Establishing Prevalence of Commonalities in Randomly Paired Individuals as a Method for Assessing Synchronicity

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Abstract — Randomly paired male or female college students were instruct-ed to converse for 45 minutes to find as many coincidental events as possible. These items were then checked for rarity against a larger random sample of that population. The results are discussed in terms of developing a methodol-ogy for assessing commonalities among a population of unrelated college stu-dents. This method may ultimately prove useful in determining baseline rates of commonality which could be used to evaluate synchronicity in other populations such as reunited birth relatives.

Jung defines synchronicity as an "acausal" connecting principle. Synchro-nous events involve both a high level of meaning for those people experienc-ing the event and the sense that the event is both highly unusual and difficult to explain. Jung states that such events are "connected so meaningfully that their 'chance' concurrence would be incredible." (Jung, 1955, p. 31) The sensed unliklihood of the connections found in synchronicity suggests that they are not due to standard cause-effect sequences as they are usually understood. Rather the connections are thought to be brought about by relationships in some other, perhaps as yet unrecognized, dimension of reality.

Jung suggested that the presence of high emotionality leads to an increase in the likelihood of recognizing a synchronistic event when one occurs. His ex-planation was that a decrease in the level of conscious processes to a more primitive level during emotional events is associated with an increase in the correspondence between psychic and physical reality. According to Jung, the discovery of synchronicity is also increased in probability by both the belief in synchronicity and the desire to discover it.

The nature of conscious reality which individuals accept is defined by an in-teraction between the belief systems of their culture and their unique personal experiences within that culture. Thus we typically perceive only those dimen-sions of the environment which are consistent with our experience and with our definition of the universe. When individuals are presented with informa-tion, or have an experience, which is inconsistent with the definition of reality that they have accepted, they are challenged about how to interpret the situa-tion. They are likely to classify that knowledge or experience as a curious phenomenon within their existing definition and to discard it, or to regard it as a supernatural phenomenon (Murchie, 1978). According to Kuhn (1970) when the number of these "discarded" nonconformities becomes too great to

be supported by the existing paradigm, a new paradigm is then developed, often after a period of struggle, which better fits the evolving understanding of the universe.

At present, Western thinking is heavily dominated by a cause-effect model of reality, resulting in the automatic assumption that events occur within the boundaries of a causal relationship (Braud, 1983). We are primed to look only for such causal relationships. However, rather than demonstrating a cause-effect relationship, events identified as synchronistic may only reflect the underlying connected nature of a dimension of reality which has not yet been recognized within the current Western paradigm. The need to impute a cause for "unexplained" commonalities may be viewed as more a function of our imperfect understanding of the nature of the universe than of the true nature of reality.

Braud provides an excellent review of the literature concerning synchronicity and discusses the difficulties of understanding acausality. He studied the frequency of co-occurrence of words felt to be synchonistic and of control words not felt to have synchronistic meaning. While he found a significant difference in favor of synchronicity, he also acknowledged that synchronicity is difficult for many to accept.

We believe that there are four possible results of exposure to coincidental events that might meet the definition of synchronicity:

   1) failure to even notice their existence due to an absence of attention to them (which might occur as a consequence of lack of belief in their possible existence);
   2) attribution to causative factors (with no change in world view needed);
   3) assumption that the event is nothing more than an unusual occurrence (with no change in world view needed); or
   4) belief that the event is a demonstration of synchronicity (which may entail a new view of reality and ultimately acceptance of a new paradigm).

One of the richer areas for investigating synchronicity is that of reunited birth relatives who were separated by the adoption process. Stiffler (1992) reports numerous cases of synchronicity in birthparent-adoptee, sibling, and other reunions between biologically related persons. It is not unusual for such reunited people to discover highly meaningful similarities in personality, life experiences, names, places, or other categories. Some of these may be explainable by a common genetic architecture, but many appear to defy our typical understanding of causality.

The high level of desire to find similarities among reunited birth relatives may lead to discovery of synchronicities, but at the same time may merely reflect an error of attribution. For instance, vacationing in Florida in the winter could be easily explained on a number of levels, but vacationing within the same four block neighborhood of the same city in Florida for 10 years seems to lie outside the boundaries of typical causality (Stiffler, 1992).

