

EXCEPTIONAL EXPERIENCES AMONGST TWINS

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ABSTRACT

Two studies are reported here concerning the relationship between exceptional experiences in pairs of twins and their degree of attachment to each other. The initial study collated replies to a questionnaire given to a large number of twins who were attending a twin-day celebration. The further study used a highly selected series of replies from a postal survey of the twins in the twin registry. Both studies used the Exceptional Experiences Questionnaire, which recorded the frequency of remarkable coincidences, shared dreams, apparent telepathy as well as the degree and duration of the attachments the twins experienced to each other. In the survey study, 60% of the responding twins reported having experienced events that they judged to be of a telepathic nature. Frequent telepathic experiences were reported by 11% and remarkable coincidences by 56% of the respondents. Identical twins reported having these experiences significantly more often and having a significantly stronger attachment to each other than was the case for non-identical twins. A significant relationship was also found to occur between reporting a strong attachment and reporting many and more remarkable exceptional experiences. A large majority of the twins reported these experiences as having occurred in a waking state. Almost half of the twins reported the experience of telepathy to concern the welfare of the other twin, often relating to a pain or illness, or injury. However, in the postal survey group about one third of the remarkable events were positive events. The use of a private language and the occurrence of shared dreams seem to be further hallmarks of these experiences.

INTRODUCTION

There exist diverse professional opinions about the true nature of apparent cases of telepathy and remarkable coincidences amongst twins that often make press headlines. Because of the lack of research on this topic these opinions are inevitably based on preconceived ideas. The present report is an attempt to present some actual hard data about the type and frequency of these experiences. To avoid unnecessarily biasing the issue from the onset we use the term “exceptional experiences”.

The original impetus for the present investigation came from a survey of twins carried out by the Department of Twin Research and Genetic Epidemiology (DTR), King’s College, London. The DTR has the largest adult registry of twins in the UK. (now over 12,000). A total of 9186 individuals were originally sent this questionnaire of whom 5512 replied, a response rate of 60%. The returns from the survey (Cherkas, 2004/2005) indicated that some 39% of respondents believed they might have “the ability to know what was happening to their partner”, a further 15% were convinced of it, and identical twins were significantly more likely to report psychic abilities (19%) than were non-identical twins (11 %). Questions were also included about the nature of their relationship, for example if one of the twins was regarded as more dominant than the other.

Both the studies to be reported here used the *Exceptional Experiences Questionnaire* (EEQ) which was designed to document telepathy-like experiences, striking coincidences (synchronicities), shared dreams and shared physiological responses to illness. It also included questions concerning the degree and intensity of attachment between pairs of twins.

The twin day party held in London in 2010 to thank twin volunteers offered the opportunity to begin carry out a study. One aim for the “Twin Day Study”, as well as for the “Postal study” of self-selected twins was to focus on the topic of attachment between twins in a pair, since many twins, especially identical twins, emphasize they are emotional close although there is surprisingly little research on this (Segal,1999). Emotional closeness is a central topic both for developmental psychology as part of attachment research (Cassidy, 1999; Hesse, 1999) and for parapsychology as part of psi-research (Broughton, 1991; Radin, 2006; Rhine, LE, 1956; Sheldrake, 2011). Accordingly, it was planned to use the opportunity provided by the “Twin Day study” for focus not only on various exceptional experiences, but also on the attachment the twins experienced to each other during childhood and adulthood. The aim was to connect the area of research on attachment with that on exceptional experiences by investigating their possible relationship in terms of experienced emotional closeness.

Attachment theory is a basic theory in psychology, developed by John Bowlby and his collaborator Mary Ainsworth during the 1950s and 60s (George, Kaplan & Main, 1984/1996). The theory, which has clinical and experimental support, emphasizes how the first relationships between the ages of 8 months and 18 months can have a determining influence on future relationships. The first relationships are normally the parents, but they can also include other members of the inner family, such as siblings, or ersatz parents.

Although attachment is traditionally viewed as primarily a relationship with the parents, in many cases other persons (siblings, an aunt or an uncle, or friends) can be as or more important (Cassidy, 1999). Evidence has emerged that siblings can serve as attachment figures (Stewart & Marvin, 1984; Teti & Ablard, 1989). The crucial criterion for a relationship to be regarded as an attachment one is that it is a bond from a weaker to a stronger person. Dunn (1993) discusses the cultural circumstances that cause sibling relationships to become attachment relationships. It is well known that twins in concentration camps survived because of the close attachment they had to each other when they did not have parents.

