

**Title:** Experiencing 'continuity': A qualitative investigation of waking life in dreams

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## **Abstract**

Continuity between waking life and dreaming has typically been studied via the quantitative analysis of dream reports, which has illustrated that dreaming reflects waking-life experiences, thoughts, and emotions. However there are currently no reliable methods of analysing dreams for more subjective aspects of dreams, such as dreams that are metaphorically related to the dreamer's waking life. We conducted a qualitative study involving in-depth semi-structured interviews with four participants. The interview schedules were based on Schredl's (2010a) dream group technique. Using thematic analysis we developed three themes that describe continuity between waking life and dreams: 'Experiential Continuity' (between waking-life experiences/thoughts and dreams); 'Emotional Continuity' (between waking-life emotions and dreams); and 'Representative Continuity' (metaphorical and generic representations of waking life in dreams). Rather than being dichotomous, participants experienced continuity in gradations. A fourth theme ('Attitudes Towards Continuity') explored how attitudes towards continuity influenced continuity experiencing.

## Introduction

The continuity between an individual's waking-life experiences (including thoughts, emotions, and activities) and their dreams has been researched in a number of ways, generating a wealth of understanding about the subject, such as the relative frequency of different kinds of waking-life activities in dreams (e.g. Hartmann, 2000; Schredl, 2000; Schredl & Hofmann, 2003), and the fact that we can glean an individual's waking-life conceptions and concerns from their dreams (e.g. Domhoff, 1996). It has been shown that certain types of experiences are more likely to be incorporated into dreams than others, such as emotional experiences (Horton, Smith & Proctor, 2011; Malinowski & Horton, *under review* (a); Schredl, 2006), and this may indicate that dreams serve an emotional-processing (e.g. Hartmann, 1996; Walker & van der Helm, 2009) or emotional memory assimilation (Malinowski & Horton, *in prep.*) function. While quantitative analysis has a vast array of benefits (as discussed in Domhoff, 2003), it has limitations as well. For example, content analysis performed by independent judges can produce results that are markedly different from dreamers' self-ratings, even when inter-rater reliability is high (e.g. Schredl & Doll, 1998, Schredl & Erlacher, 2003), and, furthermore, independent judges are unlikely to be able to make the links between a dream and the dreamer's waking life that the dreamer themselves could, since dream imagery is unique to individuals, based on their experience and understanding of the world (Domhoff, 2003). The methodology proposed in this paper is advantageous in its detailed consideration from both the dreamer in their interviews, and the researchers in their analysis.

The aim of the present study therefore was to explore continuity between waking life and dreaming in thorough detail, employing a methodology that would enable a more

personalised account of wake-dream continuity to be elicited. Using a qualitative approach to studying continuity may uncover novel aspects of wake-dream continuity; further, it can also produce a synthesis of understanding, rather than searching for a typical or average experiences (Rubin & Rubin, 2005) which is important as dreaming is individualised (Parker & Alford, 2010), by eliciting the dreamer's own understanding of their wake-dream relations. Further, using interviews as a data collection tool enables us to understand not only what individuals dream about but also how they interpret their dreams (Weiss, 1994).

Domhoff (2003) advocated qualitative research as a supplement to quantitative content analysis, and reported quotations from interviews with participants to illustrate where inferences made from blind content analyses were confirmed. His findings illustrated that interviewing participants can enable discovery of discontinuities between dream content and waking-life experience, as in the case of one dreamer who often rode horses in dreams but not in waking life, which was thought by the dreamer to be metaphorical in nature. However, the manner in which the interviews are conducted must be considered with care, such as avoiding leading questions that may tempt the interviewee to agree with the interviewer (Kramer, 2010), such as "Did you think they are pretty positive dreams, your horse dreams?" (Domhoff, 2003, p.129).