The purpose of this research was to investigate a methodology for establishing baseline rates of commonality against which apparently synchronistic events might be evaluated.

Method

Part One

Subjects. Subjects in Part One of this experiment were all students taking the Introductory Psychology course at the University of Wisconsin at Stevens Point in the fall, 1993 semester. All students in that course must complete a Human Subjects Pool requirement, which they can satisfy by being subjects in experiments. Sign-up sheets, which include a general description of the experiments and any special requirements, are posted periodically.

For this experiment subjects were required to be 18 or 19 years old and to not know any other person already signed up for their time slot. They were recruited in same sex groups, four subjects per time slot. A total of 26 pairs of students (13 each male and female) were used out of 27 pairs sampled (one male pair was eliminated — see Results).

Apparatus. The subjects were placed with their partner in one of two small multipurpose experimental laboratory rooms. Each contained a padded chair for each subject, was carpeted, and had two permanently mounted video cameras with lenses covered in corners near the ceiling. One subject was handed a clipboard and a pen along with written instructions.

Procedure. Two female senior undergraduate psychology majors served as research assistants. Each subject was greeted in a small anteroom for the experimental laboratories. In the cases where one subject did not show up at the appointed time, another subject was randomly chosen and dismissed. The assistant confirmed that subjects were all strangers to each other and assigned pairs at random.

Each pair was then placed in a laboratory room. They were instructed to talk with each other in an attempt to find commonalities in their lives. The written instructions can be found in the Notes section at the end of the article. The assistant also pointed out to them that lens caps were covering the camera lenses and that they were not being observed or taped. She then left them alone for approximately 20 minutes. The assistant then reentered the room and presented the subject pairs with a list of topics that might include areas of commonalities. A pilot study had shown that being given such a list was helpful in broadening discussion. A copy of that list can be found in the Notes section, as well. At the end of another 20 minutes all of the data were collected and the subjects debriefed and dismissed.

The responses from each of the subject pairs were entered into a database by the research assistants. Following a training session they coded responses by type of information into one of six categories. These categories were:

1) personal data (information about the subject; things that happened to the subject, e.g. names, skills, weaknesses, objects received as gifts, illnesses);
2) personal experiences (things the subject chose to do once or twice, including activities that only involve one "choice", even though they may occur regularly after making the choice, e.g. non-family vacations, jobs, educational activities);
3) family based experiences (experiences the subject had because of living in a particular family, e.g. family vacations, religion or religious celebrations, relatives' common experiences, family members' occupations);
4) personal habits (things the subject chose to do regularly, things the subject plans to do in the future, good or bad habits and peculiarities, e.g. tastes in food, music, etc., likes or dislikes, recreational activities, life or future occupational plans);
5) items owned (anything possessed, purchased or acquired by the subject, e.g. any form of property, including pets); and
6) personality factors (aspects of character, temperament or values, e.g. sense of humor, promptness, honesty, chastity, outlook on life, preference for time of day).

Part Two

Subjects. Subjects in part two consisted of 60 Male and 80 Female 18 and 19 year old students recruited in the same manner as in Part One. The unequal number of subjects by sex was caused by the voluntary nature of the recruitment process.

Apparatus. The apparatus consisted of a list of descriptive statements generated from the commonalities identified in Part One. The subjects were handed this along with a pencil and answer sheets and allowed to find their own place to sit in a lecture auditorium. They were instructed to answer A if a given statement was true of them and B if it was not true. In cases where they could not be sure they were instructed to answer B. The Female set had 274 statements and the Male set had 279.

