



CORRESPONDENCE

Defense of Emergent Effects in Astrology Research: Rebuttal of Dean and Kelly (2023)

Kenneth McRitchie
kdmcrichtie@gmail.com

For the benefit of the larger community, and especially for those who might want to do their own research, my essay (McRitchie, 2022) introduced a more formal approach to focused *single-factor* and *multifactor* experiments regarding their design criteria and limitations. Then, I describe a third test design, *whole-chart* experimentation, that has languished on the sidelines for more than a decade but has been revived and automated to become highly objective (Godbout, 2020).

Additionally, recent research has made improved use of effect size metrics and meta-analysis (Currey, 2022) that make better sense of the big picture¹. This leads to a discussion on the explanatory concepts of emergent effects. I wrote the article to deter critical negligence and scientific misconduct, i.e., to reduce the number of ill-conceived and improperly analyzed studies that reach publication.

While Dean and Kelly (2023) carefully ignored nearly all the substance I presented, they exercise a very old rhetoric of claims that dates back over a thousand years. Their apparent intent is to impugn the whole of astrology and avoid the current findings and topics as not worth discussing. I have argued against their claims before (McRitchie, 2016), but let us consider what they offer now.

Emergent Effects Claim

As astrology deals with complex but measurable processes, I argue that the best way to think about these processes is to consider *emergent effects* (strengths of emergent properties). In disagreement, Dean and Kelly argue that emergent properties do not apply to astrology as it would require a “compelling theoretical rationale” that is “different from those found in philosophy and science.”

Yet, the rationale is not different. Emergent effects models, such as the decision trees currently used in whole-chart modeling, are directly applicable to astrology as they simulate the mental combinatorial processing that astrologers use in their consultations. This is indeed perfectly consistent with “the actual practice of astrologers” that Dean and Kelly state they accept.

The best way to study any kind of effect is through experimentation that would either support or falsify a conjecture of outcome. Doing this, the research program is finding formidable, experimentally replicated results. Contrary to what many critics try to suggest, astrology research does not depend on traditionally understood *physical causes* and *mechanisms* for its effects. As I explain in the essay, it is the *effective information* that emerges according to the theory that is significant. When models of effective information are applied to the data, it is hard to argue with the facts.

The leading example is an inherently objective automated chart-matching study by researcher Vincent Godbout (2020) that uses a *semantic proximity model* to evaluate

<https://doi.org/10.31275/20233121>

PLATINUM OPEN ACCESS



Creative Commons License 4.0.
CC-BY-NC. Attribution required.
No commercial use.



emergent effects. Dean and Kelly do not criticize or even mention it. The machine far outstrips its human counterparts in combination *semantics* (meanings), resulting in both high effect sizes ($r = .42$ to $.63$) and extremely low probabilities against chance ($p = 1.7 \times 10^{-4}$ to 3.9×10^{-8}). Godbout's study (and others that I list) challenge Dean and Kelly's claims with strong new evidence. Yet they remain silent on all positive results.

Origins Claim

Dean and Kelly argue that my conclusions are wrong or at least "premature" because astrology has its origins in the "ancient imaginings" of Greek mythology. Besides ignoring all the astrological observations and discourse recorded on clay tablets from Mesopotamia that predate Hellenistic Greece, attacking a claim's origins is a spurious argument. It is a *genetic fallacy* that the editors and reviewers of academic publications reject because it does not demonstrate whether the claim itself is false. It is well acknowledged by historians of science that modern theories emerged out of not-scientific imaginings.

As an extension of their origins claim, Dean and Kelly cite an unpublished paper by Kelly and Saklofsky (2023, pp. 1-2) to make a murky issue out of "symbolic systems" and suggest that the very old symbols of astrology can mean anything, which they do not. Symbolism is not a practice peculiar to astrological connections, relationships, and meanings, nor are they confined to the ancient past.

At their origins, many scientific disciplines have based claims on symbolism, metaphor, and imagination. Current disciplines have used these to generate hypotheses, which are then subject to testing. A famous example is August Kekulé's reverie or wakeful-dream of the alchemical ouroboros symbol, which he said led him to propose that the atoms of the benzene molecule form a ring.

Wrong Chart Claim

In another argument, Dean and Kelly claim that "accurate birth charts are not needed" because clients sometimes accept consultations based on accidental use of the wrong chart. But this is merely *anecdotal evidence*. Presently, I do not know of any well-designed studies of acceptance of wrong chart consultations or of a potential *placebo effect* (which doubtless exists in astrology as it does in medicine), but the *burden of proof* is on those who make the claim.

Self-Attribution Claim

Dean and Kelly claim that "shuffling is not an effective control" for test subjects who have "prior knowledge

of astrology" because the subjects would tend to comply (perhaps unconsciously) with what they know about their astrological (Sun-sign) attributes. Presumably, this false *self-attribution* condition operates in the same way that people might misdiagnose themselves with an imagined medical or psychiatric condition that they do not really have.

Pressing this argument, Dean and Kelly claim that astrology is "sufficiently popular" and that knowledge of it can confound astrological experiments for "every human population used to test it." So insidious is this self-attribution claim that its authors may fail to appreciate what they are saying. Assuming the claim were true, it would make not only astrology testing—but *all tests of personality*—unreliable.

Fortunately for the human population, a recent experiment by Currey (2023) that uses Dean's own data in an Eysenck Personality Inventory (EPI) test does not support the claim. Many people within Western influence know some traits of their Sun signs, but very few know anything more than that. Dean, in his original EPI experiment (1985, p. 9), states: "Because few people know the sign position of the other planets and the Ascendant, a self-attribution cannot apply to these factors." This observation is important.