Thematic analysis of interviews was chosen as the method of analysis, with the intention that it would be able to elicit unanticipated insights (Braun & Clarke, 2006) into continuity, particularly in terms of those that quantitative methods may be less able to generate. For example, quantitative researchers note that it is likely that dreams may be indirectly as well as directly related to waking life, but that this is very difficult to research objectively (e.g. Bulkeley & Kahan, 2008). There is evidence from quantitative research that indirect

continuity, continuity between waking life and dreaming that is not literal but may be thematic or metaphorical, exists (e.g. Davidson & Lynch, 2011), but it is scant and does not provide any detail of the nature of the continuity. Indirect continuity cannot be ignored if continuity is to be investigated fully, but it is also much easier to misjudge, and so should be researched with as much participant input as possible.

The current research explored, using interviews analysed with thematic analysis, participants' wake-dream continuity experiences, and discusses what continuity can reveal about the nature of dreaming.

## **Methodology**

### *Participants*

Four participants took part in the study. Initials are used instead of names in the report. At the time of the study, EC was 45, MF was 44, JC was 26, and PC was 44. Participants received no remuneration for their participation but shared an interest in discussing dreams.

### *Dream collection*

Participants kept a dream diary for two months. The diary was electronic and included the month and day at the top of the page for each day of the study, along with the instructions: "Please document in as much detail as possible any dreams you can remember from last

night's sleep (expanding onto as many pages as necessary)". Participants were asked to record their dreams in the morning immediately upon awakening from sleep. No other instructions were given for completing the diary. A total of 142 dreams were collected, with an average word count of 167.77. EC reported 37 dreams (average word count 220.65); MF reported 17 dreams (average word count 143.41); JC reported 39 dreams (average word count 175.45); PC reported 49 dreams (average word count 130.20).

### *Interviews*

Interviews were conducted at the end of the first month of the study and the end of the second month of the study, no longer than one week after each month of the diary was completed.

A semi-structured interview schedule was developed for this study. The interview schedules were based on Schredl's (2010a) dream group method, 'Listening to the dreamer', which was designed to draw out dreamers' waking-life experiences in relation to a dream without the questioner(s) influencing the dreamers' responses or offering their own interpretations. In the study, this method was used for the one-to-one interviews, with the questions written prior to the commencement of the interviews. There were four stages of the interview: 1) asking the dreamer clarifying questions about the dream; 2) asking the dreamer whether the different elements of the dream (e.g. characters) were associated with anything from their waking life; 3) asking the dreamer to describe the basic action pattern of the dream (retelling the actions and interactions without the specific imagery of the dream); and 4) asking the dreamer whether they saw any parallels between the basic action pattern of the dream and their waking life.

For each interview, participants were asked questions about four dreams, selected from the dream diary the participants had been keeping. Two dreams were selected for apparent high levels of wake-dream continuity (i.e. many explicit references to waking life such as “I was at work”), and two dreams for apparent low levels of wake-dream continuity (i.e. few references to waking life). In one of their interviews, participants were also asked to discuss wake-dream continuity in general.

The study abided by British Psychological Society ethical guidelines, and received local approval from an institutional panel at Leeds Metropolitan University. Interviews lasted between 90 and 120 minutes and were conducted in participants’ homes. The interviews were audio-recorded and later transcribed verbatim.

### **Analysis**

Interviews were transcribed including all pauses and non-word communications (such as “um”), and emphasis was added using italicisation where participants verbally emphasised a word or group of words. An in-depth inductive thematic analysis (following Braun & Clarke, 2006) was conducted. Thematic analysis is inductive and data-driven, rather than theory-driven, and its purpose is to organise and richly describe the data.

Two of the researchers coded the transcripts and grouped the codes into themes, one familiar with the dream research literature and one not. The analysis was essentialist, in that it examined participants’ experiences and meanings of continuity, and their motivations and beliefs, but not the influence of societal constructions on these experiences, meanings, motivations, and beliefs (Braun & Clarke, 2006). It formulated an initial description of the

data, followed by an interpretation, in terms of theorising around the meanings and significance of the findings within the research topic. Themes were devised for both internal homogeneity, i.e. the coded extracts cohered meaningfully within the theme, and external heterogeneity, i.e. there were “clear and identifiable distinctions” (Braun & Clarke, p.91) between the themes. Following this, themes were reviewed and refined and quotes were selected that best illustrated the essence of each theme. The process of conducting the thematic analysis also led to a discussion of the different ways in which continuity was manifested within dreams, as well as the influence that attitudes towards wake-dream continuity may have upon dream-wake continuity. A discussion of these issues follows the presentation of the themes arising from the initial analysis.

