TOWARD THE QUANTITATIVE ASSESSMENT OF "MEANINGFUL COINCIDENCES"

By William Braud

We have all experienced coincidences that seemed more than "merely coincidental." These coincidences are accompanied by a special feeling--a feeling of "meaningfulness," sometimes even of extreme meaningfulness, of numinosity. Much has been written about this fascinating, albeit confusing, topic of "meaningful coincidence" and much of that writing is itself confusing.

Jung (1973) and Bender (1977) have traced the history of the concept of meaningful coincidence from its early precursor, the *Tao* of ancient Chinese philosophy, through the medieval doctrine of *correspondentia*, the "occult" philosophies of Agrippa and Paracelsus and the writings of Kepler, Leibniz, and Schopenhauer, to the more modem notions of Kammerer and of Jung himself. The concept of meaningful coincidence has recently been popularized in several books (Koestler, 1971, 1972; Progoff, 1973; Vaughan, 1979). The relevance of the concept to interpretations of the paranormal has been discussed (Bender, 1977; Gatlin, 1977; Hardy, Harvie, & Koestler, 1973; Honegger, 1980), and the concept itself has been clarified (Tart, 1981) and criticized (Beloff, 1977; Braude, 1979, 1980; Eisenbud, 1980) by parapsychologists. Excessive preoccupation with meaningful coincidences has long been recognized as a component of paranoia (Coleman, 1956) and a new psychological syndrome, "positive paranoia," in which one sees every detail of the world drenched in positive meaning, part of a conspiracy organized for one's benefit, has even been suggested (Weil, 1972).

Despite the relatively large volume of literature on meaningful coincidences, very few quantitative empirical studies of the phenomenon appear to have been carried out. In fact, only two such studies come to mind-one by the Austrian zoologist Paul Kammerer, the other by the Swiss psychiatrist and psychologist Carl Jung.

Kammerer described his investigations of meaningful coincidences in his book, Das *Gesetz der Serie*, which he published in 1919 (see Koestler, 1971, 1972). In that work, Kammerer developed his "laws of Seriality" that governed the "lawful recurrence of the same or similar things and events-a recurrence, or clustering, in time or space whereby the individual members in the sequence-as far as can be ascertained by careful analysis-are not connected by the same active cause" (Koestler, 1972, p. 85). Kammerer devoted half of his book to the classification of coincidences which he had observed and recorded. He suggested a *typology of* coincidences and discussed their morphology, their *order* (the number of successive coincidences in a series), their *power* (the number of parallel coincidences) and their *parameters* (the number of shared attributes of the coincidences).

Jung (1973) provided a psychological analysis of meaningful coincidence, which he termed "synchronicity"--"the simultaneous occurrence of two meaningful but not causally connected events" or "a coincidence in time of two or more causally unrelated events which have the same or similar meaning" (p. 25). Jung went so far as to suggest that the principle of acausal connectedness (synchronicity) was equal in rank to causality as a principle of explanation.

It was difficult for Jung to put into words his own understanding of synchronicity and it is difficult for the reader to follow his "explanations." These difficulties stem, no doubt, from the essentially "causal" structure of Western language itself and from the essentially causal nature of the dominant Western worldview. Making use of a notion of Pierre Janet (see Watkins, 1976), Jung suggested an almost mechanical or hydraulic model in which synchronicity arose during a partial *abaissement du niveau mental* (lowering of the mental level) in archetypal situations, with the subsequent release of "psychoid" contents from the unconscious. This is a gross oversimplification of Jung's theory. The reader who seeks a fuller understanding is referred to Progoff's (1973) excellent presentation of the model and to Fordham's (1962) explanatory article.

Jung conducted an astrological experiment in an attempt to demonstrate an acausal, but real connection between the likelihood of marriage and the presence of certain aspects in the natal horoscope (conjunctions and oppositions of sun, moon and ascendant). Although this was a quantitative study, the subject matter was at least one step removed from what we usually consider as meaningful coincidences. The astrological experiment and its results are described in Jung's (1973) original monograph and in a subsequent paper by Fordham (1957).

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What I wish to propose in the present paper is a possible methodology for the study of meaningful coincidences. The method presupposes no particular theory or explanation of meaningful coincidence other than that such coincidences do occur, that they tend to occur in series and that such series can be recognized before they are completed. The method would seem to be more closely related to Kammerer's "seriality" than to Jung's "synchronicity," since it concerns itself with *series* of events and the events explored will perhaps be not as profound or "archetypal" as Jung would have liked. It need hardly be mentioned that this is a quite preliminary attempt and the method is far from perfected. It is presented at this stage so that others might use the method and suggest ways of improving and refining it.

