

A Mathematical and Philosophical Re-Examination of the Foundations of TimeWave Zero and Novelty Theory

Foreword

Does the mathematical or philosophical structure of the I-Ching, reveal anything of an underlying connection with nature or the cosmos, that could explain how it (the I-Ching) might work? When it is viewed as a system that reflects or represents a process of flow, motion, or change in nature and the human experience, it is one that finds considerable correspondence elsewhere in philosophy and science, including elements of quantum theory. The flow of yin to yang, yang to yin, finds correspondence in the flow of matter to energy, and energy to matter – revealing a dynamic and ever changing universe. The First Order of Difference (FOD) number set, described by McKenna and others, is derived from the King Wen sequence of the I-Ching; and is assumed to contain meaningful information about the process of flow or change in the physical universe, that is intelligible to us and consistent with our experience. If correct, *Novelty Theory* is then a description of the form in which this information expresses itself – i.e. the *TimeWave*. If such information is encoded in the FOD number set, then it behooves us to decipher it, by selecting the appropriate tools for its decoding, and establishing the proper form of its expression.

These are issues worth considering prior to any serious examination of the *TimeWave*, or its supporting *Novelty Theory*, for if any of this is to be taken seriously, one must accept the plausibility of the assumptions and mathematical arguments that form the underpinning of such a system. If the I-Ching does provide valid and meaningful information about the nature of “reality” that corresponds to, and is consistent with our experience of it, then it is a plausible thesis to propose that this information carrying process can be deciphered and expressed mathematically. The mathematics is, after all, part of the I-Ching as a whole and as such, carries information about the nature of that system. It could also be possible that this system has holographic properties – that is, each structural aspect may contain an image of the whole. It seems to me, that these are appropriate considerations for any discussion or debate concerning the notions or theories advanced by McKenna and others – those that have been proposed to expose and express the hidden processes responsible for the successes that the I-Ching has achieved in revealing hidden features of nature and our experience.

I will not argue for acceptance of *Novelty Theory* or the *TimeWave* as proven fact, nor make any claims about specific connections to nature or reality; but simply that given the relationship to something that appears to work for many people (I-Ching), then these ideas deserve to be given the benefit of open inquiry. The test for relevance of any theory, after all, is how well it works (i.e. how consistent its description of reality is with direct experience), and not how well it fits one’s notion or expectation of how things should be, nor whether or not its formulation is offensive. After all, the notion of total gravitational collapse of a massive star to form a black hole was considered absurd and offensive by most, until the 1960’s, even though theory predicted it. Now it is not only accepted science, but in many ways it defines the frontiers of astrophysics and cosmology. So in order to examine the efficacy of *Novelty Theory* or the *TimeWave* system, we should

first express its development in clear and consistent mathematical terms – to provide a common language and frame of reference, within which these ideas may be discussed.

When I first entered the debate, my primary interest was to examine or extract some of the more detailed structure of the *TimeWave* (output of the TWZ software), under the assumption that this graph contained intelligible and meaningful information. I had learned of *Novelty Theory* and the *TimeWave* while attending a McKenna workshop a few years ago. During that weekend gathering, I became intrigued by the notion that one may be able to obtain information that exposed hidden features in the domain of experience, by examining a simple mathematical relationship exhibited by the 64 hexagrams of the I-Ching. I was somewhat skeptical, but the ideas still fascinated me, and on the surface they appeared to actually work - at least in a general sense. I thought that if there is something real going on here, then it should be possible to test the reflective and projective aspects of this system in greater detail, using mathematics that I use frequently in the work that I do. I began this mathematical process during the ensuing weeks, but was only able to complete some of the preliminary work before stopping. Eventually, however, with my interest in the work rekindled, I contacted Terence to obtain information on the current state of the TWZ software. It was then that I learned of the [Watkins Objection](#) for the first time, and read it with the same interest and skepticism that has characterized much of my experience with *TimeWave Zero*, and *Novelty Theory*.

