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# Dream Content in Complicated Grief: A Window into Loss-Related Cognitive Schemas Running Head: Dreams in Complicated Grief

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## Abstract

Bereavement and its accompanying psychological response (grief) constitute potent experiences that necessitate the reorganization of cognitive-affective representations of lost significant attachment figures during both wakefulness and dreaming. The goals of this preliminary study were to explore whether the dream content of 77 adults with complicated grief (CG) differed from that of a normative sample, and to explore whether CG patients who dream of the deceased differ from CG patients who do not dream of the deceased on measures of daytime emotional distress. CG dreams were characterized by more family and familiar characters including the deceased (in women), and fewer social interactions and emotions compared to norms. Increased representations of familiar characters in CG dreams may reflect attempts to reorganize relational cognitive schemas to compensate for the loss.

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## Introduction

Dreaming is a universal human experience which has stimulated much theoretical, clinical, and empirical debate. Psychodynamic, existentialist, and cognitive neuroscience models of the role and functions of dreams have been proposed (e.g., see Pesant & Zadra, 2006; Hobson, Pace-Schott & Stickgold, 2000; Domhoff, 2000; Solms, 1997). Regardless of one's theoretical approach to the study of dreams, there is a general agreement that waking life experiences, including specific events, related thoughts, memories, and emotional states, do influence dream content (e.g., Freud, 1900; Jung, 1974; Foulkes, 1985; Hartmann, 1984; Hobson, et al., 2000; Nielsen, 2000; Maquet et al., 1996).

Bereavement and its accompanying psychological response (grief) constitute potent waking experiences that can influence dream content. Although not substantiated by empirical data, several anecdotal case reports are consistent with the widely-held belief that dreaming of the deceased may be an important component in the recovery process (Garfield, 1996). This hypothesis proposes that dreaming about the deceased facilitates emotional processing of the loss by "desensitizing the survivor to it, eventually allowing him or her to bear the unbearable" (Garfield, 1996). It is also possible that dreaming of the deceased is a compensatory process that operates by providing aspects of the waking life previously fulfilled by the deceased that are now missing. Either way, the notion that dreaming of the deceased facilitates coping with the loss of a loved one suggests that such dreams would be associated with reduced daytime emotional distress. However, we are not aware of empirical data which support the dreaming-as-coping hypothesis by showing that bereaved individuals who dream of the deceased show reduced emotional distress compared to bereaved individuals who do not report dreams of the deceased. Normative data in non-bereaved people indicate that dreaming of a deceased person is a rare event, occurring in 1% of dreams reported by women, and less than 1% of dreams reported by men (Hall & Van de Castle, 1966), and in 2% of college students (Barrett & Loeffler, 1992). If the hypothesis linking dreams of a lost loved one with better coping is correct, bereaved people should report a higher rate of dreaming about the deceased than that observed in normative dream content data. In addition, bereaved people who report dreaming of the deceased should cope better than those who do not report dreaming of the deceased. Similarly, bereaved individuals who are not coping well, such as those who have symptoms of complicated grief, may experience more emotional distress when they report fewer dreams of the deceased.

Complicated grief (CG) is a disorder characterized by symptoms of prolonged acute grief persisting for more than 6 months after the loss of a loved one, and sometimes lasting for many years, and include intense, recurrent pangs of grief, and intrusive thoughts about the deceased individuals, which trigger and maintain avoidance of reminders of the deceased (Prigerson et al., 1996; Prigerson, Frank et al., 1995). Recently, diagnostic criteria for complicated grief, or prolonged grief disorder, have been proposed for the DSM-V and ICD-11, and include separation distress (yearning), and a variety of cognitive, behavioral, and emotional symptoms that follow bereavement, persist for more than six months after the loss, and is associated with significant functional impairments (Prigerson et al., 2009).

