn the theoretical foundations—critical realism, post-colonial thought, biosemiotics. They must be absolutely fluent in the history of therapy, psychology and psychiatry, as this is the embedded narrative with which clients come asking for help. Admittedly, that might not be the case in some other cultures, less influenced by the West, so this must be adjusted to the population.

Second, trainees learn methods of systematic inquiry. They learn to gather evidence from multiple sources—personal testimony, historical records, social structures, economic conditions, and scientific reality of biological systems. On top of that they must be at the very least competent in both qualitative and quantitative methods of the so-called scientific enquiry, as a lot of authority of ideas flows through these channels, and a psychologist-detective cannot afford to be blind. They should for example be competently able to answer the question about the utility of neuroscience, genetics, etc—the foundational sciences that psychology and psychiatry claim as their source (Smoller et al., 2019).



Third, trainees learn to work collaboratively. Critical Formulation is not a matter of expert applying knowledge to client, but of detective and client working together to understand the truth. We always assume the truth to exist, independent of both actors. Trainees learn to recognize that those who experience distress are often the most knowledgeable about its sources, and they learn to work with that knowledge rather than against it. In this sense the practitioner must work against what can be termed a therapeutic-instinct, which reaches for authority by grounding conclusions in some abstract set of knowledge. For example, if the conversation is about emotions, the practitioner first analyzes what that thing even is, and where that idea came from—historically, linguistically, spiritually, etc.—and in light of that explores the idea with the client. It very well could be that the split between emotions and cognitions, culturally made as it is, is a useful dissociative lie the client uses to procure some resources. If that is the case, the responsibility of the practitioner is not to convince the client of the moral reality of this act—as would be the case in psychoanalysis or psychodynamic interventions, which interpret behavior through moral frameworks of superego and conscience (Freud, 1923)—but to simply show him that it is so, with respect for one's free will if they want to remain in these structures.

Fourth, trainees must learn to combat abstractions, as these are often used as dissociative realities. It is quite impossible to fight against the abuse of one's culture—it's a non-entity—but if we appropriately see culture as what our dad communicated to us and made us obey, just as his dad did, and so on, then it's just some people, mostly dead, exerting influence over our lives. That is at least comprehensible. In this sense, the practitioner should see all problems, even economical, as problems with individuals—understanding that even structural economic phenomena must ultimately be traced to individual actions and decisions (Weber, 1922).

3. EXPLAINING CRITICAL FORMULATION TO CLIENTS

When someone seeks help through Critical Formulation, we explain that we are not therapists applying established protocols, but detectives engaging in systematic inquiry. We explain that we will work together to understand what has been done to them, by whom, and under what conditions. We explain that we will examine evidence from multiple sources—their testimony, historical records, social structures, material conditions, biology, anthropology, etc.

We explain that our formulations are always provisional, always open to revision as new evidence emerges. We explain that we do not have all the answers, that we are engaging in detective work, and that the process requires their active participation. We explain that they are not subjects to be studied, and are not patients, but collaborators in searching for the truth.

We explain that Critical Formulation is not therapy—we are not that concerned with one's relative well-being, only with the truth. Should that truth be problematic to accept, the practitioner should always reiterate the camaraderie and equal-standing of the exchange, not the expert-sufferer, patient-doctor relationship as is the case in therapy. Therefore it's better to refuse service than to abuse the client by extracting their money for what Freire calls the banking model of education—where knowledge is deposited into passive recipients rather than emerging through collaborative inquiry (Freire, 1970).

The ultimate moral obligation of any practitioner is not to the technique, his own training, cultural identities, or personal goals and beliefs, but to the living being in front of them, the individual client. For this reason the practitioner cannot present themselves as carriers of "knowledge" as psychiatrists do, and not as emotional or spiritual role-models, like therapists, but rather, more humbly, as "security personnel" and investigators.