My reaction to the content of the Watkins paper was mixed. Watkins had apparently uncovered an operational flaw in the process used to generate the 384 number data set from the basic FOD number set, then concluded that the flaw was fatal to TWZ and Novelty Theory. The discovery of an operational flaw was interesting and certainly worthy of examination; but his conclusion that Novelty Theory was therefore stillborn, seemed somewhat premature and speculative to me. Theories are, after all, validated or invalidated by the evidence of their success or failure, and neither by speculation nor proclamation. Without evidence then, Watkins' most important conclusion appeared to be speculative - that the unexplained "half twist" spelled doom for the *TimeWave* and *Novelty Theory*. Nonetheless, Watkins has done TWZ and *Novelty Theory* a revitalizing service with his work, since his challenge has forced the interested parties to take a closer look at the *TimeWave* and its foundation – and for this he should be commended. Moreover, since my intended work was based on the assumption that the *TimeWave* contained meaningful information, expressed through Novelty Theory, Watkins' work also forced me to examine that assumption more closely, as well as provoking me to take a closer look at the foundation of these ideas myself.

Coaxing Nature's secrets from her has always been challenging and time consuming for the serious investigator. The prospects for success are slim indeed, without the proper focus, well-defined and simple questions, and the appropriate tools with which to gather the information needed to answer those questions. If the approach, methodology, or tools that McKenna has used to extract whatever information may be contained within the FOD number set were flawed, or insufficient to reveal the full content, then perhaps other and more appropriate tools could be more revealing. It would be somewhat naïve to assume that anyone's first attempt at formulating the details of this kind of theory, would be flawless; so Terence must certainly be acknowledged and credited for having the vision, courage, audacity, or foolhardiness necessary to undertake such a risk filled

venture. We must remember, after all, that all theories are by their nature limited and incomplete - the word theory itself coming from the same root as theatre - to watch, look at, view, or observe. In other words it is simply a way of looking at something, or “world view”, and not intended to be the final or absolute word about the reality it is attempting to describe. In addition, new theories are often unsophisticated or short sighted, and of course somewhat unfocused - and in a very real sense no theory is absolute or all encompassing. As we evolve, and gain experience and insight into our world and nature in general, so does the imagery of the imagination and the form of the languages we use to describe our experience - including the language of mathematics. So rather than summarily dismissing McKenna’s work in this arena as poppycock, perhaps we should examine the whole system more closely - then ask ourselves if it is all, or partially plausible, and if so, can it be stated or expressed in a way that facilitates it testing?

After reading the *Watkins Objection*, I simply wanted to understand the basics of the TimeWave construction and convince myself that I wouldn’t be wasting my time in pursuing an in-depth mathematical analysis of the wave. Once I began my investigation, however, I discovered that the documentation did not provide enough information to faithfully reconstruct the process of TimeWave generation. Explanations and descriptions of the some of the more important steps were missing or poorly documented, and some of the mathematical operations described used unconventional language that was somewhat confusing to me. So in order to make sense of the process of wave generation, I decided to delineate and mathematically formalize each of the steps in the process that takes one from the King Wen hexagram sequence, to the final 384 number data set that is used to generate the *TimeWave*. I wanted to do this in a way that could be clearly visualized, rather than expressing the process in terms of arcane mathematical operations that work, but fail to give one a picture of what is actually happening. I hope the following results show that I have been able to do that, but I leave it to the readers to make that judgement.

The paper that follows describes the complete mathematical formalization of the *data set* generating process, for which each step is carefully defined and delineated. The formalized *revised data set*, and original *standard data set*, as well as several of the resulting *TimeWaves*, are then compared to examine the degree of interdependence. The results show that the mathematical errors, described by Watkins, do produce a distortion in the *standard TimeWave*, but that this distortion does not destroy the information content of the *data set*, and it is correctable. In addition, the *standard* and *revised data sets* exhibit a significant degree of correlation, showing that *TimeWaves* generated by the *standard* data set retain a significant portion of the information content that is contained within the revised waves. The *standard TimeWave* is corrected using the mathematical formalization process, which produces a *TimeWave* free of distortion and one that appears to be a more accurate reflection of known historical process than the standard wave.

For those interested in the details of this work, the full paper (html format) can be found at the [Levity Web Site](#) as [shelform](#). The detailed mathematics sections can be skipped without significant information or continuity loss; but for the mathematically inclined those sections will provide an opportunity for additional understanding of the TimeWave and the formalization process. The entire paper can also be downloaded as two pdf documents, for those who would like a copy to browse at their leisure. The [foreword.pdf](#)

and [shelform.pdf](#) documents will download and open automatically for those with **Adobe Acrobat** properly installed on their systems.

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