Attachment research in developmental psychology is largely based on the adult-recall of early experiences and various questionnaires have been developed accordingly with the assumption attachment memories have some validity and can be used for the type of work reported here (Crowell, Fraley, & Shaver, 2008).

Some of these measures are robust and extensive such as the *Adult Attachment Interview* and therefore require training to administer (Hesse, 1999). This was unfortunately beyond the resources of the present project. Simpler scales assessing relationships do exist (Fraley, Waller & Brennan, 2000) but neither they nor the Adult Attachment Scale are orientated towards sibling- or twin-relationships. The Adult Attachment Interview has however been used to relate attachment experiences to religious belief with the claims that New Age type beliefs are related to an insecure parental attachments (Granqvist & Kirkpatrick, 2008). This background encouraged us to develop our questionnaire and valid it on the twin population.

Although the two topics, exceptional experiences and attachment, arouse considerable interest amongst the public, and in the case of attachment also amongst researchers, there has apparently never been any serious attempt to examine how these topics might relate to each other. There are some findings in parapsychology which support the importance of emotional closeness for facilitating psi between the

sender” and “receiver” in experiments (Broughton, 1991; Sheldrake, 2011; Radin, 2006).

The EEQ was designed in order to provide an initial evaluation of the relationship between twins as well as documenting the type and frequency of their exceptional experiences.

With this background in mind, we formulated for the twin day study two central hypotheses and a series of ancillary hypotheses:

The *first central hypothesis* proposed that identical twins would report a higher frequency and intensity of exceptional experiences as well as a greater strength of attachment than non-identical twins.

The *second central hypothesis* proposed that there would be a positive and significant relationship between measures of exceptional experiences and attachment. It also predicted that this relationship would naturally be stronger for identical than for non-identical twins.

We are obviously dealing with intricate subjective experiences and interpretations here. An initial step towards an objective assessment was to have the exceptional experiences independently rated as to how explicable they appeared to be. It might be expected that more remarkable experiences would be reported by twins who experience closer attachments to each other (Broughton, 1991). This led to the *ancillary hypothesis* that ratings of the contents of the exceptional experiences in terms of their remarkability, will be higher for identical than non-identical twins. Finally, the state of consciousness is considered to be an important variable determining the occurrence of these experiences. There is a long tradition of research both from spontaneous experiences (Rhine, 1962) and laboratory work (Parker, 2003; Storm et al 2011) indicating that exceptional experiences are associated with altered states. However a recent study (Parker, 2010) questioned if this was valid for exceptional experiences between twins. It was proposed that the hypothesis would be tested by predicting that there will be significantly more reported exceptional experiences (telepathy-type experiences and synchronicities) during altered states of consciousness as compared to the waking state of consciousness. Shared dreams appear to be a totally non-researched area except for that of anecdotal reports (Laberge, 1985; Waggoner, 2009). Since there are indications from the research literature (Segal, 2009) that identical twins report a stronger attachment being more close to each other, it is proposed that a consequence of this probable stronger attachment between identical twins is that significantly more identical twins than non-identical would report shared dreams which may reflect a common inner life.

One additional way of looking at the subjective world of twins is to study the validity of their experiences for each other, that is the degree to which they agree about the strength of and meaning given to their attachment. Since the twins filled in their questionnaires largely independently of each other, it is an approximate measure of this to see how their responses corroborated each other’s experiences.

In reporting and assessing these experiences, we make no judgment as to their “real” origin or causes. The report is primarily an attempt to document and classify the experiences as they were reported. For simplicity's sake, the terminology “telepathy-type experience” is used instead of the more formal and correct designation “subjective telepathic experience”.

We report here two studies. The first is a quantitative study carried out at the twin day and the second a postal study designed to get more personal details about the content of the experiences.

THE TWIN DAY STUDY

METHOD

Design: The Twin Day Study was carried out with twins attending the open-air “Twin Day” party in London in July 2009 at St Thomas’s Hospital in London, arranged by Department of Twin Research & Genetic Epidemiology (DTR), King’s College. The “Exceptional Experiences Questionnaire” (EEQ) was administered to the twins who attended an ESP-testing booth. In addition an informal “ESP- test” was carried out by some of the DTR staff using Zener cards.

Participants: For this study, 224 of the approximately 400 twins attending the open-air “Twin Day” party in London, participated by filling the EEQ

Materials: This EEQ consisted of 17 items concerning telepathy-like experiences, striking coincidences (synchronicities), shared dreams and shared physiological responses to illness. It also included a further five questions concerning the degree and intensity of attachment between the twins in each pair. Each of the above topics also included a request for the respondents to give a brief account of their most striking experiences.