The Method

It is assumed that potential synchronistic events may be identified even before the synchronistic sequence has been completed. This might be accomplished by noting a "special feeling" or "anomalous attention" in connection with the first element of the sequence, or by noting a second order of synchronicity that might later expand to third or nth order. For example, I might have a feeling that "xylophone" will be part of a synchronistic sequence at the time of my first encounter with the word or thought or actual object; I would then be on the alert for the second encounter. Or I might experience what I believe to be a synchronistic occurrence of two instances of the name "Machen" and, since synchronicities might tend to occur in groups of three or four for me, I would be alert for possible additional occurrences of "Machen." Given these crucial assumptions, I would then proceed to attempt to determine the likelihood of the next occurrence of the "key" concept (the one featuring in the synchronicity sequence) as compared with the next occurrence of some suitably selected "control" concept. Ideally, I would want to select as a control concept one which has the same expected probability of occurrence in everyday life as does the key concept.

A possible method of selecting appropriate control concepts is to make use of published norms. If one assumes that frequency of word use reflects frequency of experience of the referent of the word in everyday life, then one could utilize word frequency norms. Since *spoken* words might be expected to predominate, norms of spoken English might be useful (e.g., Howes, 1966). Such a word count could be used to determine words of equivalent frequencies and, hence, assumed equal likelihood of occurrence in everyday life.³

The procedure would then be as follows. Upon detecting a potential synchronistic concept, I would reduce that concept to the single word which best represents that concept, I would make a record of that word (the "key" word), along with the date and time. Next, I determine the frequency of occurrence of that word in the (Howes, 1966) frequency table and record that. Then I select a control word of equal frequency. Truly random selection could be used, but,. I would prefer to minimize "degrees of freedom" (i.e., possibly psi-influenced decision points) by choosing the very next word in the norm table which happens to have a frequency identical to that of the key word. Then, I simply become very observant and note the next occurrence of the key and control words, and record the times at which they are experienced. The outcome predicted by the synchronicity or seriality hypothesis is that the key word will be experienced sooner than the matched control word. To simplify things, I might use some arbitrary yet sensible time limit for the test (e.g., 24 hours). Some predetermined number of word pair tests (e.g., 10 pairs) would define an "experiment." This experiment would be repeated as needed by the same individual or by other individuals.

A Pilot Study

With this procedure in mind, I designed a pilot study of the quantitative assessment of meaningful coincidence. The experiment was to consist of 10 instances of synchronicity. The key instance was to be identified by means of the criteria mentioned above. The control instance was selected from Howes' (1966) spoken English frequency norm as described. If the end of the table was reached before finding a control word with the appropriate frequency, I continued at the beginning of the table. If a control word of identical frequency did not exist, the word with the next closest frequency was used. The key and control instances, their frequencies and the time and date were recorded on a special form. I attempted to remain especially aware of the key and control words during the next 24-hour period and made a record of the time of occurrence of each. If a word was not encountered within the 24-hour period, a value of 1500 minutes was arbitrarily assigned as its time. An additional record was kept of the precise circumstances surrounding the occurrences that were being documented. Two special "rules" were followed during the 24-hour documentation period. The first was that I had to eliminate from consideration the context in which the first instance of the key word occurred, since further repetitions within that context would not be, independent of the original, occurrence. The second was that I could not "seek out" confirmatory

contexts, i.e., contexts in which I would be quite likely to encounter the key word. Otherwise, I simply went about business as usual.

The results of the pilot investigation are presented in Table 1. When, a dependent (matched) t test was performed on the 10 pairs of elapsed time scores, that analysis yielded a t = 3.01, df = 9, p = .014 (two-tailed). Thus, the "key" (synchronistic) instances occurred significantly sooner than the matched, control instances.

