

21st Century Astrological Thought:

A Confusion of Divinitory & Causal Models

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ASTROLOGY AND PROFESSIONAL STANDARDS

As a former board member and President of one of the largest astrological organizations, ISAR (International Society for Astrological Research), I have participated in efforts to bring astrology into alignment with professional standards. Currently astrology resides further outside the domains of academia and professionalism than other alternative modalities such as acupuncture, yoga, massage, and herbalism.

As attempts continue to raise professional standards in astrology, there is one glaring problem within the field of astrology that keeps astrology ostracized from the hallowed halls of academia. Some astrologers do not seek entrance into those hallowed halls, but regardless of one's attitude towards the relationship of academia to astrology, it can be helpful to understand the current relationship. The glaring problem with astrology is that it generally does not adhere to the epistemological requirements of academia. More specifically, the methodologies employed to teach, learn, explain, and advance astrological understanding do not conform to academic standards. The problem with astrology from an academic standpoint has less to do with the content of astrological thought as much as it does the manner in which astrological understanding is acquired.

CAUSAL MODELS

A classic book on research designs is "Experimental and Quasi-Experimental Designs" by Shadish, Cook, and Campbell. In order for astrologers to better appreciate the relationship of astrology to academia, books, or at least sections of books, like this one are required reading.

Other leading theorists in the area of research design for the social sciences are Judea Pearl and Donald Rubin. Very briefly, a "cause" in the social sciences is generally not regarded as necessarily a cause in the sense of causes in Newton's laws of inertia, but rather are variables that are exogenous (outside) to the interaction of the endogenous variables and the values of the exogenous variables affect the values of the endogenous variables.

In astrology we may say that a person is pioneering because there is an Aries stellium, stubborn because of a preponderance of fixed signs, etc. The celestial variables are exogenous to the human behavior. Planetary positions are determined to great accuracy by mathematical formulae and are not changed by human behavior or thought. Even if astrology works through synchronicity or some form of cosmic resonance rather than causality in the Newtonian sense, it

is still based on a causal model, unless the astrologer uses a divinitory model or some other alternative model as described below.

Even modern psychological models are causal models in the sense that these terms are used in modern research methodology. Astrologers cannot ignore the standard academic concepts and terminology and hope to communicate with, or participate in, intelligent conversations with academics. One objective of this article is to acquaint the astrologer with standard academic concepts and terminology which, unfortunately, astrologers appear to be largely unaware of.

Nearly all astrological research is based on quasi-experimental designs. A quasi-experimental research design is one in which random assignment of groups is not possible. Much of astrological research is a kind of natural experiment where one draws conclusions from natural events (such as the birth of people and their behavior or personality traits). Drawing conclusions from quasi-experimental designs is much more difficult than drawing conclusions from experimental designs because one is not completely certain how the trait measured or observed would vary if the values of the exogenous variables were different. In astrology, this translates to the fact that we do not know exactly how the behavior or personality of the person would differ if all other things were the same except the configurations of celestial bodies. Donald Rubin's counterfactual framework is a fundamental frame of reference for approaching these kinds of problems and it has been developed to a sophisticated level through the development of advanced statistical methods.

Rubin's counterfactual framework states that A is a cause of B if B would not occur if A did not exist. For example, suppose that a fire begins in a forest and the fire fighters arrive late because the fire truck has a flat tire. By the time the flat tire is fixed, the fire spreads and two houses are destroyed by fire. Did the flat tire cause the houses to burn? This complex question is reduced to a very simple question using the counterfactual framework: Would the houses have been destroyed by fire if there was not a flat tire? If the answer is affirmative, then the flat tire is a cause of the forest fire. Because the flat tire was a cause of the fire, we have a causal model. It does not matter what the mechanism for this cause is; we still have a causal model. If not, then the flat tire is not a cause of the forest fire.

Similarly, we can ask whether having 5 planets in Pisces causes the person to be imaginative. Using the counterfactual framework, this question can be translated to asking if the person is as likely to be as imaginative if the 5 planets were in a zodiac sign that does not foster greater imagination.

Whenever a personality trait or behavior is associated with a celestial event, we are implying that the absence of the celestial event would result in the likelihood of different behavior. Therefore, any relationship to celestial events to human behavior or human personality is a causal model according to the counterfactual framework, even if the astrologer believes that the mechanism for that relationship is synchronicity or works via archetypal or other mechanisms.

Rubin's counterfactual framework is a foundation of Rubin's Causal Model (RCM). Rubin's causal model is a foundation for the theoretical framework of an enormous amount of current research in economics, educational psychology, and other areas. Whether an astrologer embraces synchronicity, archetypal realities, or any other mechanism by which astrology works has no impact on the applicability of RCM to astrology. The only way in which RCM can become dispensed with is if the astrologer believes that astrology is not capable of correlating with behavior and personality traits and exists only as a phenomenon within the psyche and has no impact on observable behavior and personality traits. Given the strength of RCM in current research in the social sciences, astrologers cannot avoid the requirement to control selection bias and implement other principles of research.