4. THE STRUCTURE OF PRACTICE

Critical Formulation sessions involve systematic inquiry into sources of distress. We begin by gathering evidence—listening to the person's testimony, examining their social and historical context, understanding the material conditions that shape their experience. We generate hypotheses about sources of distress and test those hypotheses against evidence. We

develop formulations that are always provisional, always open to revision.

The work is collaborative. The practitioner is not an expert applying established knowledge, but a detective engaging in systematic inquiry. Therefore we see no need for this work to be built around the transference dogma of therapy, and it shouldn't be tied to one practitioner. Just as well, another one can read the notes and continue the work, or two or even more practitioners can be working simultaneously.

IV. SUMMARY AND CONCLUSION

We are now beginning to experiment with establishing this practice.

1. THE CHALLENGES

The potential development of Critical Formulation faces several substantial difficulties. First, there is the extreme resistance of practitioners themselves to become disloyal to Western-centric narratives. Many practitioners have invested years in training within existing frameworks, developing expertise and authority within them. To abandon these frameworks requires not just intellectual reorientation but a fundamental shift in professional identity—from expert applying established knowledge to detective engaging in systematic inquiry. In fact, it might be simply too difficult to establish it within western-dominated cultures.

Additionally, the lack of organizational supervision and the requirement for personal responsibility may be too demanding for many practitioners. Most therapeutic modalities create structures that diffuse accountability—supervision frameworks that establish shared liability structures (Thomas, 2007), professional guidelines, institutional protocols—that allow practitioners to offset responsibility onto abstract en-

tities. In psychodynamic therapy, for example, responsibility is understood as emerging from unconscious processes and relational patterns rather than direct practitioner accountability (Gabbard, 2014).

Critical Formulation requires practitioners to take full responsibility for their formulations, to recognize that it is they, not the author of a modality or the ancient Greeks and Christians who shaped psychological language, who speak to clients. This level of personal accountability may be more than many practitioners are willing to accept. Lacan emphasized that the analyst must bear responsibility for their position and ethical stance, recognizing that "at every moment we need to know what our effective relationship is to the desire to do good, to the desire to cure" (Lacan, 1992, p. 300)—a requirement that many find too demanding.

Second, there is the challenge that patients themselves may not be receptive to this type of work. Critical Formulation requires clients to question their own loyalties. As Lacan observed, the therapeutic process involves "a radical questioning of the foundations of each one's identity" (Laurent, 2002), and resistance emerges here. The best we can offer clients is the opportunity to question these loyalties, to examine the sources of their distress, to under-



stand how structures of exploitation and violence have shaped their experience.

Clients come to mental health services often seeking relief from distress, seeking to feel better, seeking to adjust to existing conditions—the primary goals of psychotherapy are to gain relief from symptoms, maintain or enhance daily functioning, and improve quality of life (National Institute of Mental Health, 2023). Not offering that by default might be commercially an unviable proposition.

2. OUR HOPES

Despite these challenges, we have several hopes for what Critical Formulation might achieve. First, we hope it will be particularly effective for representing minorities and cultures who have wholesale imported Western psychological and therapeutic culture. These populations have often been forced to understand their distress through frameworks that pathologize their responses to oppression, that obscure the sources of their suffering, that locate problems within them rather than within structures of exploitation.

Second, even if Critical Formulation practice develops slowly or not at all, we hope it could serve as valuable training for therapists to become less authoritarian with their clients. Research demonstrates that collaborative therapeutic relationships are evidence-based and effective, with goal consensus and collaboration between therapist and client being key components of successful therapy (Norcross & Lambert, 2018). The requirement to work collaboratively, to recognize that those who experience distress are often most knowledgeable about its sources, to abandon the expert-patient relationship in favor of detective-client collaboration—these principles could transform therapeutic practice even if practitioners do not fully adopt Critical Formulation. The recognition that formulations are always provisional, that evidence must be examined critically, and that it pertains to a morally-needed objective reality, and that power structures must be addressed—these insights could make exist-

ing therapeutic approaches less harmful even if they do not become fully critical.