Two qualitative examples will illustrate the contexts in which these events occurred. The first example (Number 6 of Table 1) is an instance in which the occurrence of one meaningful coincidence is used to predict further similar occurrences. While driving across country in July of 1981, 1 chanced to think of the *executive* director position that was being proposed for a certain foundation. At precisely that moment, a radio announcer (for National Public Radio, *which I* was listening to on my car radio) mentioned *"executive* director." A few minutes later, I encountered an *EXECUTIVE* freeway exit and, a few seconds after that, the *"executive* branch" of the government was mentioned in a completely independent radio news broadcast. The second example (Number 3 in Table 1) is one in which a synchronistic occurrence was identified by a "special feeling" accompanying the initial instance. On an evening in June of 1981, my attention was "anomalously" drawn to someone who was placing an order for a *"Billy Bones"* meal at a local Long John Silver's restaurant (a seafood restaurant featuring pirate and treasure chest decor). The patron was repeating the order over and over in a peculiar manner. My subjective feeling was that "a synchronicity was afoot." I left the restaurant and drove straight to my apartment, where I turned on the television set. A *PM Magazine* program on treasure finders was, in progress. Following that segment was a preview of the next day's program, *which included* a segment on electrical stimulation as an aid to the growth of *bones*.

Table I

Data for the Pilot Experiment

DATE	TIME	KEY WORD f	CONTROL f	KEY INSTANCE	CONTROL INSTANCE
5/23/81	8: 00 pm.	TURKS 1	TURNPIKE 1	5/24/81 8:00 pm	
5/27/81	5:25 pm.	ASSASSINATION 1	ASSEMBLE 1	5/27/81 8:35 pm	
6/02/81	6:43 pm	BONES 3	BORED 3	6/02/81 6:55 pm	
6/08/81	6:15 pm.	SKIN 10	SMALLER 10	6/09/81 3:15 pm	
6/15/81	1: 07 pm.	AUTOMATICALLY 6	AUTOMOBILE 6	6/15/81 10: 02 pm	
7/06/81	4:45 pm	EXECUTIVE 4	EXPECTED 4	7/06/81 4:50 pm	
7/14/81	1:05 pm	BRITISH 6	BRUSH 6	7/14/81 2:36 pm	
7/16/81	8:28 pm	GERMAN 39	HISTORY 39	7/17/81 10: 25 am	7/16/81 11:58 pm
7/22/81	12: 00 am	MOON 5	MOTORS 5	7/22/81 2:40 pm	7/22/81 12:25 pm
7/24/81	7:05 pm	WAIT 42	DEPARTMENT 42	7/24/81 8:45 pm	

f denotes tabled frequency; ---- denotes nonoccurrence

Now there are a number of problems associated with the method used in this pilot study. One problem is that following my encounter with an instance of the key word (and thus "confirming" the synchronicity), I might have unconsciously relaxed my degree of vigilance, paid less attention to my environment and may have. missed instances of the control word that could have occurred prior to the one finally entered into my records. This could have inflated the key word vs. control word time advantage. This particular problem can be eliminated by converting the data of Table 1 into ordinal data in which one simply notes whether the key confirmation occurred before or after the control confirmation. According to this much more conservative method, the key word occurred sooner than the control word on 8 out of 10 instances, yielding a binomial p = .05.

A second problem is not so easily dealt with. This is the obvious difficulty of "selective attention" *throughout* the 24-hour documentation period. Perhaps I was selectively attentive to instances that may have confirmed the synchronicity and this could have biased my results in the hypothesized direction. There are two general approaches to this problem. One approach would require that someone else do the documentation after I had specified the two words; this second experimenter would be kept naive as to which word was the key and which was the control. As methodologically clean as this alternative appears to be, it really is not in keeping with the notion of meaningful coincidence, which is a very personal and subjective process. Much more consistent with the notion of synchronicity is the requirement that the person attempting to "confirm" the synchronicity be the same person for whom the synchronicity occurred in the first place. The coincidence is meaningful to Person A and to have Person B attempt to complete the sequence (and without emotional investment at that) does violence to the concept.

An alternative approach is to attempt to maintain an *objective record* of the experiences of Person A (who both "initiates" and "confirms" the sequence) throughout the documentation period. With such a permanent, objective record, other investigators could later verify the accuracy of Person A's assessment and determine whether or not selective attention was involved during the confirmation stage.6 Ideally, Person A would monitor his -environment with audio- and video-recording equipment throughout each of the 24-hour documentation periods. Given the progressive development of high quality portable audio/ video recording devices, such a procedure, while somewhat inconvenient and obtrusive, would not be impossible. A less ambitious form of this "permanent record" strategy was employed in my second experiment.⁷

A Second Experiment

The second experiment was refined so that a permanent record of documentation period events could be made available. However, this refinement had to be made at a cost, at a sacrifice. The domain of possible confirmatory events had to be greatly *restricted* and this restriction may have robbed the documentation period of a great deal of rich content which could otherwise have been molded by the synchronicity-making process (whatever that might be). The refinement in this case required the substitution of a *limited* newspaper record for the freely occurring activities of the 24-hour documentation period of the pilot study.