## **Results and Discussion**

Three main themes were found that describe participants’ experiences of wake-dream continuity: ‘Experiential Continuity’, ‘Emotional Continuity’, and ‘Representative Continuity’. The data also provided evidence for gradations of continuity, rather than a dichotomy of continuous/discontinuous. Finally, we explored how the ways in which participants viewed dreaming influenced their interpretation of continuity. A thematic map is shown in Appendix 1. The themes are described below, with illustrative quotes to support each theme description. All quotations are verbatim other than removal of non-words (such as ‘um’) and filler words (such as ‘you know’) for ease of reading, as well as personal details that could risk participants being identified.



## 1. Experiential Continuity

The first theme, 'Experiential Continuity', was a large theme encompassing aspects of dreams that reflected participants' regular waking-life experiences. There were three sub-themes, as described below.

### *Work, Studies, and Hobbies*

Participants often reported that aspects of their dreams reflected activities from their waking lives, particularly work and/or studies: JC dreamt of teaching, EC of starting a university degree, MF of her old job, new career, and newly-found student status, and PC of his PhD studies. For example, MF said of a dream in which she was a student at the university she had worked in: "this dream is probably a combination of me having *left* the university as a workplace but then having gone *back* to another university as an undergraduate student". In addition, all four participants dreamt of hobbies that were work-like in that they were cognitively focused, such as translating a text or writing a novel.

One aspect of work/studies that was particularly dreamt of for MF and EC was the novelty of their situation. EC had moved cities and started a university course and her dreams referred to this many times. MF had left her job, started a new one, and also started a university course, and she dreamt of all three of these novel life developments. Similarly, MF, in relation to learning a new language, noted that she and her classmates all dreamt of it, and said, "I think that's just part of learning the language". Indeed, dreaming of language-learning has been shown to relate to improvement (de Koninck et al., 1988; de Koninck et al. 1990), although it has also recently been suggested that the dream is a reflection of improvement, not active in it (de Koninck et al., 2012). The dreams were also often of things

participants were specifically working hard on or struggling with; for example, JC dreamt of a “hypocritical villain”, which was a character he was currently devising for a piece of writing, and MF of her struggle to translate a difficult text. This may seem at odds with Hartmann’s (2000) conclusion that we tend not to dream about “rapid processing – output” (p.103) cognitive behaviours, such as reading or writing. However the continuous activities referred to here may have been incorporated into dreams on the basis of their novelty or difficulty.

### *Media*

Another commonly dreamt-of waking-life experience was aspects of the media, particularly visual media such as television and films, and to a lesser extent verbal media such as books and magazines. Visual media were most common in dreams in the forms of characters or actors and locations. However, they were usually displaced, with characters being amalgamations of two or more people, and the dreamers themselves appearing in locations from television programmes or films but with unrelated characters and actions in the dreams. For example, EC said one dream character was “a mixture between Rambo and Clint Eastwood”, and MF said she sometimes dreamt of herself on board a spaceship from the television programme ‘Battlestar Gallactica’.

In contrast to the ubiquity of the influence of visual media on participants’ dreams, verbal media had only a small influence, and not because the participants spent more time engaging with the former than the latter. Two participants (JC and MF) commented that it was strange that they dreamt so little of the books they read, given how much time they spent with them. JC said: “I don’t watch much TV, and I don’t dream of book characters

anywhere near as much as I do about TV characters, which is interesting". It may be that visual media influenced dreams much more because of the visual nature of dreams (Schredl & Wittman, 2005). More research would be welcome in investigating how media appears in dreams, such as whether some television programmes appear differently in dreams than others.