Results and Discussion

Three categories of commonalities were eliminated from the original lists generated in Part One by paired Introductory Psychology students. Obvious similarities caused by artificial restrictions placed on members of the subject pool by virtue of their status as college students and their enrollment in Introductory Psychology at this university were removed. Examples of these were such items as: both college students, both dorm residents, both in same year in college, and both come from same state. The second category of commonalities eliminated were those items we believe to be common in the general popu-

lation such as: both right handed, both brush teeth, both dry off with a towel. The third category of commonalities removed involved highly specific references to knowing particular people or to places which could not readily be asked of others, such as: both live on same floor; both have same English teacher. In addition there were a significant number of redundant items, with either exact or substantially similar wording identified by multiple pairs. For example, both have glasses; both have weak eyes; both need glasses; both wear contacts. In these cases, only one representative item was used. For example, "Wear glasses or contacts." Finally, one pair of male subjects was eliminated. Fairly early in their discussion they discovered they were both, unknown to the other, dating the same woman. This certainly fits the criterion of an unexpected commonality, perhaps even a synchronicity, but it was felt subsequent data generated by this pair could be tainted.

One very interesting gender difference occurred in the process of eliminating items to create the final lists to be presented. The initial list of 379 commonalities generated by the male pairs was significantly longer than the 284 generated by the female pairs. However, only 10 items were eliminated from the female list due to redundancies, while 100 items were eliminated for the same reason from the male list. This suggests that although males paired at random may engage in conversation which discovers more similarities, these are more likely to be of a superficial or common nature, while females, though they discover fewer similarities, are likely to discover similarities which are more unique and less obvious.

When the subjects conversed about commonalities the most common area in which they found similarity was in personal habits. The 26 pairs of subjects generated 219 commonalities in this category. The second largest category was personal experience with 100 items, followed by personal data with 82 items, family experiences with 56 items, and personality with 45 items. Surprisingly, the category in which similarity was found least often was possessions with only 31 items identified.

However, when this list of similarities was presented to a larger sample of students from the same population to determine the general expected rate of similarity, a different pattern emerged. A total of 105 of the commonalities (27.7 percent of the total items) were found to be true of less than 22 percent of the sample population. In each of these cases, therefore, it would be assumed that random pairing would find a match for that item in no more than 5 percent of cases ($0.22' < 0.05$). These items were defined as significantly rare.

In this situation, the smallest category of commonality is personality, with only one out of the 45 items determined to be common in the paired subjects found to be significantly rare in the sample population as a whole. This is to say that, if two college students are paired at random, they are likely to find several common personality traits, but the mere discovery of these common traits should not be taken as evidence of synchronicity at work. On the other hand, in the categories of personal data and items owned, 39 of the 82 types of

common personal data (47.6 percent), and 12 of the 31 items owned (38.7 percent), were found to be significantly rare in the larger unmatched sample. Therefore, discoveries of similarities in these areas may be evidence of some underlying non-random causality. For subjects paired at random one possible source of non-random causality is the result of cultural factors common to Midwestern American college students.

In the case of related people the possible sources of causality would also include the effects of common heredity, as well as the effect of some other uncontrolled factor(s) such as synchronicity. Thus, if two biological relatives who were separated at birth and later reunited discovered that they had several similar personality characteristics, that level of commonality could be explained without resort to synchronicity. Furthermore, it could be expected that they would find some similarities in a number of different life areas, especially to the extent that they shared other common demographic traits such as age, gender, residence, etc. However, if they found a relatively large number of similarities in personal data or in items owned, synchronicity in some form may be the most viable explanation.

One other interesting finding was that male and female subjects did not divide evenly into the various categories for significantly rare commonalities. A chi-square on percentage data of sex by category yielded a significant result (chi-square $(5) = 13.55$; $p < 0.05$). This difference appeared to be largely due to two of the categories, personal data and ownership. In personal data 54 percent of the commonalities found by female pairs were significantly rare in the population as a whole compared with 37 percent for males. However, in possessions, 32 percent of female commonalities were rare while 50 percent of males were rare.