The major features of the experiment were identical to those of the pilot study. The important difference was that following the identification of key and control words, I looked for possible confirmatory instances of those two words in a prespecified issue of a specified newspaper for the day on which the defining instances occurred. The newspaper was the early morning edition (Home Edition) of the *San Antonio Express*. If a possible meaningful coincidence was identified on a particular day, I carefully read the *Express* for that day, noting the starting time of my reading and continuing until I had encountered the two words for that day, or until I had read the entire newspaper." I read in a predetermined manner, beginning with the leftmost column of a page and reading all articles or small items beginning in a column before going on to the

Table 2

Data for the Second Experiment

DATE	TIME	KEY WORD f	CONTROL WORD f	KEY ELAPSED TIME	CONTROL TIME
7/28/81	10:00 am	TAPE 10	TELEPHONE 10	14 min	4 rain
8/04/81	6: 11 pm	CRACK 1	CRADLE 1	70 min	70 min
8/05/81	8: 00 am	LONDON 16	MEANS 16	1 min	10 min
9/28/81	6:30 am	HOUSE 184	KIND 183	8 min	28 min
10/05/81	6:15 pm	RAINBOW 2	RAINCOATS 2	98 min	98 min
10/05/81	10: 30 pm	ENJOY 19	EXCUSE 19	33 min	83 min
11/12/81	1:07 pm	GEORGE 2	GESCHWIND 2	4 min	60 min
1/14/82	12:15 pm	WEST 40	AFRAID 40	10 min	55 min
1/18/82	12:25 pm	HEAT 17	JAPANESE 17	60 min	60 min
3/13/82	12: 01 pm	MUSIC 14	NORMAL 14	14 min	27 min

f denotes tabled frequency

next column. Articles greater than a column in length were read to completion (unless continued on another page) before going on to the other articles of that column. When one of the critical words was encountered, I noted and recorded the total elapsed reading time at that instant and the page and column in which the word appeared, then continued reading in order to find whether the other word was contained in that newspaper. If a word was not found in the newspaper, it was arbitrarily given an elapsed time score equal to the time required to complete the newspaper. As in the pilot study, it was predicted that key words (those featuring in meaningful coincidence) would be encountered sooner than matched control words.

The results of this second experiment are given in Table 2. A dependent (matched) t test applied to the 10 pairs of reading time scores yields a t = 2.44, df = 9, p = .036 (two-tailed). The meaningful coincidence hypothesis was again confirmed. As in the pilot study, it could be argued that my attention decreased or that I unconsciously read more slowly after discovering a key word and that this could have biased the time results in favor of the key word. This possible problem is eliminated by the very conservative procedure of reducing the data to ordinal data and making determinations in each case of whether the key word preceded or followed the control word. For the seven cases in which there was a time difference (i.e., eliminating the three tie cases in which neither word was found in the newspaper and for which, therefore, no ordinal determination could be made), the key word occurred sooner than the control word in six instances. The application of a binomial test to these frequencies yields a probability that approaches, but does not quite reach significance (p = .062).

Discussion

A primitive methodology was developed for the quantitative assessment of meaningful coincidence and two experiments were conducted as preliminary tests of the usefulness of the method. Both experiments yielded positive results. Thus, with certain refinements, the method may prove useful for future study of meaningful coincidence.

It should be emphasized that what has been described in this paper is simply a tool for the study of "synchronicity." Thus far, the method has told us little about the nature of synchronicity or the conditions under which synchronicity is most likely to occur. These sorts of questions may be answered when the method is applied in a more extensive program of process-oriented research. For

example, once a large number of confirmed synchronicities have been collected, these may be compared with unconfirmed cases to investigate possible differences in precipitating conditions between the two classes of events. Investigations could be made of the nature of the concepts or words featuring in confirmed synchronicities, to determine whether the former are indeed more "archetypal," as Jung suggested.9 Studies could be made of whether a particular psychological state accompanies the initial defining instance of a meaningful coincidence. Individual differences in the likelihood of noticing meaningful coincidences could be examined.