For the purpose of scoring, the EEQ was divided into items dealing with two categories of exceptional experiences, telepathy-like experiences and those dealing with what may loosely be termed synchronicities or remarkable coincidences. For the category telepathy type experiences, the questions were 1) Have you ever experienced telepathy between you and your twin – by which we mean some form of communication which *could not easily be explained* by expectancy, common experiences, or other normal means 2) How often have you experienced telepathy 3) Have you successfully received or sent what seemed to be a form of telepathy about pain or illness, an accident or injury, a problem or state of mind (such as depression or anxiety) or other circumstance (Please specify)?.

For the category of remarkable coincidences, the questions were 1) Have you and your twin ever experienced any remarkable coincidences in events or decision making, 2) How often do these remarkable coincidences occur (See the appendix).

Answers to these questions were summated according to their loadings to give a total score for exceptional experiences, to be used in the analyses. For the frequency of telepathy and remarkable coincidences, the answer “once or twice” gave 1 point, “occasionally” gave 2 points and “frequently” gave 3 points. Each of the four answers relating to the circumstances for telepathy (Q6) received 1 point if answered in the affirmative.

The questions relating to attachment experiences concerned the number of years, if any, the twins were in the same school, and the same class. They were also asked (question 17) to rate the strength of the attachment during childhood and adulthood. Finally under this section, they were asked about the presence or absence of a private language between them during childhood.

In addition there were two questions relating to the state of consciousness in which the experiences occurred and to the occurrence of shared dreams.

In attachment research (Cassidy, 1999; Hesse, 1999) the conventional practice is to divide questions into adulthood attachment and childhood attachment, a division that is followed here and we arrived at scores for the responses relating to adult and

childhood attachment. After consultation with researchers in this area, only question 17 was used in the analysis since questions relating to school experiences were considered secondary to the attachment concept (Granqvist, 2011). Answers to questions would be scored according to the position on the rating scale (points 1-7).

Since the EEQ is under development we have as yet no psychometric properties prior to these studies.

The degree of “remarkability” in the exceptional experiences that twins reported was assessed by GB for telepathy-like experiences and, for synchronicities, by an academic colleague who researches these experiences. Reports were given one point if there obvious could be an obvious normal explanation, 3 points if a normal explanation is not obvious, and 2 points if the case was undetermined due to the length or lack of detail.

Procedure: The 112 volunteer pairs of twins (224 individual twins) attending the twin day filled and returned the EEQ. This occurred in the context of their interest in an informal ESP test that was carried out by some of the DTR staff using Zener cards. Although this was not a part of the actual project as such, it provided a focus point for attracting twins who wished to test their ability. The “ESP test” required one of the twins to try to make an exact match of the order of the five cards with one of each of the five, which the other member of the twin pair had placed hidden from view by a board. During the period when the fourth author (AP) was present, nearly 100 pairs of twins were tested of which five pairs of twins were noted as having succeeded at this level. (Theoretically only one pair amongst 120 pairs would be expected to succeed with this matching. It should be emphasized that the testing was carried out under informal conditions with none of these basic requirements concerning the source of randomness and the elimination of sensory cues (only a board was used to obscure vision). Nevertheless, it was of some interest to evaluate if this group differed from the twins in general and to examine how their apparent success may relate to variables such as attachment.

RESULTS

A total of 224 twins (112 pairs) attending the twin day filled and returned the EEQ. Of these, 162 participant pairs reported that they were identical twins with the remaining 62 participants pairs stating they were non-identical twins. Raw scores and percentages for their replies are reported in Table 1.

A *summated score* for exceptional experiences (based on their answers to questions on telepathy-like experiences and synchronicities) was calculated for each twin. The score was arrived at by loadings given to the frequency and the diversity of their experiences (question 6). In addition the remarkability of the reports of the subjective telepathic experiences and of synchronicities was rated (1 if there obvious could be an obvious normal explanation, 2 if the case couldn’t be judged, and 3 if a normal explanation is not obvious), a rating that was included in the “summated score”. A further additional point was given for the use of a private language during childhood. In total, the “summated score” for each twin could vary from 0 till 16.

Experiences of telepathy were reported by 60 percent of the respondents (see Table 1). These experiences were said to occur frequently by 11%, occasionally by 53%, an only once or twice by 36% of the respondents.