Although some symptoms of CG overlap with symptoms of major depressive disorder (MDD; sadness, social withdrawal) and posttraumatic stress disorder (PTSD; intrusive thoughts and avoidance). CG, like MDD and PTSD, is also associated with sleep disturbances (Germain, Caroff, Buysse & Shear, 2005; Hardison, Neimeyer, & Lichstein, 2005; Monk et al., 2008), several psychometric studies have now shown symptoms of these three conditions constitute distinct clusters (e.g., Boelen & van den Bout, 2005; Golden & Dalgleish, 2010; Prigerson et al., 1996; Prigerson, Frank et al., 1995), and that CG

represents a distinct syndrome (Boelen, van den Bout, & de Keijser, 2003; Langner & Maercker, 2005).

In individuals with CG, (as opposed to those experiencing normal grief) it is possible that dreaming of the deceased may, paradoxically, be associated with *more* severe daytime symptoms of psychiatric distress, rather than *less* distress and better coping. In this instance, dreaming of the deceased may be a symptom of CG related to increased daytime emotional distress, including intrusive images about the deceased. This would be in a manner analogous to that reported in trauma victims with acute and chronic stress reactions, and would be consistent with the dreams-as-symptoms hypothesis. Trauma-exposed individuals typically experience trauma-related dreams (e.g., Esposito, Benitez, Barza, & Mellman, 1999; Germain et al., 2004; Hartmann, 1984; Schreuber, van Egmond, Kleijn, & Visser, 1998) which include intense fear and other negative emotions, and are associated with increased daytime PTSD symptom severity (Krakow, et al., 2002). Others have reported a decreased frequency of dream recall in trauma exposed adults (Kaminer & Lavie, 1991)

Dream content in MDD is characterized by fewer characters and tends to be more mundane than dreams collected in non-depressed individuals (Agargun, Cilli, Kara, Tarhan, Kincir, & Oz, 1998; Armitage, Rochlen, Fitch, Trivedi, & Rush, 1995; Barrett, & Loeffler, 1992; Cartwright, Lloyd, Knight & Trenholme, 1984; Cartwright, Young, Mercer, & Bears, 1998). Increased nightmare frequency and negative dream elements in MDD have been associated with increased severity of depressive symptoms and suicidal ideations (Agargun et al, 1998; Agargun & Cartwright, 2003). In both PTSD and in MDD, intensified negative emotional valence of dreams is considered an index of failure in restorative dream function following a significant life event (Esposito et al., 1999; Rothbaum & Mellman, 2001; Hartmann, 1984; Cartwright et al., 1984; Cartwright et al., 1998). In a similar manner, increased frequency of negative dream elements and of dreams of the deceased in individuals with CG may be an index of a similar failure to adapt to the loss of a loved one.

The first goal of this preliminary study was to compare dreams collected from bereaved men and women with CG to sex-matched dream content norms in an exploratory manner, using a reliable and standardized dream coding system (Hall & Van de Castle, 1966). Although exploratory, we expected that CG dreams would be characterized by a greater frequency of negative dream elements (i.e., negative emotions, aggression, failures, misfortunes), as well as more references to deceased characters, and fewer instances of positive dream elements (i.e., positive emotions, friendliness, success, and good fortunes) compared to dream content norms. We also explored whether the severity of emotional distress differed in the group of CG patients who reported dreaming of the deceased compared to the group of CG patients who did not report such dreams.

## Methods

### Participants

Data were collected from a sample of 25 men (*M* age = 49.8, *s.d.* = 13.6 years old) and 103 women (*M* age = 47.0, *s.d.* = 12.7 years old) who enrolled in a larger study of the treatment of CG. Written, informed consent was obtained from all participants. Participants, design, and treatment procedures have been reported in detail elsewhere (Shear, Frank, Houck, & Reynolds, 2005). Briefly, participants were included if they were at least 6 months post-loss and if they endorsed symptoms generating a score greater than or equal to 30 on the Inventory of Complicated Grief (ICG) (Prigerson, Maciejewski et al., 1995). The ICG is a self-reported 19-item scale that assesses symptoms of complicated grief, and has an excellent internal consistency (Cronbach's alpha = .94) and test-retest reliability ($r$ = .80). A

score of 25 or higher is associated with significant functional impairments (Prigerson, Maciejewski et al., 1995). ICG scores in this sample ranged from 31 to 76.