The fact that astrological variables are complex and interact in complex ways does not make astrology intractable by modern scientific research methods. Nearly all research problems analyze multiple exogenous variables and the growing sophistication in structural equation modeling, hierarchical modeling, and data mining methods provides tools for investigating complex relationships. Also, the goal of research in a field in which a measurable effect has yet to be found is typically only a very small effect and with large sample sizes may be so small as to be of no practical or useful consequence.

Therefore, contrary to what astrologers sometimes claim, modern research methods:

- a. do not assume causal relationships in the sense of direct causal relationships as one can measure in the Newton's laws of inertia,
- b. are often of a nature similar to the astrological scenario where quasi-experimental designs are needed,
- c. can detect extremely small effect sizes (in other words, the astrological variable needs to only "work" to a very small extent), and
- d. include sophisticated analytical tools for finding effects from multiple variables.

That an astrological variable may manifest in many ways (for example, Taurus might be stubborn, materialistic, hedonistic, practical, etc.) does not preclude astrology from being studied using modern research methods. When astrologers claim otherwise, they simply are ignoring the facts of modern research methods and thus further ostracize themselves from academia and professional standards. One must study an area before making assumptions about it and it has become popular among astrologers to make various critiques regarding the limits of science and the problems of applying scientific methods to astrology without having any expertise in research methodology. The consequence of this typically is statements that are simply erroneous.

DIVINITORY MODELS

Geoffrey Cornelius and other astrologers have proposed that astrology does not actually work as astrologers for centuries have thought that it works. The validity of astrology arises in the moment of the use of astrology through a divinatory process. Aries may not actually confer a pioneering spirit, nor Taurus confer a practical and stubborn nature but the concepts are able to "come alive" and be applicable in the process of practicing astrology, much as the I Ching may give wisdom and helpful information through a divinatory process.

If astrology functions only through a divinatory process, then astrology, as astrology has been understood, for millennia, is dead. The greatest threat to astrology as astrologers prefer to think of astrology may not be from skeptics but rather from astrologers! This is not necessarily bad. Geoffrey Cornelius and others may, in fact, be rescuing astrology from a deep and pernicious delusion, while at the same time keeping astrology alive in some sense. However, astrology as divination is a far less powerful and useful tool than astrology as a real relationship between celestial bodies and human behavior!

Astrology as divination eviscerates astrology of its power and glory. Astrology is shackled to a world of seers, psychics, and magicians who divine the nature of the soul but cannot compute, calculate, and predict stock markets, weather, and health through a pure analysis of the geometry of the heavens. Astrology becomes a participatory activity in which the participation of the astrology is necessary for astrology to have validity, accuracy, and usefulness.

INCONSISTENCY IN THE MOST POPULAR CURRENT ASTROLOGICAL PARADIGMS

In the late 20th and early 21st centuries astrology has devolved into an incongruous mixture of causal models and divinatory models. Astrologers continue to use the language of a causal model. They state things like "you are stubborn because of the large number of fixed signs", "you are spiritual because Sun is conjunct Neptune in a water sign in the 9th house", or "you are inventive because Mercury is conjunct Uranus in Aquarius". These statements are clearly statements of a causal model, regardless of whether the mechanism for the relationship is synchronicity and involves no physical medium for the relationship to occur.

Astrologers also make statements that are more probabilistic or allow for many possibilities, such as for a stellium in Gemini, "You are curious and you tend to jump from one thing to another. You might be talkative or you might find that you need to explore different views on a subject rather than stay narrowly focused on one approach or perspective. You might like to multi-process to prevent yourself from getting bored with just one activity." The astrologer may visualize Gemini as a kind of a playful and curious archetype that can take many forms. The astrological influence may be understood to be a synchronistic identification of planetary positions with myths and thought forms in the psyche.

There may be low probabilities towards certain kinds of behaviors but the specific behavior may be very difficult to predict. Would this conceptual framework for astrology lie outside a causal model? The answer is no. The Rubin Causal Model (see [Rubin causal model](#) for details), for example, is based on the counterfactual question: if the astrological configurations at birth were

different, would the person's personality or behavior be different? You might answer that the astrological configurations could not be different because they are synchronistic and acausal realities. Therefore, to respond to the question raised by Rubin's counterfactual framework, the answer is that the person would at least in some ways be different if the planetary configurations were different because the person would now be synchronistically and acausally related to the different astrological configurations.

No matter what one's understanding of how astrology works or what it even means to "work", as long as there is even a probabilistic relationship between celestial events and human personality or human behavior, then there is a causal model as the term "causal model" is currently understood in the social sciences.

Furthermore, the statements usually do not involve a very complex set of variables. In modern research on human genes, economic variables, weather, and many other areas one may be sifting through thousands of variables in an attempt to identify dozens of variables that relate to the behavior of interest. In short, astrological ideas are typically stated in a way that implies a causal model.