### *Thoughts*

In addition to things participants were currently experiencing, dreams also often reflected more distant elements of waking life, including from childhood; but the experiences were current in *thought*. For example, PC dreamt of his childhood friend, whom he had not seen in many years, twice within the duration of the study. PC said that to dream of the friend was "not completely out of the blue" because of the occasional thoughts he had about him. The fact that thinking about something may trigger dreaming of it may also hold some explanatory value for the subtheme 'Work, Studies, and Hobbies'. It may be that participants dreamt of their novel and difficult work situations, studies, and hobbies not because they were novel or difficult *per se*, but because the novelty and/or difficulty of the experiences meant that they were ruminating upon them more than other experiences.

## **2. Emotional Continuity**

Whereas 'Experiential Continuity' referred to aspects of physically-experienced waking-life activities (whether current, or distant in time but current in thought), 'Emotional Continuity'

refers to aspects of waking life that were often more abstract, and not necessarily tied to a specific experience. It comprised three sub-themes, described below.

### *General Emotions*

Three of the four participants stated that they felt their dreams were more related to their waking-life emotions than actual experiences; for example, MF said “the emotional tenor of the dreams relates to things that are going on in my waking life but not usually to specific events”. Emotions ranged from the very negative, such as anger and guilt, to the very positive, such as excitement and elation. However, the most commonly expressed emotion was concern, in line with findings that dreams represent dreamers’ concerns, one of the major findings of content analysis (e.g. Domhoff, 2003). Two very different ways in which concerns were dreamt of were discussed: those that passively reflected concerns, and those that aided the dreamer in moving forward with those concerns.

### *Reflections of Concerns*

A multitude of dream elements were thought by the participants to reflect their waking-life concerns, such as sexuality and issues with self-acceptance. Participants often discussed concerns that reflected something unresolved or unfulfilled, pictured the fulfilment of a wish, and/or ‘compensated’ for the waking-life concern by picturing the opposite. For example, JC said of dreams about his sexuality that he had had an “endless stream of sex dreams” in which sexual domination and submission were “key themes”; and he said that in his dreams “I think I feel the need to submit when I feel guilty almost about my own

dominant desires". Hence, dreams of submission were seen to compensate for the waking desires of domination. Here, the reflection of concerns was not necessarily direct in that it was similar to waking life; rather it was opposite to it, whilst still being inherently continuous.

### *Progression of Concerns*

There were several ways in which dreams seemed to participants to facilitate the progression of a waking-life concern in some way, as opposed to mere reflection. Sometimes participants saw in their dreams the transmission of 'messages' from the dream to the waking mind, from relatively innocuous 'reminders' to do something, to stronger messages of instruction. Occasionally, dreams would appear to present a solution to something from waking life, but both JC and MF explained that it would become clear upon waking that the dream-solutions were not viable; for example, JC said: "I do have dreams where I think I've found the answer to something. And when I wake up I realize I actually haven't. [...] I was dreaming, thinking 'I can solve things in my *sleep*, how awesome am I?' I woke up and realised it was complete gobbledegook". Problem-solving in dreams is heard of anecdotally but there is not much empirical evidence for it, and is argued against as a theory of dream function (e.g. Blagrove, 1992). This was similar to the finding in the present study; MF even noted that she had heard of the idea that dreams could be problem-solving, but that it was not that direct for her.

Progression, then, came not from the presentation of solutions in dreams but the *explorations* of concerns and sometimes the explanations available to be found in them. It was clearest for EC, who said that "all of the bits I don't understand in life, the stuff that

goes on that makes me scared...all of that I explain to myself in my dreams". For instance, she thought that her dreams about her childhood communicated messages that enabled her to recognise what was wrong with the patterns she had been perpetuating from childhood, and she became "aware of my own motivation, which releases me from repeating patterns". Similarly, JC considered dreams that dealt with his sexuality to be "a way of exploring that issue". He explained: "I never think, 'Oh my gosh, I've now uncovered the core to everything, I've seen something I've never seen before...Well sometimes I see things I haven't seen, but it's all part of the bigger – a bigger process of getting to know yourself."