Table1

Comparison of the types of exceptional experiences and attachment reported by identical and non-identical twins. The numbers in the table show the number of respondents who simply answered ‘yes’ that they had had at least one such experience. Besides the raw score, also the percentage is presented.

		N	Telepathy Type Experience	Synchron icities	Illness	Accident	Problem	Mean Attachment scores Child Adult	
Non Identical	Raw score	62	35	29	18	9	12	5.39	5.60
	%	28	56	47	51	26	34		
Identical Twins	Raw score	16 2	99	97	68	39	58	6.13	5.80
	%	72	61	60	69	39	59		
Total	Raw score	22 4	134	126	86	48	70	5.92	5.74
	%	100	60	56	64	36	52		

The results gave support to the *first major hypothesis* that telepathic experiences and synchronicities will be significantly more frequently reported amongst the identical twins than non-identical twins. For this analysis, as well as for hypothesis 2 and other analyses having references to ‘having many exceptional experiences’, the “summated score” for exceptional experiences was calculated for each twin as reviewed above from the questions about experiences of telepathy and synchronicities and a language of their own. The mean value of the “summated raw score” for identical twins was 5.83 and for non-identical twins 4.40, a difference that was shown to be statistically significant, $t = 2.27$, $df = 222$, $p = .02$

As regards attachment, as argued in the introduction, identical twins were found to report a significantly stronger attachment in childhood than the non-identical twins. As seen in table 1, the mean childhood attachment that twins reported is 5.39 for non-identical and 6.13 for identical twins while those for attachment during adulthood are 5.60 for non-identical and 5.80 for identical twins.

The *second major hypothesis* predicted there would be a significantly positive relationship between attachment and exceptional experiences. This hypothesis was again assessed using the summated scores and was confirmed both for childhood and adulthood attachment. The hypothesis was confirmed by the results of the Pearson correlation coefficient between attachment experiences and exceptional experiences (as measured with “summated scores”) reaching significance (for childhood, $r = .311$, for adulthood, $r = .357$, $p < .001$ for both). In order to look at this more closely the summated exceptional scores and the attachment scores were each divided into three groups. For the summated exceptional experiences scores these were: low = 0-4, middle = 5-9, and high = 10-14. For the attachment scores, these were: low reported attachment = 0-3, middle = 4-6, and high = 7. For childhood attachment: $\chi^2 = 16.24$, $df = 4$, $p = .003$, and for adulthood attachment: $\chi^2 = 34.17$, $df = 4$, $p < .001$). Amongst the identical twins, 34 out of 162 respondents fall in the joint group containing the highest summated scores for psi and synchronicity and high degree of attachment, both for childhood and adulthood attachment. The correlation coefficient between the attachment experiences and

exceptional experiences reaches significance: for childhood attachment, $r = .183$, $p = .020$ and for adulthood attachment, $r = .285$, $p = .0001$, indicating that for identical twins, a higher degree of reported attachment is related to exceptional experiences.

Contrary to the hypothesis, the Pearson correlation for non-identical twins between summated scores for exceptional experiences and attachment is higher (although non-significantly so) than the identical both for childhood $r = .388$, $p = .002$, and for adulthood, $r = .293$, $p = .021$.

The judgments of the *remarkability* were compared with childhood and adulthood attachment scores. For identical twins, both childhood and adulthood attachment gave significant correlations predicting the judgments of remarkability of reported examples of telepathy: $r = .233$, $p = .003$ and $r = .259$, $p = .001$, respectively. For non-identical twins, the correlations were at a similar level to those of the identical twins: $r = .284$, $p = .026$, $r = .238$, $p = .063$ respectively.

An *ancillary hypothesis* concerns the state of consciousness in which twins reported having psi experiences, that is if they were in an altered state of consciousness such as a dreaming or in a normal waking state. The hypothesis that the experiences would be associated with altered states was not confirmed and the data actually supported the opposite conclusion. 110 twins (90 %) reported having these experiences in a waking state, while 15 twins, 19%, reported them to occur in a dream state, and 12 twins, 15% reported them to occur in a form of altered state. So it is obvious that a large majority of these experiences has occurred during the period when the twin was awake and not in any altered state. By dividing the twins into two groups: those having experiences in a dream state or in a form of altered state and those having experiences in a waking state, it was found that the twins reported significantly more often having experiences in a waking state rather than in another state of consciousness: $\chi^2 = 7.84$, $df = 2$, $p = .02$.