Participants included in the present study all provided a dream narrative of their most recent dream prior to initiating treatment in the main study.

### Psychiatric Symptom Measures

Prior to treatment, the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960), and the Structured Interview Guide for the Hamilton Anxiety Rating Scale (SIGH-A; Shear et al., 2001a; Hamilton, 1959) were administered to all participants by a trained clinical assessor.

### Dream measures

Participants completed the Most Recent Dream Form (Domhoff, 1996). The MRDF form is a validated and reliable method developed for the collections of dreams in large samples by asking people to report the most recent dream that they can remember (Domhoff, 1996, 2000). This method has been shown provide representative samples of dream narratives (Domhoff, 1996).

The Hall and Van de Castle (H/V, 1966) dream content scoring system was used to code dream narratives reported by participants. The H/V system, derived from qualitative and quantitative content analysis of over 500 dream reports collected from men (n = 100) and women (n =100) between the ages of 18 and 25 years old. All were European-American college students, and each provided 12 to 18 dreams, or which five were randomly selected for analysis (Hall and Van de Castle, 1966). The H/V dream coding system has been shown to be a valid and reliable method of coding dream elements (Hall & Van de Castle, 1966, Domhoff, 1996). Multiple studies have shown that dream content norms remain stable within American samples across age, socioeconomic, racial and ethnic groups (reviewed in Domhoff, 1996), with the exception of a general decrease in the frequency of reported aggressive interactions in older men and women compared to younger adults (Hall & Domhoff, 1963; Winget, Kramer, & Whitman, 1972). Cohort effects also appear to be negligible (Hall, Domhoff, Blick, & Weesner, 1982).

The H/V scale produces a score comprising the total number of explicit occurrences of items on each of 10 operationally defined dream subscales. In this study we utilized six subscales that pertained to our a priori hypotheses: 1) characters (including deceased characters), 2) social interactions (aggression, friendliness), 3) success, 4) failure, 5) fortune and misfortunes, and 6) emotions (positive, negative). Other subscales (i.e., activities, settings, objects, and descriptive elements) were not coded because they did not directly relate to the study hypotheses. Explicit operational coding rules are used to score each subscale, and the scale has been shown to produce high inter-rater reliability (Domhoff, 1996). We confirmed inter-rater reliability among our raters. Two raters were first trained on 30 dreams from the original H/V dream sets. Discrepancies among raters were reviewed and discussed. Thirty additional dreams were randomly selected from the online DreamBank (Schneider & Domhoff, 2004, http://www.dreamresearch.net) for computing inter-rater reliability. Inter-rater reliability, computed as ratio of the number of agreements over the number of agreements and disagreements, was satisfactory (kappa > 0.85 for all the scales).

### Statistics

To compare the proportion of the H/V categories in CG patients to published norms, we first computed the frequency ratio of number of instance of a subscale (e.g., number of aggressive interactions) divided by to the total number of all interactions (e.g., total number

aggression + friendly interactions) in the dream sample. This ratio is used to normalize the contribution of each individual in the sample, and bypasses the effects of dream report length (Domhoff, 1996). Normative dream content differs by gender (Hall and Van de Castle, 1966; Domhoff, 1996). Therefore, we examined dream content separately for men and women in our study. The magnitude of the differences for each scale ratios for the CG samples of women and men and gender-specific norms was then computed using the *h* effect size statistics (Cohen, 1977), which allows for assessing the significance of the magnitude of the difference between two independent proportions. To explore the relationship between dreams of the deceased and psychiatric symptoms, we compared scores on the ICG, HRSD, and SIGH-A in participants with and without the presence or absence of a deceased character in the dream narrative, using an independent means t-test.

