

Meaningful Coincidences and Near-Death Experiences

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Atribution of meaning to coincidences is problematic because in a sufficiently large population, even low-probability events are likely to happen by chance; exposure to common information sources increases the likelihood of people having similar thoughts; and a person's history, cognitive style, and emotional state strongly influence whether a coincidence is considered meaningful.^{1,2}

Apophenia, the tendency to perceive meaningful patterns in apparent environmental "noise," has been associated with a right-hemisphere processing bias.³⁻⁵ However, this association does not address whether a right-hemisphere processing bias overestimates the true incidence and meaningfulness of coincidences, or whether a left-hemisphere processing bias underestimates them.

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Despite the frequency with which people experience meaningful coincidences and the speculations about neurophysiological and psychological correlates, the difficulty in classifying and measuring coincidences has frustrated research on this topic. As a step toward a scientific understanding of meaningful coincidence, Coleman, Beitman, and Celebi¹ developed the Weird Coincidence Scale (WCS) to quantify and categorize the frequency of self-reported coincidences; this instrument was subsequently refined as the WCS-2.²

Perception of coincidences and attribution of meaning to them have been associated with belief

in and experience of paranormal phenomena,³ faith in intuitive modes of thinking, a spiritual interest, and a more experiential, rather than rational, information processing style.¹ However, causal direction of these associations is ambiguous; it is equally plausible that spiritual people may seek meaning in coincidences, or that dramatically meaningful coincidences inspire spirituality.^{1,2}

Near-death experiences (NDEs), profound subjective events at the threshold of death, often encompass spiritual and paranormal elements, such as a sense of leaving the physical

body, perceiving events at a distance, and encountering mystical entities and environments. We might, therefore, expect NDEs to be associated with perception of coincidences and the attribution of meaning to them. There have been many anecdotal accounts of profoundly meaningful coincidences in the lives of near-death experiencers (NDErs),⁶⁻⁸ and several researchers have reported that synchronicities are common after NDEs,^{6,9-12} but no detailed study of the topic has yet been published.

If NDErs experience more meaningful coincidences than others, then studying them may offer a window into the causal direction between spirituality and coincidence experiences because NDErs have been shown to be more spiritual after, but not before, their NDEs.^{6,9,13} That is, if NDErs report a high number of coincidences before their NDEs, when they are not more spiritual than others, that might suggest that a coincidence-seeking personality or cognitive style may lead people to have spiritual experiences when they come close to death. On the other hand, if NDErs report a high number of coincidences only after their NDEs, that might suggest that having a profound spiritual experience may lead people to recognize and seek meaning in coincidences.

METHODS

Measures

Weird Coincidence Scale-2

The WCS-2 is a 12-item Likert-type instrument surveying the frequency of meaningful experiences and their analysis or interpretation. It comprises a seven-item interpersonal factor, addressing coincidences involving the respondent in relation to others (eg, “When my phone rings, I know who is calling.”), and a five-item agentic factor, addressing coincidences involving the respondent’s actions (eg, “I advance in my work/career/education through being at the

‘right place-right time.’”). There are an additional six analysis/interpretation items, addressing beliefs about coincidences (eg, “Meaningful coincidences help me grow spiritually.”), that do not contribute to the WCS-2 score.²

The WCS-2 was introduced in this study by the standard instructions as previously described,^{1,2} with one exception: Participants were asked to provide two



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responses to each of the 18 items, one referring to the period before the NDE and one referring to the period since.

The NDE Scale

The NDE scale has been shown to have high internal consistency, correlation with previous measures of NDEs, split-half reliability, and test-retest reliability in the short term (6 months)¹⁴ and long term (20 years).¹⁵ A Rasch rating-scale analysis established that the NDE scale yields a unidimensional measure with interval-scaling properties, invariant across gender, age, intensity of experience, or time elapsed since the experience.¹⁶

The WCS-2 and NDE scale were

mailed or emailed to participants, who completed and returned them at their convenience during a period of 1 year.

Participants

Participants were 200 people who had previously contacted the author to share their accounts of NDEs, and whose experiences met the criterion of being NDEs: a score of 7 or higher on the NDE scale.¹⁴ The NDE scale is a 16-item multiple-choice instrument used to quantify NDE and differentiate them from close brushes with death that are not accompanied by NDEs.¹⁷

Participants’ mean score on the NDE scale was 15 (SD = 6.7), with a range from 7 to 32. Fifty participants (25%) reported that they had lost vital signs at the time of the NDE; 57 (28.5%) reported they were near death without loss of vital signs; 34 (17%) reported they were in serious condition but not near death; and 59 (29.5%) reported their condition was not thought to be serious at the time of the NDE.

Participants included 143 women (71.5%) and 57 men (28.5%). Their mean age was 65.3 years (SD = 12.5), with a range from 23 to 95 years. Their mean age at the time of the reported NDE was 29.4 years (SD = 13.9), with a range from 3 to 72 years. Participants included 174 whites (87%) and 26 of other or mixed race (13%). Current religious preferences included 56 Protestants (28%); 32 Roman Catholics (16%); 10 atheists or agnostics (5%); and 102 (51%) “other” preferences. By contrast, at the time of the NDE, 72 (36%) were Protestant; 43 (21.5%) Roman Catholic; 19 (9.5%) atheist or agnostic; and 66 (33%) “other” preference.