A significant difference was found in childhood attachment between twins reporting shared dreams and those not reporting them, $p = .003$ ($t = -2.97$, $df = 209$). The mean childhood attachment score was 3.24 for twins with no experience of shared dreams, and 3.79 for twins with experience of shared dreams. For adulthood attachment, there was no significant difference between the two groups. The hypothesis that there would be more identical twins reporting shared dreams as compared to non-identical twins was not confirmed ($\chi^2 = 1.77$, $df = 1$, $p = .18$).

One of the most predictive responses in the reporting of exceptional experiences and attachment was found to be the use of “*private words*” or a “*private language*”. Twins reporting this also reported more frequently having remarkable coincidences and telepathic type experiences. Their examples of telepathy-like experiences were also judged to be more remarkable than those who did not use a private language or words ($\chi^2 = 9.52$, $df = 3$, $p = .023$). There was also a difference in the diversity of telepathic-like experiences. Twins reporting having used “private words” also reported significantly higher degree of both childhood and adulthood attachment, as compared with other twins.

In evaluating the nature of the exceptional experiences, the test results for *the 5 pairs of twins who succeeded at the card guessing task* have been given a separate analysis, with “succeeded” meaning in this sense getting all five cards in the right order. Since the number of the pairs who succeeded at this task was too low to allow for a chi-square test, a non-parametric test of differences between this group and the other twins was carried out. Could this informal telepathy test be an indicator for having many exceptional experiences (and thus give a high “summated score”)? The mean rank (7.60) of “summated scores” was compared for the selected group with

the remaining members of the twin day group (5.33) The difference between the means on a t-test does not reach conventional statistical significance if equal variance is assumed ($t = 1.66$, $df = 222$, $p = .098$), but is close to significance if equal variance is not assumed, $p = .056$.

Concerning the issue of *validity of data*, it seemed to be of interest to check if each twin in a pair reported *the same degree of attachment* as the other twin in the pair. If they mainly agree about the nature of their relationship, then we would expect them to have about the same evaluation of their attachment. However when telepathic-like experiences are taken into account, as they are in the “summated score”, it is more difficult to evaluate. This may depend on what they remember about being “sender” or “receiver”. Accordingly, two main values for each of the twins belonging to the same pair were studied: these were the “summated score” and the scores for attachment. Choosing “summated scores” rather than item scores avoided making the analysis dependent on small variations in responses.

The “summated score” amongst the 112 pairs of twins resulted in 41 pairs who shared exactly the same total score (between 0-14). For another 26 pairs, the difference was only one point, and in another 15 pairs, they differed in two points. Only 17 pairs of twins showed a difference of more than 3 points. In total then, 73% of the twins differed by less than 3 points from each other. This means the twins make similar judgments about their experiences.

The scores for attachment (from Q16) ranged for adult and childhood attachments from 1-7 points. The results showed that 72 pairs of twins out of the 112 pairs had exactly the same score on their attachment. Another 27 pairs differed by only one or two points. This meant that 88% of the pairs had a maximum 2 points of difference. The maximum difference of 4 points was shown by only three pairs of twins. (There were additionally 5 pairs where since both twins did not reply to all the questions, no evaluation was carried out.) The patterns of agreement were very similar for the experiences of both childhood and adulthood attachment.

THE POSTAL STUDY

The “Twin Day” study was followed by *the postal study* where an advertisement was included in a newsletter, sent to all twins in the UK registry of twins (Spector & Williams, 2006): The study was aimed at collecting information and qualitative examples of the types of experiences from twins who were motivated to give a fuller account of their experiences than the limited time available at the Twin day permitted.

METHOD

Participants: All the twins in this registry were recruited through national media campaigns and from other twin registers. The twins in the registry are not selected for any particular trait and they volunteer to take part in studies that cover a wide range of traits and common medical conditions. TwinsUK research is approved by the St Thomas’ Hospital research ethics committee. Twins from this registry have been shown to be comparable to the age-matched general population of singletons for a broad variety of medical and behavioural traits (Andrew et al., 2001).

The Newsletter from DTR with the advertisement was sent in November 2010 to all 7518 twins. A total of 77 twins returned the filled questionnaire (20 by post, 57

by email, and another 19 twins communicated their interest but did not return the EEQ). Three pairs in this postal study also participated in the Twin Day study. The very low response rate (1%) might be due to the requirement of posting replies.

This was a highly selected group, and the central hypothesis would lead us to expect that many more monozygotic twins would volunteer their experiences.