This study was an attempt to develop a methodology for assessing commonalities among a population of unrelated college students. To the extent that this group is representative of the population as a whole these results may have some generality. It is quite common for birth brothers and sisters who are separated at birth but who later are reunited to find examples of commonalities which make them believe in some underlying causality. However, while not directly applicable to these situations which often occur outside of the college population, the present data seems to indicate some "unusual" commonalities are to be expected without needing to postulate an underlying causality. For instance, among the more unusual commonalities reported by the pairs of subjects in this study were owning chameleons, pet rats, or a dog that had cancer; having had scoliosis; and having been high school exchange students. It would be very easy to imagine that long-lost relatives would find such commonalities highly meaningful. Yet, such matches, though they might be perceived as rare in the college population as a whole, do occur in randomly paired subjects from that group.

In particular, if reunited family members discover some similarities in personality patterns it is unlikely there is anything more underlying such events

than what could be expected by virtue of common cultural experience or genetic architecture. In contrast, if many similarities are found by such a pair, particularly in personal data or possessions, there would be more reason to suspect synchronicity. However, this data must be used with caution when projecting a critical number for such commonalties between reunited birth relatives. A methodological problem is generated due to the differences between having strangers converse on a single occaision for only 45 minutes versus reunited relatives, who converse within a much longer time frame, with an expectation of a future social relationship and who are simultaneously highly motivated to find similarities.

Still another problem arises in using this data in a population of reunited birth relatives. This study may not have engendered a high level of expectancy in the subjects due to the nature of subjects in an experimental psychology pool, and the nature of the instructions. Thus, subjects in this study may have failed to discover as many commonalties as they would otherwise have found. Furthermore, they were unlikely to have been as impressed by discovering commonalties as reunited birth relatives. In any case, even with higher motivation and a longer time frame for conversation, there is still the difficulty of attempting to expand results from a population of college students to a more general population, let alone a population of reunited birth relatives.

To qualify as a synchronistic event two elements must be present: a low level of probability for the event and a high level of personal meaningfulness for those persons involved. While the methodology developed for this study does not adequately address the latter issue, it nevertheless may prove useful in establishing a baseline level of commonality against which the probability aspect of synchronicity can be evaluated. Future research should also attempt to address the affective dimension of synchronicity.

References

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Notes

Written Instructions to Subjects. The concept of synchronicity has been defined by Carl Jung as "a *meaningful coincidence* of two or more events, where something other than chance is involved." Jung also states that in synchronicity the coincidences are "connected so meaningfully that their 'chance' occurrence would represent a degree of improbability that would have to be ex-

pressed by an astronomical figure." There is some thought that synchronous events occur more often in cases of people who are genetically related. Certainly people who grew up in the same family environment would be expected to have a high number of shared experiences, but commonalities in the lives of biological relatives separated early in life by such things as war or adoption have also been noted.

A problem with the concept of synchronicity is that there have been few if any studies in which a "baseline" measurement of the number of *common life experiences in non-genetically related strangers* has been made. This study is an attempt to determine this baseline.

We realize that you and your partner in this study are not related to each other and grew up in different family environments. We would like you to talk with each other for the next 45 minutes and to look for as many similarities in your lives as you can discover. Please begin on the back side of this paper and list, in as exact a fashion as possible, specifically what these similarities are. Please write the similarities down as you discover them rather than waiting until the end of your discussion.

After you have worked for 45 minutes or so on this task, the experimenter will discuss with you your reaction to what you have been asked to do and will answer any questions you have about the study.

Interim Instruction List. Now that you have had a chance to discuss for a while, we would like you to think about some of the types of similarities that have been identified by others. Be sure to note down when and where you were when you note that a coincidence happened.

Possible categories to cover are: Names (first, middle, family, pets, relatives); Places (vacations; where you want to go); Times or Dates (birthdays; age at a particular experience); Health/Illness (never sick; asthma); Personal interests (hobbies, sports, games, recreation); Education (public school; college major); Tastes in food (love pickles, etc.); Preferences in Art, Music, Clothing, or Colors; Personal hygiene products (toothpaste, deodorant); Habits, good and bad (bite fingernails; always fold clothes); Plans for a career; Personal temperament (slow to anger; impatient; sense of humor); Personality (procrastinate; flexible; always on time); Things owned (large cars, black labs); Religion or Spirituality (believe in God; Muslim).

There may still be many others. Don't let this list limit you.