RESULTS

Coincidences Before and After NDEs

The Figure shows mean scores on the WCS-2 and its factors for the

NDE sample before and after the NDE, along with the norms reported by Coleman and Beitman.² For the total 12-item WCS-2, the mean score of the NDE sample before the NDE was 2.43 (SD = 0.69), slightly lower than the previously published norm of 2.59 ($t = 3.19$, $df = 178$; $P = .008$, with a Bonferroni correction for multiple simultaneous statistical tests). The mean score of the NDE sample on the total WCS-2 after the NDE was 3.43 (SD = 0.84), much higher than the published norm of 2.59 ($t = 14.20$, $df = 199$; $P < .001$). The mean increase in WCS-2 score from before to after the NDE was 1.02 (SD = 0.94); this difference was highly significant ($t = 16.29$, $df = 178$; $P < .001$).

For the seven WCS-2 items that comprise the interpersonal factor, the mean score of the NDE sample before the NDE was 2.40 (SD = 0.73), slightly lower than the published norm of 2.66 ($t = 4.65$, $df = 178$; $P < .001$). The mean score of the NDE sample after the NDE on the interpersonal factor was 3.38 (SD = 0.87), much higher than the published norm of 2.66 ($t = 11.68$, $df = 199$; $P < .001$). The mean increase in scores on the interpersonal factor from before to after the NDE was 1.00 (SD = 0.86); this difference was highly significant ($t = 15.60$, $df = 178$; $P < .001$).

For the five WCS-2 items that comprise the agentic factor, the mean score of the NDE sample before the NDE was 2.46 (SD = 0.73), not significantly different from the published norm of 2.49 ($t = 0.42$, $df = 178$; $p = .63$). The mean score of the NDE sample after the NDE on the agentic factor was 3.51 (SD = 0.93), higher than the published of 2.49 ($t = 15.38$, $df = 199$, $P < .001$). The mean increase in scores on the agentic factor from before to after the NDE was 1.06 (SD = 0.94); this difference was highly significant ($t = 15.12$, $df = 178$; $P < .001$).

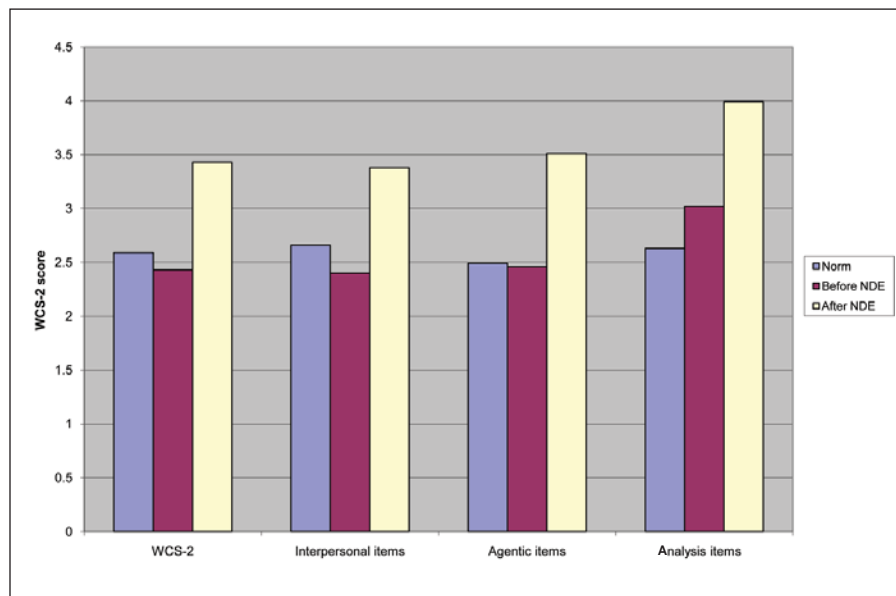


Figure. WCS-2 scores. Source: Greyson B.

For the six analysis/interpretation items not included in the WCS score, the mean score of the NDE sample before the NDE was 3.02 (SD = 0.79), higher than the published norm of 2.63 ($t = 6.59$, $df = 178$; $P < .001$). The mean score of the NDE sample after the NDE on the analysis/interpretation items was 3.99 (SD = 0.88), again higher than the published norm of 2.63 ($t = 21.84$, $df = 199$; $P < .001$). The mean increase in scores on the analysis/interpretation items from before to after the NDE was 1.01 (SD = 0.87); this difference was highly significant ($t = 15.58$, $df = 178$; $P < .001$).