Material: All data from the 77 EEQ questionnaires were coded in the same way as for the Twin Day study. A question on “positive experiences” relating to telepathy was added. Four questions were added about any possible separations during childhood. In accordance with other attachment studies, the analysis of attachment only used the reported degree of attachment as the measure of attachment.(Granqvist, 2011). All the individual records were confidential.

Procedure: The Newsletter from DTR with the advertisement was sent in November 2010 to all 7518 twins. In the advertisement, twins who had had exceptional experiences were asked to communicate their interest in participating in a questionnaire study, and to communicate it via email or by ordinary post. Access to the twin registry at the DTR for the follow-up study enabled us to determine the zygosity of the twins. The aim was to give possibilities to twins who not had the possibility to attend the Twin day to participate in the study and fill the questionnaire. We were unable to use an internet survey because the policy of the DTR is not to exclude those who do not have internet access.

RESULTS: Amongst the 77 respondents, 62 pairs of twins reported they were identical and 15 that they were non-identical. Responses to questions were grouped in the same way as in the Twin Day Study (telepathy experiences, synchronicities, the “sensing” of illness, accidents or serious problems, and attachment experiences. The results are presented in table 2. New columns are Negative and Positive, relating to whether the reported experiences were regarded as negative or positive.

Table 2

Comparison of the types of exceptional experiences and attachment, reported by identical and non-identical twins for the second sample

		N	Telepathy Type Experience	Synchro nicities	Illness	Accident	Negative Events	Positive Events	Mean Attach ment scores Child Adult
Non Identical	Raw score	15	12	10	11	3	7	3	6.07 5.87
Identical Twins	%	19	80	67	73	20	47	20	6.19 6.06
	Raw score	62	58	50	46	33	32	25	
Total	%	81	94	81	74	53	52	40	6.17 6.03
	Raw score	77	70	60	57	36	39	28	
	%	100	91	78	74	47	51	36	

Experiences of telepathy were in this sample reported by 91 percent of the respondents: with 10% reporting these experiences as occurring over fifty times (see Table 2). Given the nature of the self-selection, we would expect a relatively small range in the frequency experiences. This makes testing of the hypotheses that were previously advanced for the first study less appropriate for this relatively self-selected group. Nevertheless it is of interest to note that a majority of self-selected twins, 44 out of 77, reported the highest score of attachment in adulthood.

As can be seen in Table 2, a little more than one third in the postal sample reported having pleasant experiences of telepathy with their twin, and even here, significantly more identical twins reported having these experiences as compared to non-identical twins.

The postal group supplied us with many examples of their exceptional experiences. These are typically cases when accidents or dramatic events befall one twin without the other twins having known or being informed of these, and yet these twins report the identical reactions. The reports we received also confirmed the well-known cases in the literature (Playfair, 2012) of both twins becoming pregnant and giving birth on the same day. They also confirm reports of twins having independently made the same choices such as buying the same clothes, the same perfume and jewellery or in many cases the same presents for each other. These coincidences may have more to do with ‘concordance’ than telepathy in some cases.

The following are typical examples, quoted with permission (numerous similar incidents are described in Playfair, 2012):

- I recall an incident when as a child I injured myself and my sister felt the pain. On another occasion, again as children, when I was under a general anaesthetic, I understand she felt very drowsy.
- As a child at school I cut my hand badly. Across the room, and completely unaware of what I was doing my sister reacted to the pain and I thought it was she who had injured herself. It was only when I saw blood I realized it was me. The class and the teacher all remember it – we were about 7 years old.
- As teenagers my sister had an operation. I passed out in class and told my mum the time. It matched up with my sister getting her anaesthetic but was earlier than scheduled so I couldn’t have ‘known’.

DISCUSSION

It is clear from these results that exceptional experiences are not exceptional amongst twins in the sense of being uncommon. This is certainly true for the identical twins where telepathy type experiences and synchronicities, were both reported by 60% of the respondents. By comparison Haraldsson (1989) presents data for the equivalent age here (16-34) range that 24% of the UK population report experiencing telepathy. It is, however, still unclear as to precisely how common they are amongst the twin population. It might appear that the captive audience attending the twin day was fairly representative but it is likely that those twins who attend twin parties are in fact ‘closer’ to each other and enjoy their twinship than those who do not. Moreover, since little more than half of these completed the EEQ, the figures reported are very probably over-estimates. Although there are no comparable figures to go on, it seems likely that the substantial number of twins who report having frequent telepathic experiences, 11% of the twins in our survey – 14 % of

identical and 3% of non-identical, may well be higher than what would be expected for the general population.