As the Sun, Moon, and Ascendant are independent variables, and each plays a strong role in personality, Currey tested EPI results for these placements and found the Moon and Ascendant to be independently significant ($p = .005$, $r = .13$) in corroboration with traditional astrology (in addition to the Sun $p = .003$, $r = .18$). Thus, Dean's claim of self-attribution is wrong by his own criteria by using his own data.

No Physical Explanation Claim

Finally, the forever imperishable (it seems) arguments are trotted out that there is "no known physical explanation" for the "observed small positive effect sizes." Firstly, not only is it a mistake to disregard any experimentally replicated effect, but the effect sizes in the newer multifactor studies tend to be medium to large. Secondly, the "no known physical explanation" argument is specious *scientism*. Many scientific findings of effective information are usefully applied without knowing a physical cause.

From history, there is the example of Ignaz Semmelweis, who understood the significant results of hand washing on the rate of childbirth mortality before discoveries by Louis Pasteur and Joseph Lister developed germ theory as the cause of infections. Also, Alfred Wegener described the origins of continents and oceans, which he

called “continental drift,” because there was significant evidence of it even though plate tectonics had not been discovered as the cause.

The human mind craves the sense of freedom and security from knowing simple material causes to easily interpret and quickly deal with phenomena, and it dislikes the ontologies that emerge from contributory models, theories, and correlations. All complex models and theories, whether scientific, are suspect because when generalized into an imposing metaphysical worldview, they tend to take on too many wrong assumptions that do not fit contrary experiential and correlational evidence, which is consequently ignored and even scorned. As there are scientific models, religious models, philosophical models, medical models, economic models, political models, psychological models, language models, and astrological models, among many others, there are deep and valid issues of limitations and open-mindedness to be sorted through (Phillipson, 2000, pp. 171-181).

Replication and Pro-Replication

Apart from the problems with their arguments, I fully support Dean and Kelly’s endorsement of the need for independent replication of positive results. Doing so would have made for a different and better criticism from them. To this entreaty, I would add that there is an equal need for independent replication of published negative results where reliable source data is available (either published or on request). Negative replications entail a critical assessment of a study’s research design, protocols, and analysis with corrections where necessary. In observance of this rule, I included examples of reversed (*pro-replicated*) negative studies in my essay.

A good pro-replication example comes from the detailed reappraisals by Suitbert Ertel (2009) and Robert Currey (2023, pp. 76-80) of Shawn Carlson’s famous 1985 double-blind chart-matching study published in *Nature*. Ertel showed a significant probability that the positive evidence was not due to chance based on Kendall’s *tau* for ranked results ($p = .037$; $ES = .10$; $N = 100$). Currey’s multivariate regression analysis of the same data shows that there was a good agreement among the astrologer participants in rating correct matches above false matches with a high level of consistency ($r = .57$).

CONCLUSION

It is sad to see that the once great researcher Geoffrey Dean who, from his initial brilliant 1977 book *Recent Advances in Natal Astrology* with co-author Arthur Mather—that had inspired a generation of researchers including myself—has over the years fallen into routine

recitations of the old “astrology cannot be true” arguments dating back to Cicero and Augustine; as well as the pitfalls of scientism and its attendant fallacies. Yet, as the better-equipped and more recent research in astrology moves on and continues to discover consistent, effective information, the meaningful connections and truth values at the basis of astrology will have important consequences for science and philosophy.

ENDNOTES

- ¹ In response to Dean and Kelly’s criticism that there were no astrology tests with negative results included in Currey’s meta-analysis, the title of that study specifically states that it covers the years 2020-2021. During that period, there were ten studies published with positive results, and there were no studies published with negative results.

ACKNOWLEDGEMENTS

Thanks to Robert Currey, Hal White, Vincent Godbout, Kyösti Tarvainen, and Peter Marko for their advice, suggestions, and corrections.

REFERENCES

- Carlson, S. (1985). A double-blind test of astrology, *Nature*, 318 (December), 419–425. <https://doi.org/10.1038/318419a0>
- Currey, R. (2022). Meta-analysis of recent advances in natal astrology using a universal effect-size. *Correlation*, 34(2), 43–55.
- Currey, R. (2023). Review understanding astrology: A critical review of thousands of empirical studies 1900-2020. *Correlation*, 35(2), 63-83.
- Dean, G., & Kelly, I. (2023). Commentary on McRitchie (2023). *Journal of Scientific Exploration*,
- Dean, G. (1985). Can astrology predict E and N? 1: Individual factors. *Correlation*, 5(1), 3-17.
- Dean, G., & Mather, A. (1977). *Recent Advances in Natal Astrology: A critical review 1900-1976*, The astrological Association.
- Ertel, S. (2009). Appraisal of Shawn Carlson’s renowned astrology tests. *Journal of Scientific Exploration*, 23(2), 125-137.
- Godbout, V. (2020). An automated matching test: Comparing astrological charts with biographies. *Correlation*, 32(2), 13–41.
- Kelly, I., & Saklofske, D. (2013, monograph updated July 1). A philosophical critique of Contemporary Western astrology. *ResearchGate*. Online posted manuscript: https://www.researchgate.net/publication/371971068_A_Philosophical_cri

tique_of_Contemporary_Astrology_July_2023_
DOI_1013140RG222516602888

- McRitchie, K. (2016). Clearing the logjam in astrological research: Commentary on Geoffrey Dean and Ivan Kelly's article 'Is astrology relevant to consciousness and psi?' *Journal of Consciousness Studies*, 23(9-10), 153-179.
- McRitchie, K. (2022). How to think about the astrology research program: An essay considering emergent effects. *Journal of Scientific Exploration*. 36(4), 706-716. <https://doi.org/10.31275/20222641>
- Phillipson, G. (2000). *Astrology in the Year Zero*. Flare Publications.