If astrologers adopt a purely divinitory model, then they might say "The archetype of Aries is strong and impels you to express the Odysseus story of the hero in your life". This statement keeps astrology constrained to the realm of the person's psyche, and the stories that run through the person's life and are independent of any particular behavior in which this story may express itself. In this language astrology is incapable of telling us whether we are likely to be a biologist, tennis player, teacher, parent, or mystic. If astrology can inform us of these likelihoods, then we are introducing the causal model.

- If we use a causal model, then the academic requirement is that we test the causal model!

Astrologers are free to choose a divinitory model or causal model or a combination of both models. However, from the academic perspective, one cannot choose a model without consequences.

A BETTER PATH TO PROFESSIONALISM FOR ASTROLOGY

Those astrologers who feel that astrology can inform us of likely behavior must adopt the accepted research methods that this belief implies if they wish to function in accordance with modern standards.

They must, for example, make attempts to control for selection bias. This is a requirement of modern thinking, not an option! One can control for selection bias by running a proposed idea through a database of people. One can, for example, test the idea that Aquarius is innovative or progressive by evaluating people who have the most planets in Aquarius to see if they are progressive.

One can weight planets differently, assign points to the ruler of the Ascendant, etc. The astrologer often complains at this point that such methods do not take into account the entire chart. This complaint, however, is not reasonable from the standpoint of modern research methodology. If researchers in the social sciences did no research because they are forced to greatly simplify the hypothesized actual relationships for the purposes of research, then virtually no research would be conducted.

There is an extreme communication gap between astrologers who maintain these beliefs and modern research methodologists. Astrologers are raising issues that research methodologists have wrestled with for decades and have come up with solutions to address these issues. Rather than utilize these advances made in research methodology, astrologers too often simply repeat their objection to scientific research like a mantra, but the mantra is only a stale and lifeless complaint generated from a lack of awareness of current academic standards.

In addition to needing to control for selection bias, astrologers must analyze and discuss cases that do not work. Cases that do not work are fundamental to progress in the social sciences as well as the hard sciences. Astrologers might, for example, analyze the case of the triple Pisces who shows no inclinations to be imaginative beyond the normal range, and yet is still a highly productive and healthy individual. If the astrologer says that there are no such exceptions, then this contradicts the inability to have discovered measurable astrological effects.

Lastly, the history of scientific research designs since the early 20th century is primarily has been motivated by practical considerations, not idealistic concepts of how research would be done in a world that was built by God to be ideal for research. D.R. Cox's work in agriculture and much of the early work in statistics and continuing up to now is focused on dealing with the practical problems that one encounters in research.

Astrology is not the only field in which research is difficult to conduct! Raising complaints about the complex interaction of astrological variables, etc. is the bread and butter of research methodology. Astrologers, however, tend to throw up their hands in surrender and choose to rely solely on their own personal experiences and those of colleagues rather than dive into the difficult and treacherous waters of serious research. From the academic point of view, this is the lazy way out. As the celebrated physicist Richard Feynman once said about some New Age beliefs he encountered: they cannot possibly know if their ideas are correct because they have not done the hard work necessary to find out. The ideas may be correct but we do not know yet.

Very often when astrologers (and non-astrologers) think of scientific research, they immediately think of statistical research that validates whether a particular hypothesis is true or not. This kind of research is referred to in research methodology as hypothesis testing. It is an essential tool in the toolbox of researchers. However, in a field like astrology, small steps to control for selection bias are also important tools. One typically does not jump from the extreme of having

no measurable effects to conducting a quantitative hypothesis test. Many years of research by hundreds of researchers may be needed before one is ready to do this.

Because scientific research especially in the social sciences is a practical affair where one often works very hard to make small incremental improvements in knowledge, one must often be content to make small improvements. In academic research one often finds a graduate student writing a dissertation or a professor writing a paper for publication to make a very specific but minor clarification. The research may consume many hundreds or thousands of hours. Although astrologers generally do not have the funding to allow them to do this, they can still do whatever is possible within their means to take steps to control for selection bias. This is within the means of nearly every astrologer if they are willing to learn how to do and expend the energy necessary. Without doing so, astrology is not compatible with academia nor is it compatible with the standards of any profession.

CONCLUSION

Astrology in the early 21st century often utilizes the language of a causal model but embraces a belief that astrology lies outside the realm of scientific inquiry. The belief that astrology lies outside the realm of scientific inquiry is often based on an inadequate understanding of research methodology. Until astrologers begin to make incremental improvements to their understanding of astrology by controlling for selection bias and carefully analyzing cases that contradict theory, astrology is not ready to participate in academic settings nor is ready to participate in our communities as a respected profession.

The alternative to making these improvements to how we learn, teach, and study astrology is to embrace astrology as a purely divinitory practice, along with the severe limitations that this implies for the application of astrology.