Another interesting line of research would be the exploration of the nature of "documentation period" events susceptible to molding by the synchronicity-making process. For example, in the pilot study, the documentation period contents were essentially unlimited and included a mixture of "pre-recorded" and "real time" events. On the other hand, in the second experiment, the documentation period contents were much more limited and consisted entirely of prerecorded events (newspaper records which already existed when the meaningful coincidences were first observed). An interesting experiment would involve a formal comparison of the possible differential "synchronicity susceptibilities" of events differing in their degree of "free variability." Suppose, for example, that the documentation periods were filled entirely with radio broadcasts, some of which were pre-recorded and others of which were "live." Would synchronicities be more likely to be confirmed in the live instances? Or would this factor make no difference?" Such experimentation could greatly illuminate the nature, not only of meaningful coincidences, but of other forms of psi as well. It should be pointed out that related experiments, using different methodologies, are already being carried out (see, e.g., Schmeidler, 1981; Schmidt, 1981; Tart, 1981b).

A final possibility should be mentioned. This is, of course, the obvious possibility that everything discussed in this paper is simply a manifestation, not of "synchronicity," but of conventional forms of psi. In my own experiments, for example, I may have clairvoyantly or precognitively detected the "confirmations" of my meaningful coincidences in the events or newspaper records of the documentation periods, and could have generated the initial defining instances by unintentionally exposing myself to those earlier events that would allow my prophecies to be fulfilled. This unintentional early exposure could have included various amounts of "psi-mediated instrumental response," unconscious psychokinesis, and so on. Such a psi interpretation of synchronicity has been discussed by, among others, Beloff (1977) and Eisenbud (1980). In connection with this issue, I wonder whether the views that psi may be explained by synchronicity or that synchronicity may be explained by psi are both untestable and unprofitable positions, and that a more sensible approach would be to include both psi and synchronicity as two manifestations of a more general and more theoretically neutral principle such as "conformance behavior" (Braud, 1980; Stanford, 1978) or "psychopraxia" (Thalboume, 1982).

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NOTES

- 1. Henceforth, the term "synchronicity" will be used in a descriptive sense, as a synonym for "meaningful coincidence," without any implied allegiance to Jung's theoretical notions.
- 2. Barbara Honegger has suggested that "anomalous attention" may be a key to the understanding of synchronicity.
- 3. Allowance should be made, of course, for special environments in which word usage is likely to differ from that found in more "general" environments; e.g.' certain words are more likely to occur within a garment district than outside of such a district.
- 4. Unfortunately, but not unexpectedly, I have found that many of my more interesting synchronicities could not be reduced to words which were included in the frequency table used, and therefore remained outside of the protocol of this study.
- 5. It may be of interest to note that when I began these studies almost one year ago, the first two synchronicities to be "captured" within this methodology involved the words "Turks" and "assassination." At the moment I wrote the footnoted sentence, a radio announcer mentioned two news items-the first referred to an airplane crash in *Turkey*, the second referred to an award-winning photograph of the Reagan *assassination attempt*. The year has come full circle and the meaningful coincidences that began that year recur. I am reminded of the comments of John Lilly and of Robert Anton Wilson that "when you begin paying attention to coincidence, coincidence starts paying attention to you."
- 6. "Selective attention" during the *confirmation* phase is problematic; however, a certain type of selective or anomalous attention may be crucial in the *generation* of synchronicities and may be an essential part of the process.
- 7. 1 conducted both experiments with myself as "subject." I attempted to have two other individuals replicate the experiments; however, both found the procedure difficult and tedious and terminated their participation. This factor should be considered by those contemplating replications of these studies.
- 8. My thanks to Diane Holmes for supplying the daily newspapers.
- 9 As a preliminary test of whether the "key" concepts may have been more "archetypal" than the control concepts, two psychotherapists with Jungian training were asked to rate the forty words of these studies (presented in random order and without any additional information) by assigning to each word a number between I and 10, indicating the degree to which they felt the word related to or suggested an archetypal situation. Mean ratings were computed for each word and the two sets of words (key words vs. control words) were compared by means of a matched (dependent) t test. The mean ratings of the key words (Mean =5.58) were found to be significantly higher (i.e., more "archetypal") than those of the control (Mean =3.75) words (t=3.33, df=19, p=.0037, two-tailed). I am indebted to James Hall and Jonathan Vierville for their assistance with these ratings.
- 10. A variation of this strategy would be to have a computer generate a string of words during the documentation period and measure how much time elapses until the generation of key and control words. In some cases, the generated words could be randomly selected in real time (e.g., by a radioactive decay based random event generator), while, in other cases, a pre-recorded list of words could be retrieved.

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