Third, we hope Critical Formulation could provide a useful framework for legal work and patient advocacy, especially in light of mental health malfeasance. When practitioners harm clients, when institutions fail to protect vulnerable populations, when therapeutic approaches reproduce violence rather than address it, Critical Formulation provides tools for understanding what has happened. The emphasis on examining power structures, on understanding distress in relation to its sources, on recognizing epistemological violence, these could strengthen advocacy work and legal challenges to harmful practices.

Fourth, we hope Critical Formulation could offer an anti-bioethics framework for understanding medicine. Rather than accepting medical ethics as philosophy in disguise, as language used to legitimate existing practices and maintain professional authority, Critical Formulation insists on examining the power relations embedded in medical practice, on questioning whose interests are served, on recognizing that doctors are technicians applying established knowledge rather than scientists engaging in inquiry. To use more poetic language, this framework could help us defrock the last caste of priests who are explicitly believed by the public—the so-called mental health experts.

3. NEXT STEPS

The next step in developing Critical Formulation is to run a pilot trainee programme. This programme will identify practitioners willing to engage in this work, train them in the theoretical foundations and methods of systematic inquiry, and support them as they begin to practice Critical Formulation. We will document what works and what does not, we will refine our methods through practice, and we will build a community of practitioners committed to this different way of understanding and responding to psychological distress.

This work is experimental, provisional, and necessarily incomplete.



REFERENCES

Beck, J. S. (2011). *Cognitive behavior therapy: Basics and beyond* (2nd ed.). Guilford Press.

Bhaskar, R. (1975). *A realist theory of science*. Leeds Books.

Cuijpers, P., Karyotaki, E., Weitz, E., Andersson, G., Hollon, S. D., & van Straten, A. (2014). The effects of psychotherapies for major depression in adults on remission, recovery and improvement: A meta-analysis. *Journal of Affective Disorders*, 159, 118-126. <https://doi.org/10.1016/j.jad.2014.02.026>

Descartes, R. (1984). *Meditations on first philosophy*. In J. Cottingham, R. Stoothoff, & D. Murdoch (Trans.), *The philosophical writings of Descartes* (Vol. 2, pp. 1-62). Cambridge University Press. (Original work published 1641)

Eells, T. D. (Ed.). (2007). *Handbook of psychotherapy case formulation* (2nd ed.). Guilford Press.

Fanon, F. (1952). *Black skin, white masks* (C. L. Markmann, Trans.). Grove Press.

Freire, P. (1970). *Pedagogy of the oppressed* (M. B. Ramos, Trans.). Herder and Herder.

Freud, S. (1923). *The ego and the id*. W. W. Norton & Company.

Fricker, M. (2007). *Epistemic injustice: Power and the ethics of knowing*. Oxford University Press.

Gabbard, G. O. (2014). *Psychodynamic psychiatry in clinical practice* (5th ed.). American Psychiatric Publishing.

Ghaemi, S. N. (2009). *The rise and fall of the biopsychosocial model: Reconciling art and science in psychiatry*. Johns Hopkins University Press.

Harper, D. (n.d.). Psyche. In *Online Etymology Dictionary*. Retrieved from <https://www.etymonline.com/word/psyche>

Herman, J. L. (1992). *Trauma and recovery: The aftermath of violence—from domestic abuse to political terror*. Basic Books.

Hoffmeyer, J. (2008). *Biosemiotics: An examination into the signs of life and the life of signs*. Scranton University Press.

Husserl, E. (1970). *The crisis of European sciences and transcendental phenomenology: An introduction to phenomenological philosophy* (D. Carr, Trans.). Northwestern University Press.

Kapferer, B. (2005). *The retreat of the social: The rise and rise of reductionism*. Berghahn Books.

Lacan, J. (1992). *The ethics of psychoanalysis, 1959-1960: The seminar of Jacques Lacan, Book VII* (D. Porter, Trans.). W. W. Norton & Company.