This grouping of dreams – dreams that facilitated exploration and progression – illustrates an important potential dichotomy in continuity, between passively reflective dreams, and actively progressive dreams. It relates to emotion-processing theories of dreaming, particularly the idea that dreams help to ameliorate emotions (e.g. Hartmann, 1996; Walker & van der Helm, 2009). This was, in fact, evidenced in one participant's dream: MF, discussing a dream she had had about her old job, said: "the fact that I had this dream but it wasn't an anxiety dream or at least not to the same extent may have been significant, I was kind of neutralising it, and perhaps putting it away and saying 'OK I don't have to have those dreams any more because I don't work in that environment any more'." Furthermore, while the Reflection of Concerns sub-theme could be akin to emotional cognition within dreams, the Progression of Concerns sub-theme could be likened to emotional metacognition within dreams. Indeed, there is great evidence for metacognitive capabilities within dreaming (e.g. Kahan & LaBerge, 1994).

### **3. Representational Continuity**

The theme of Representational Continuity described continuity in which the dream represented something from waking life: it either represented a specific element of waking life in a non-literal way ('Metaphorical Representation') or it represented a generic element of waking life ('Generic Representation'). These two sub-themes are described below.

#### *Metaphorical Representation*

Dreams and dream elements were perceived as "metaphors", "symbols", and "representations" for something from waking life in a number of related but different ways. In particular, dream characters were perceived to represent a variety of things from waking life; for example, EC said of a female character: "She represents the bit of me that's not scared, so the bit of me that's just getting on with it". EC was especially conversant with symbols in her dreams, to the extent that she recognised when a dream symbol meant the same thing in different dreams, such as a car journey symbolising her "psychological journey". This was also the case for one or two symbols that appeared in JC's dreams, such as mountains and clouds, which represented "spirituality". PC was the only participant not to use the term 'metaphor', 'symbol', or 'representation', and stated that he felt his dreams were quite "mundane" in the sense that they were literally relatable to his waking life. Nevertheless, there were also occasions in which his dream portrayed waking life in non-literal ways, such as in a dream about Walloon and Flemish cardinals playing each other at football: "as I assumed that they are Walloon, this is my own kinda interpretive portrayal of the state of Belgian politics at present." His use of the term "interpretive portrayal" was similar in meaning to the other participants' use of the words 'symbol', 'representation', or

'metaphor', in that they all conform to the definition of metaphor as a statement of non-literal similarity.

Metaphor in dreams was often the transmutation of something abstract from waking life (e.g. "the bit of me that's just getting on with it"), into something concrete in dream (e.g. a person). This was a common dream experience for the participants. For example, PC dreamt of Belgian politics as cardinals playing football, as above; JC dreamt of releasing a demon, which represented releasing his "own inner demon"; MF dreamt of the maiden voyage of the 'Starship Enterprise', which represented her new ('entrepreneurial') career "taking off". This notion of abstract-to-concrete in metaphor, in particular in dream metaphor, has been noted by many researchers in the past, such as Lakoff (1993) and Hartmann (1996). It is a crucial aspect of continuity, because it demonstrates how apparent discontinuities in dreams can actually be metaphorically continuous.

### *Generic Representation*

While some dream elements represented specific parts of waking life, others represented generic parts of it. That is, a dream element was easily recognisable as a certain 'type' from waking life, but had not been specifically encountered in waking life, such as a dream MF had that was set in a bookshop, and contained a character who "looked like a very stereotypical and poorly sketched second-hand dude". Strauch and Meier (1996) have noted that such 'types' may be the "building blocks" (p.161) of dreams. The bookshop assistant, for example, plays a role in the dream, and is able to conform to a type of person MF could categorise, but not any specific person she knew from waking life. This enabled the action of



the dream to progress, i.e. engaging in a bookshop scenario. The presence of ‘types’ in dreams is analogous to ‘extras’ in a film: necessary for the action, but not central to the plot.