## Results

### Dream recall rates

Thirty-nine of the 103 women (38%), and 12 of the 25 men (48%) did not provide a written dream narratives on the MRD form. Dream recallers (13 men, 64 women) were significantly younger than non-recallers (12 men, 39 women), $t$ (126) = 3.18, $p < .01$. This pattern held in both women and men. Because of the preliminary nature of this study, the small sample of dreams collected from men was included in subsequent comparisons. Mean grief intensity scores on the ICG for dream non-recallers, $M$ = 44.79, *s.d.* = 11.11, and dream recallers, $M$ = 47.75, *s.d.* = 9.50, did not significantly differ, $t$ (105) = − 1.47, $p$ =.14. Depression severity in non-recallers, $M$ = 20.62, *s.d.*, 8.16, and dream recallers, $M$ = 21.64, *s.d.* = 7.10, did not differ between the two groups, $t$ (106) = −.69, $p$ = .50. Neither did mean levels of anxiety ($M$ = 21.40, *s.d.* = 9.12 in non-recallers, and $M$ = 21.68, *s.d.* = 7.00 in recallers), $t$(106) = −.18, $p$ = .86. Time since the index loss in recallers, $M$ = 5.33 years, *s.d.* = 7.21 years, did not differ from time since index loss in non-recallers, $M$ = 4.07 years, *s.d.* = 5.24 years, $t$(126) = −1.07, *ns*. The distribution of participants with a comorbid diagnosis of current MDD did not differ in the 77 dream recallers (n =50) and the 51 nonrecallers (31 with MDD), Chi-square = .19, $df$ = 1, *n.s.* Similarly, the distribution of participants with a comorbid diagnosis on current PTSD was comparable in recallers (n = 26) and non-recallers (n = 28), Chi-square = 1.11, $df$ = 1, *n.s.*

### Dream Content Analyses

Table 1 shows the proportions of dreams containing coded H/V dream elements in CG men and women in comparison to published norms for men and women separately. Dreams involving deceased characters were more frequent in women with CG compared to norms, but this was not the case for men with CG. Compared to gender-specific norms, both women and men with CG reported more instances of family characters, and fewer instances of aggression, success, misfortunes, and negative emotions. Women with CG also reported more instances of family characters, and fewer instances of friendliness and of positive emotions compared to women's dream norms. Men with CG reported more instances of familiar characters (non-family characters) than is reported in men's norms. There was no difference from normative data for the rate of positive emotions, failures, or good fortunes.

### Relationship between dreaming of the deceased and psychiatric distress

Of the 77 dream recallers, 14 individuals (18%; all women) reported a dream that included at least one deceased character, whereas the remaining 63 (82%; all 13 men and 50 women) did not. Mean grief intensity scores did not differ between the group who did not dream of the deceased, $M$ = 48.57, *s.d.* = 9.40, and the group who did report such dreams, $M$ = 44.17, *s.d.*, 9.49; *t (63)* = 1.46, $p$ = .15. Depression severity was not significantly different between who did not report a dream of the deceased, $M$ = 22.04, *s.d.* = 7.25, and the group who did

report such a dream, $M = 19.83$, *s.d.* = 6.12; $t\ (63) = 1.46$, $p = .33$. Similarly, anxiety severity did not differ between the two groups: $M = 21.65$, *s.d.* = 7.20 for the group without dreaming of the deceased, and $M = 21.83$, *s.d.* = 6.25 for the group with dreaming of the deceased; $t\ (64) = -.82$, $p = .94$.

To further explore whether measures of psychiatric distress relate to dream elements other than dreaming of the deceased, we conducted exploratory Spearman's correlations in the samples of women and men separately. In women, anxiety scores were negatively and significantly correlated with the number of aggressive dream interactions, *rho* = −.30, $p = .02$, as well as with the number friendly dream interactions, *rho* = −.43, $p < .001$. The grief intensity and depression scores were also negatively and significantly correlated with friendly dream interaction, *rho* = −.48, $p < .001$, and *rho* = −.51, $p < .001$, respectively. No significant correlations between dream elements and distress scores were found for men, although the small sample of men compromises the robustness of these correlations.