Coincidences and NDE Variables

Scores on the WCS-2 before the NDE, and on each of its factors, were not significantly associated with scores on the NDE scale. That is, neither prior frequency nor analysis and interpretation of coincidences predicted the “depth” of a subsequent NDE. However, NDE scale scores were positively correlated with scores on the WCS-2 after the NDE ($r = 0.433$, $P < .001$), and with both the interpersonal ($r = .398$, $p < .001$) and

agentic factors ($r = 0.404$, $p < .001$), as well as the analysis/interpretation items ($r = 0.434$, $P < .001$). That is, “deeper” NDEs were followed by a higher frequency of coincidences and more analysis and interpretation of coincidences. Likewise, NDE scale scores were positively correlated with change in WCS-2 score from before to after the NDE ($r = 0.39$, $P < .001$), and with the interpersonal ($r = 0.346$, $P < .001$) and agentic factors ($r = 0.393$, $P < .001$), as well as the analysis/interpretation items ($r = 0.29$, $P < .001$).

Closeness to death at the time of the NDE was not significantly associated with scores on the WCS-2 or any of its factors before the NDE. However, with a Bonferroni correction, closeness to death was correlated positively with scores on the WCS-2 after the NDE ($F = 4.14$; $df = 3, 196$; $P = .028$), and with scores on the Interpersonal factor ($F = 4.28$; $df = 3, 196$; $p = .024$), but not on the agentic factor ($F = 3.16$; $df = 3, 196$; $P = .104$) nor on the analysis/interpretation items ($F = 2.10$; $df = 3, 196$; $P = .408$). That is, the closer the experiencer had come to death, the more coincidences were

reported subsequently, particularly of the interpersonal type. However, change in scores on the WCS-2 or in any of its factors was not significantly associated with closeness to death.

Coincidences and Demographic Variables

With a Bonferroni correction for multiple simultaneous tests, age at the present time was correlated inversely with the analysis/interpretation items ($r = -0.216$; $P = .012$), but not with the WCS-2 or either its interpersonal or agentic factors. That is, although age was not associated with the frequency of coincidences, younger participants reported a greater tendency to analyze or interpret coincidences as meaningful. Again with a Bonferroni correction, age at the time of the NDE was not significantly associated with the WCS-2 or any of its factors.

With a Bonferroni correction, gender was not significantly associated with the WCS-2 or any of its factors before the NDE. However, women scored significantly higher than men on the WCS-2 after the NDE ($t = 3.34$, $df = 198$; $P = .004$), and on both the interpersonal ($t = 3.38$, $df = 198$; $P = .004$) and agentic factors ($t = 2.76$, $df = 198$; $P = .024$), as well as on the analysis/interpretation items ($t = 2.82$, $df = 198$; $P = .02$). Change in WCS-2 scores from before the NDE to after was not significantly associated with gender.

Race was not significantly associated with scores on the WCS-2 of any of its factors either before or after the NDE. Neither religion at the time of the NDE nor religion at the present time was significantly associated with scores on the WCS-2 or any of its factors, either before or after the NDE.

DISCUSSION

The major finding of this study was that, among NDErs, the incidence of meaningful coincidence before the

NDE was slightly less than that among the general population; meaningful coincidences after the NDE were significantly more frequent. The tendency to analyze or interpret coincidences was somewhat higher before the NDE, but that too increased significantly after the NDE.



Those who came closer to death had more subsequent coincidences, particularly of the interpersonal type.

The “depth” of the NDE was not influenced by prior experiences of meaningful coincidence, nor by the tendency to analyze and interpret them; however, deeper NDEs led to greater increases in both subsequent coincidences and their analysis. Likewise, prior coincidences and their analysis did not influence proximity to death the time of the NDE; however, those who came closer to death had more subsequent coincidences, particularly of the interpersonal type.

Age, race, and religion were not associated with WCS-2 scores; women reported more coincidences than did men after the NDE, but not before.

This study of the meaningful coincidences among NDErs was the first to use an objective instrument to

document such coincidences and to compare incidence before and after the NDE. The sample size of 200 experiencers was large enough for statistical power, even though 21 of those 200 experiencers had their NDE so many years ago, or at such a young age, that they could not recall the incidence of meaningful coincidences before the NDE.

The study relied solely on participants’ subjective reports of meaningful coincidences and is, therefore, theoretically vulnerable to bias in perception, recall, and willingness to report unusual experiences. However, because the meaningfulness of a coincidence is inherently a subjective interpretation, there is no valid alternative to first-person report. This was the first study to ask participants to rate their coincidences before and after a specific time in the past, which introduces an additional potential bias: Participants who reported substantial increases in coincidences, as this NDE sample did, might retrospectively underreport the frequency of coincidences before the NDE in an unconscious effort to underscore the change. However, because the “before” scores were lower than the published norm for the interpersonal factor, indistinguishable from the norm for the agentic factor, and higher than the norm for the analysis/interpretation items, it seems unlikely that there was a pervasive retrospective underreporting.

These findings corroborate prior anecdotal and subjective reports of increased synchronicity among NDErs. In addition, they provide additional evidence that increase in meaningful coincidences is apparent only after the NDE, not before. These data suggest that prior tendency to recognize coincidences and to analyze or interpret them do not lead to spiritual experiences such as NDEs. Rather, spiritual experiences such as

NDEs, and the increased spirituality that typically follows, lead to increased experiences of meaningful coincidence and increased analysis and interpretation of these coincidences.

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