However, Strauch and Meier (1996) also suggested that these ‘extras’ may be symbolic expressions, referencing specific abstract aspects of waking life, much like in the subtheme Metaphorical Representation. They gave an example of an unfamiliar briefcase in a dream (a ‘type’ object) being potentially related to the relationship with the dreamer’s father. For three of the four participants of the study, such generic types were only discussed as ‘building blocks’, in that they were not related to abstract aspects of waking life. However, for EC, types were also often symbolic. For example, two women in a dream conformed to EC’s concept of a “bitchy” women type, and they also represented being “caught up in [...] the dramas that we create for ourselves, that I create for myself”. Thus, types can be building blocks, but they can also be metaphors.

### **Gradations of Continuity-Discontinuity**

The data enabled us to explore the nature of continuity and provided evidence for gradations of continuity: dream elements were not always exactly ‘continuous’ or ‘discontinuous’, but usually somewhere in between. These gradations concerned the physical elements of dreams, particularly the people who carry out the actions (characters), and the places where the dreams are set (locations). Five types of continuity-discontinuity were found: ‘Total Continuity’; ‘Irregular Continuity’; ‘Uncertain Continuity’; ‘Representative Continuity’; and ‘Discontinuity’ (see Table 1).

### **Table 1 – Gradations of Continuity-Discontinuity**

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<b>Total Continuity</b>	Dream element (e.g. character or location) looks, behaves, and occupies a role in accordance with its waking equivalent, and has been seen recently.
<b>Irregular Continuity</b>	Dream element (e.g. character or location) is from waking life but: has not been seen in waking life for many years; occupies an inaccurate role or behaves inappropriately; or is famous.
<b>Uncertain Continuity</b>	Dream element (e.g. character or location) may be from waking life but: the similarity is unclear or passing; or it is a combination with other elements (from waking-life or not).
<b>Representative Continuity</b>	Dream element (e.g. character or location) is a metaphor for something from waking life, or conforms to a certain generic type of element from waking life.
<b>Discontinuity</b>	Dream element (e.g. character or location) is not relatable at all to waking-life.

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There was only one dream element that was unequivocally totally continuous with waking life following the definition above. MF dreamt of a classroom she taught in, and said: "I can tell you exactly where it is, absolutely, there was no dream element involved – it was just what the campus is like, in real life".

'Irregular Continuity' refers to people or places behaving differently to their waking-life equivalents, or that have not been seen for a long time. For example, MF dreamt of a bookshop that she recognised from waking life, but she said it was "an absurdly long time ago, 15 years minimum, probably more, since I was there".

'Uncertain Continuity' related to dream elements that were only *somewhat* like their waking-life equivalents, either because the similarity was only guessed at, vague, or passing, or because they combined waking-life people with 'made-up' people. For example, PC said of a railway track in a dream: "It reminds me – I don't know *why* it reminds me of this 'cause it's not *like* it – of S\_ railway station"; and MF dreamt of a city that combined elements of two cities that she had previously lived in.

Dream characters and locations could also be representative of something from waking life – as in the sub-theme 'Metaphorical Representation' above.

The final type found in the study was 'Discontinuity', whereby dream characters or locations were not related by the participants to anything from waking life, not even a generic type. For example, PC said of one dream character that she "didn't strike me as having been triggered by somebody or something, or a situation". Three of the four participants emphasised that their dreams regularly involved people that did not seem to stem from waking life.