Laurent, E. (2002). Guiding principles for any psychoanalytic act. In *The Lacanian Orientation*. Retrieved from <https://www.lacan.com/ericlaurent.html>

Lyotard, J.-F. (1979). *The postmodern condition: A report on knowledge* (G. Bennington & B. Massumi, Trans.). University of Minnesota Press.

McGrath, S. (2011). Skepticism about moral expertise as a puzzle for moral realism. *Journal of Philosophy*, 108(3), 111-137. <https://doi.org/10.5840/jphil201110833>

Moncrieff, J., Cooper, R. E., Stockmann, T., Amendola, S., Hengartner, M. P., & Horowitz, M. A. (2022). The serotonin theory of depression: A systematic umbrella review of the evidence. *Molecular Psychiatry*, 28(8), 3243-3256. <https://doi.org/10.1038/s41380-022-01661-0>

Nagel, T. (2012). *Mind and cosmos: Why the materialist neo-Darwinian conception of nature is almost certainly false*. Oxford University Press.

National Institute of Mental Health. (2023). Psychotherapies. Retrieved from <https://www.nimh.nih.gov/health/topics/psychotherapies/index.shtml>



imh.nih.gov/health/topics/psychotherapies

Norcross, J. C., & Lambert, M. J. (2018). Psychotherapy relationships that work III. *Psychotherapy*, 55(4), 303-315. <https://doi.org/10.1037/pst0000193>

Open Science Collaboration. (2015). Estimating the reproducibility of psychological science. *Science*, 349(6251), Article aac4716. <https://doi.org/10.1126/science.aac4716>

Ritchie, S. (2020). *Science fictions: How fraud, bias, negligence, and hype undermine the search for truth*. Metropolitan Books.

Rush, A. J., Trivedi, M. H., Wisniewski, S. R., Nierenberg, A. A., Stewart, J. W., Warden, D., Niederehe, G., Thase, M. E., Lavori, P. W., Lebowitz, B. D., McGrath, P. J., Rosenbaum, J. F., Sackeim, H. A., Kupfer, D. J., Luther, J., & Fava, M. (2006). Acute and longer-term outcomes in depressed outpatients requiring one or several treatment steps: A STAR*D report. *American Journal of Psychiatry*, 163(11), 1905-1917. <https://doi.org/10.1176/ajp.2006.163.11.1905>

Smoller, J. W., Andreassen, O. A., Edenberg, H. J., Faraone, S. V., Glatt, S. J., & Kendler, K. S. (2019).

Psychiatric genetics and the structure of psychopathology. *Molecular Psychiatry*, 24(3), 409-420. <https://doi.org/10.1038/s41380-017-0010-4>

Solmi, M., Sanches, M., Machado, M. O., Stubbs, B., Ajnakina, O., Sherman, C., Sun, Y. R., Liu, C. S., Brunoni, A. R., Pigato, G., Fernandes, B. S., Bortolato, B., Husain, M. I., Dragioti, E., Firth, J., Cosco, T. D., Maes, M., Berk, M., Lanctôt, K. L., ... Herrmann, N. (2020). Evidence-based umbrella review of 162 peripheral biomarkers for major mental disorders. *Translational Psychiatry*, 10, Article 152. <https://doi.org/10.1038/s41398-020-0835-5>

Teo, T. (2010). What is epistemological violence in the empirical social sciences? *Social and Personality Psychology Compass*, 4(5), 295-303. <https://doi.org/10.1111/j.1751-9004.2010.00265.x>

Thomas, J. T. (2007). Informed consent through contracting for supervision: Minimizing risks, enhancing benefits. *Professional Psychology: Research and Practice*, 38(3), 221-231. <https://doi.org/10.1037/0735-7028.38.3.221>

Weber, M. (1922). *Economy and society: An outline of interpretive sociology* (G. Roth & C. Wittich, Eds.). University of California Press.