The major hypotheses were confirmed showing these experiences tended to be more frequently reported by identical twins. Moreover, there existed a clear relationship in terms of frequency, intensity and remarkability to the degree of attachment between the twins. Childhood attachment appeared to build a foundation for them in identical twins to have telepathic-like experiences, whereas in non-identical twins, it was adulthood that appeared more important for exceptional experiences in general. Judgments that were made of the degree of remarkability of these exceptional experiences confirmed their relationship to attachment.

The hypothesis concerning the relationship of these exceptional experiences to altered states of consciousness was not confirmed. As mentioned earlier this appears to be contrary to research findings on spontaneous experiences. One possible interpretation of this result is that the connection between twins is simply strong enough to enable twins to have experiences in the waking state. Moreover many experiences concern physiological responses and somatic markers rather than visual experiences on which research has focused. Whatever their known or unknown nature, many of the experiences point to a biological connectedness in that the events being physiologically reacted to concern those of pain, accident or illness. Another possibility (assuming some psi-related mediation) is that both twins may have functioned in the roles of “sender” in the experiences – a role which a large body of research data reports is facilitated by the waking state.

Twins reporting having had shared dreams with their twin had significantly more exceptional experiences as compared to other twins. Those having shared dreams reported having significantly more telepathy experiences than their counterparts without shared dreams and significantly higher degree of attachment in childhood. Likewise the twins communicating with “private words or language”, reported having significantly more exceptional experiences as compared to other twins. The difference was found to be because of a difference in many factors included in “exceptional experiences”. They were also found to report having more shared dreams. Identical twins were also found to report having used “private words” more often than non-identical twins. Both these aspects - shared dreams and private language - may therefore serve as selection criteria for future twin studies.

Until recently most of the authorities in this area have been dismissive of the claims of twins concerning their exceptional experiences, regarding them as solely due to thought concordance or a common genetic determinism (Segal, 1999). The present report contains findings that can suggest that we put these ready explanations concerning the nature of these experiences on hold until their relationship to attachment is studied more fully. There are at least some preliminary findings suggesting that thought concordance may not entirely suffice (Jensen & Parker, 2012; Parker & Jensen, 2013).

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REFERENCES

- Andrew, T., Hart, D.J., Snieder, H., De Lange, M., Spector, T.D. & MacGregor, A.J. (2001). Are twins and singletons comparable? A study of disease-related and lifestyle characteristics in adult women. *Twin Research*, 4, 464-477.
- Broughton, R. (1991). *Parapsychology: The controversial science*, Ballantine.
- Brusewitz, G., Parker, A. & Cherkas, L. (2010). Exceptional experiences amongst twins: A preliminary investigation. *Paper presented at the 35th International SPR conference in Edinburgh*
- Cassidy, J. (1999). The nature of the Child's Ties, in Cassidy, J. & Shaver, P.R. (Eds), *Handbook of attachment*.
- Cassidy, J. & Saver, P.R. (2008) (Red.) *Handbook of Attachment Theory, Research and Clinical Applications*. New York: Guildford Press
- Cherkas, L. (2004/2005). What is it like being a twin? *Twin Research Unit Newsletter*, www.twin-research.ac.uk.
- Crowell, J., Fraley, R. C., & Shaver, P. R. (2008). Measures of individual differences in adolescent and adult attachment. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications (2nd Edition)*(pp. 599-634). New York: Guilford Press.
- Fraley, R.C., Waller, N.G., & Brennan, K.A. (2000). An item-response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, 78, 350-365.