The types of continuity-discontinuity specified here are not expected to be an exhaustive account of all types of continuity, but represent a way of conceptualising continuity as having gradations, opposing the dichotomising of continuity and discontinuity (e.g. in Hobson & Schredl, 2011). These gradations of continuity bear some similarity to a previous

attempt to categorise bizarreness: Revonsuo and Salmivalli's (1995) content analysis method for bizarreness scoring included the following categories. Non-bizarre elements had to be "congruous with waking reality" (p.174); this is like 'Totally Continuity'. Bizarre elements were incongruous, vague, or discontinuous, with 'incongruous' similar to 'Irregular Continuity', and 'vague' similar to 'Uncertain Continuity'. 'Discontinuous' is only similar in name to 'Discontinuity', as the former refers to discontinuity within the dreams (e.g. sudden appearance/disappearance) and the latter to discontinuity with waking life. There was also one major difference: the only continuity category that is not present in any comparable form in the Revonsuo and Salmivalli system is 'Representational Continuity', and this category demonstrates how continuity and bizarreness may exist together: a dream character or place may be discontinuous in that they are unknown from the dreamer's waking life, but continuous in that it *represents* something known from waking life.

### **Attitudes Towards Continuity**

The data enabled us to explore how participants' attitudes towards their own dreams influenced their experience of continuity.

Two of the participants of the study (MF and PC) explicitly spoke of their reluctance to look for meaning for their waking lives within their dreams. When asked about continuity in one dream, MF replied: "A part of me's quite resistant to thinking about it in those terms". PC's stance was similar: "I don't in the ordinary course of things probe and analyse that much, quite often I'm just – I'm quite happy if I get some striking image or something out of it". They also spoke of disappointment with dreams that were obviously about some aspect of their waking life and were thus "boring". MF, in describing a dream in which she found

herself back at university as a student and found herself in the wrong class, which she related to having started at a university as a student, said: “I was *bitterly* disappointed at having had such an incredibly boring, predictable dream”. PC similarly said: “to be honest I find most of my dreams really quite boring. ‘Cause they seem boringly literal, and fairly uninspired.” Thus while both participants acknowledged that they could see things from their waking lives in their dreams, such literal wake-dream continuity was seen as dull, predictable, and disappointing, and so not sought after. Additionally, PC noted that since being the victim of a road traffic accident, he was more anxious about his dreams because he was “oversensitive to bouts of anxiety as reflected in dreams”.

In opposition to reluctance to perceive continuity because it leads to disappointment, participants sometimes expressed avid enjoyment of certain dreams, and enjoyment in the perception of the continuity of these dreams. Of MF’s dream about a spaceship ‘taking off’ being about her career ‘taking off’, she said, “I *really* enjoyed this dream!”, and explained that that was because “it was a very lazy dream in the sense that I didn’t have to get off my arse in this dream”. Subsequently, she related this enjoyment of the dream to the waking-life situation: “I actually really enjoy the fact that I don’t have to deal with anybody in person, email me your stuff and I’ll email it back and that suits me absolutely fine”. Similarly, EC discussed a dream that she enjoyed, and the enjoyment pertained to her perception of how the dream related to her waking life. Having described the dream, she explained that it pre-empted a situation in her life that gave her joy: “So the joy that I felt in waking life at that working out, that situation working out [...] that joy was a reflection of the joy I felt in – in the dream”. This enthusiasm for continuity was associated with a greater awareness of it, and different types of it – particularly metaphorical continuity and continuity that facilitated

progression with concerns. EC and JC frequently discussed dreams as representing something non-literally from waking life, and that enabled them to progress with or explore their waking-life issues; MF much less so, although she did occasionally; and PC very rarely.

When measuring attitudes towards dreams using quantitative methods, researchers ask participants a number of questions on a Likert-type scale to assess whether their attitude is positive or negative, and generally focus on how much attention is paid, and meaning and value ascribed, to dreams (e.g. Beaulieu-Prévost & Zadra, 2005). The findings of present study, however, suggest that attitude towards dreams measurements should perhaps not emphasise dream meaning so much, since MF and PC both engaged with their dreams and had positive attitudes towards them in the sense that they liked to record them, enjoyed their beautiful dreams, and they also said that they used them in their creative work; but they did not engage with trying to decipher the meaning of their dreams. According to attitude towards dreams measures, this would count against them in evaluating their attitudes, but it may be that such measures need to differentiate between people who look for meaning in their dreams, and people who use their dreams creatively and/or have positive attitudes towards them in other ways.

### **Methodological Discussion**

Because the method used in the study is novel to the study of continuity, it is important to note where improvements may be made. Schredl's (2010a) 'Listening to the Dreamer' dream group technique was a good way of eliciting participants' understanding of their own dreams whilst minimising interviewer input; however, participants occasionally had difficulties with considering the 'basic action pattern' of the dream. This may need to be

reworded or several examples may need to be available to hand to clarify this to the participant. In addition, while it was felt it would be beneficial to ask, at the end of the interviews, for participants to talk generally about their perception of wake-dream continuity, with hindsight it is arguable that this sort of discussion, which is not specifically based on recent, documented dreams, would be more susceptible to memory flaws, and thus it would be preferable in the future only to discuss specific, recent, documented dreams. The selection of dreams was performed by one of the researchers; an alternative to this would be ask participants to self-rate their dreams for continuity and then dreams rated low and/or high could be chosen. Alternatively, a simpler method such as the 'Most Recent Dream' method could be used, with no criterion for levels of continuity.

The methodology posited here is intended to supplement and enhance established quantitative methods such as content analysis, since the interview method posited here is limited in terms of its generalizability and the potential for demand characteristics to affect the data. Interviews could be conducted with participants prior to, or by different researchers after, the blind coding of dreams using content analysis, in order to reduce confirmation bias. Interviews could also be used to supplement findings from other methods such as 'Most Recent Dream'. The benefits of interviewing participants would not be limited to confirming or otherwise the findings of content analyses, but to obtain a level of detail unobtainable by content analysis, such as exploring discontinuities and non-literal continuities.

Whilst a thematic analysis approach could be deemed comparable to a cluster analysis approach, in which particular characteristics or words are identified and counted, the thematic analysis has provided a solid basis for potential additional analyses in future. The

thematic analysis has afforded the opportunity for data-driven exploration of how continuity may manifest in dreams. Subsequent cluster analyses could explore the extent to which the themes of continuity exist

Although qualitative research such as the present study is limited in that it is not generalizable, it has the potential to uncover hitherto unnoticed aspects of continuity that can be carried forward and researched quantitatively and using methods that enable generalizability. For example, Bulkeley and Bulkeley (2005) discovered through inductive analysis of dreams that transportation dreams may represent the journey towards death; this was later supported by quantitative, objective, blind analysis by Bulkeley (2012) of a different set of dreams. Additionally, it is not necessary for interviews and thematic analysis to be conducted together; though this was the chosen method for the present study, interviews could also be analysed with a more quantitative method of analysis, such as content analysis. For example, themes could be determined by frequency only, thus combining qualitative and quantitative methods. Nevertheless the benefits of the present method made use of subjective awareness of waking life as well as dream activity from the dreamers, which facilitated insight into the nature of wake-dream continuity, which traditional experimenter ratings of dream activity would have missed.

### **Summary and Conclusion**

The thematic analysis found three themes of continuity within participants' dreams. Two were types of continuity ('experiential' and 'emotional'), and the third described a way in which continuity is manifested (as representations of waking life). Further to these three themes it was also noted that continuity/discontinuity may be viewed as a gradation rather



than a dichotomy; and that individual differences, specifically concerning attitude, may have influenced the experience and perception of continuity. Within these themes, there were some key findings. A potential dichotomy was found between concerns that were reflected in dreams, and concerns that the dream helped progression with; this is likely to be influenced by attitude. It was found that dreams may represent something non-literally continuous with waking life, and this illustrates how continuity and bizarreness may exist together. The study also found a number of factors that influenced participants' experiences of continuity: for example, participants dreamt often of their novel and/or difficult waking-life activities, but this may be due to the amount of time they spent thinking about those activities. In addition, visual media were found to be incorporated into dreams more than verbal, implying a role for observed experiences.

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**Appendix 1 – Thematic map**