- George, C., Kaplan, N., Main, M. (1984/1996). *Adult Attachment Interview protocol* (3rd ed.), Unpublished manuscript, University of California at Berkeley.
- Granqvist, P., & Kirkpatrick, L. A. (2008). Attachment and religious behavior. Kapitel 38 i Cassidy and Shaver in Cassidy, J. & Shaver, P.R. (Eds), *Handbook of Attachment Theory, Research and Clinical Applications*. New York: Guildford Press.
- Granqvist, P. (2011). Personal communication to Göran Brusewitz.
- Haraldsson, E. (1985). Representative national surveys of psychic phenomena: Iceland, Great Britain, Sweden, USA and Gallup's multinational survey. *Journal of the Society for Psychical Research*, 53, 145-158.
- Hesse, E. (1999). The Adult Attachment Interview: Historical and current perspectives, in Cassidy, J. & Shaver, P.R. (Eds), *Handbook of Attachment Theory, Research and Clinical Applications*. New York: Guildford Press.'
- Jensen, C. G. & Parker, A. (2012) Entangled in the womb: A pilot study on the possible physiological connections between identical twins with different embryonic backgrounds. *EXPLORE: The Journal of Science and Healing*, 8, (6), 339-347
- LaBerge, S. (1985). *Lucid dreaming*. Los Angeles: Jeremy P. Tarcher, Inc.
- Parker, A. (2003). Psi and altered states. Chapter 10 in L. Storm & M. Thalbourne (Eds.) *Parapsychology in the 21st Century* Jefferson, NC: McFarland pp. 65-89.
- Parker, A. (2010) A ganzfeld study using identical twins. *Journal of the Society for Psychical Research*, 73, 118-126.
- Parker, A. & Jensen, C. G. (2012) Further possible physiological connectedness between identical twins. *EXPLORE: The Journal of Science and Healing*, 9, (1), 339-347.
- Playfair, G.L. (2012). *Twin Telepathy*. Guildford: White Crow Books.
- Radin, D. (2006). *Entangled minds*. New York: Paraview Pockets Books, p. 272.
- Rhine, L. (1956). Hallucinatory psi experiences : I. An introductory survey. *Journal of Parapsychology*, 20 :233-256.
- Rhine, L. (1962). Psychological processes in ESP experiences : Part II Dreams, *Journal of Parapsychology*, 27, 172-199.
- Segal, N. (1999). *Entwined lives*. New York. Penguin Books.
- Sheldrake, R. (2011). *Dogs That Know When Their Owners Are Coming Home*'
- Spector, T.D., & Williams, F.M. (2006). The UK Adult Twin Registry (TwinsUK). *Twin Research and Human Genetics*, 9, 899-906.
- Storm, L., Tressoldi, P., & Di Risio, L. (2010) Meta-analysis of free-response studies, 1992–2008: Assessing the noise reduction model in parapsychology. *Psychological Bulletin*, 136, 471–485.
- Waggoner, R. (2009) *Lucid Dreaming*. Needham Mass: Moment Point.

APPENDIX: THE EXCEPTIONAL EXPERIENCES QUESTIONNAIRE

Questions concerning telepathic like experiences:

Q1. If they were identical or non-identical twins,

About telepathy:

Q2. If they ever had experienced telepathy with the other twin, by which is meant some form of communication which could not easily be explained by expectancy, common experiences, or other normal means.

Q3. How often have you experienced telepathy: a) frequently, b) occasionally, and c) only once or twice?

Q4. During telepathy, there is usually one person sending the message – ‘the sender’ and the other person receiving the message – ‘the receiver’. During your telepathic experience(s) were you? a) always ‘the sender’ of the information, b) always ‘the receiver’? C) In some cases the sender and in others the receiver?

Q5. During the time(s) that you were the ‘receiver’ of the information, did you experience telepathy during a) a waking state, b) a dream state, c) a form of altered state.

Q6. Have you successfully received or sent what seemed to be a form of telepathy about: a) pain or illness, b) an accident or injury, c) a problem or state of mind (such as depression or anxiety), d) other, please specify?

Q7. Please tell us about your telepathic experience(s)

Questions concerning remarkable coincidences – synchronicities:

Q8. Have you and your twin ever experienced any remarkable coincidences in events or decision making?

Q9. How often do these remarkable coincidences occur? a) frequently, b) occasionally, c) only once or twice.

Q10. Please tell us more about these remarkable coincidences.

Questions concerning shared dreams:

Q11. Have you ever experienced shared dreams?

Q12. How often do these shared dreams occur? a) frequently, b) occasionally, c) only once or twice.

Q13. Please tell us more about these shared dreams.

Questions concerning Attachment

Q14. For how many years were you and your twin in the **same** school?

Q15. For how many years were you and your twin in the **same** class?

Q16. How strongly attached were you to your twin a) during childhood and b) during adulthood. By strong attachment we mean the extent to which you turn/ed to your twin in times of need, discuss/ed your problems/concerns with him/her, talk/ed things over with him/her, find/found it easy to depend on him/her, feel/felt comfortable opening up to him/her.

Attachment during childhood, circle 1 for weakest attachment, 7 for strongest.

Attachment during adulthood, circle 1 for weakest attachment, 7 for strongest.

Q17. As far as you are aware, during childhood, did you and your twin communicate in your own private words that no-one else understood? – No, Yes or Don’t know.

Q18. Would you be interested in participating in future research about exceptional experiences? – No or yes