## Discussion

Complicated grief is a prolonged grief disorder that can be reliably identified, has a chronic impairing course and is not responsive to standard treatments for depression (Reynolds et al., 1999; Shear et al., 2001b). In this exploratory study, men and women with CG provided their most recent dreams, which differed in content from normative dream content data in some unexpected ways. Both men and women with this debilitating prolonged grief disorder, reported more family characters compared to norms, and fewer instances of aggression, misfortunes and negative emotions, as well as fewer instances of success. Thus, the dreams were more extensively populated, yet both positive and negative dream elements were greatly attenuated in this sample of adults (mainly women) with CG. There were gender differences in some of the ways CG dreams differed from norms. Dreams of women with CG contained more instances of deceased characters, and fewer instances of friendliness and positive emotions, whereas dreams of men with CG contained more familiar characters who were not family members. However, the reliability of the latter observations is uncertain, given the very small sample of dreams available from men in this pilot study. Among all CG participants, dreaming of the deceased was not associated with either reduced or increased severity of complicated grief, depression, or anxiety. In women, exploratory correlation analyses indicated that fewer occurrences of friendliness were correlated with increased anxiety, depression and grief. Additionally, less aggression correlated with more anxiety. The latter tentatively suggests that dream content and emotional distress may be related in women. These relationships were not observed in the small sample of men with CG, but the small sample does not allow for a definitive conclusion. Thus, our findings failed to provide conclusive support both the dreams-as-coping hypothesis and or the dreams-as-symptom observations from studies of PTSD and MDD. Nevertheless, these preliminary findings provide strong support that detectable changes in dream content can be captured in adults with CG, and suggest that dreams in CG may reflect a reorganization of cognitive-affective representations of lost significant attachment figures.

Contrary to our expectation, both positive and negative dream elements were significantly attenuated in CG dreams relative to normative dream content. The lack of significant relationship between dreaming of the deceased and severity of CG, depression, and anxiety in CG patients is also contrary to our initial expectation. In summary, dream content results for this CG sample show a distinct dream pattern characterized by an increased number of characters, accompanied by fewer positive elements as well as fewer negative emotions, aggression, and misfortunes. This pattern suggests possible marked differences between dream content in CG, from previously reported dream characteristics in PTSD and MDD samples. Direct comparisons of dream content in these three clinical samples may provide

additional insights into the relationship between dream features and daytime emotional distress, and may provide novel evidence that CG is a distinct clinical entity and is not simply a subtype of PTSD or MDD.

The dreams of CG patients pertained mostly to mental representations of familiar people. Interestingly, while these dream characters were increased relative to normative data, there appeared to be a restriction in both positive and negative emotion as well as positive and negative content related to these images. Loss of a loved one creates a need for reorganization of the cognitive-affective mental representation of the deceased, and we have proposed elsewhere that the failure to achieve this reorganization is associated with CG (Shear & Shair, 2005). We further suggested that failure to engage in satisfying ongoing life activities and feel connected to others, impedes the grief process. If these ideas are correct, increase in dream characters could be related to efforts to revise mental representations. If so, the reduced frequency of both positive and negatively toned emotions and events and the lack of a relationship between reported dream characters and reduced intensity of grief severity, depression, and anxiety, could indicate failure to reconstruct effective forms of such representations. The finding that grief intensity, anxiety, and depression correlated with less coding of friendliness in dreams of women with CG is consistent with the possibility that dream alterations are related to the onset and/or maintenance of CG. The absence of this finding for men may be due to our small sample of men, but also raises the possibility that the relationship between dream elements and symptoms may differ in bereaved women and men with CG.

Of note, neuroimaging findings suggest that the failed reorganization of cognitive-affective representations of attachment in CG may be related to changes in brain responses to cues of the deceased figure. Specifically, CG has been associated with altered brain activation patterns in response to photographs of the deceased (O'Connor, Wellisch, Staton, Eisenberger, Irwain, & Lieberman, 2008). In this study, increased activation of the nucleus accumbens (NA; a central component of the brain reward system) in response to photographs of a deceased loved one has been reported in adult women with CG compared to bereaved women who did not suffer from CG. Rather, women who did not suffer from CG exhibited decreased activation of the NA in response to photographs of the deceased one. In addition, increased activation of the NA was positively correlated with yearning symptoms of CG. The dream content characteristics observed in this study in the women with CG may arise from similar underlying neurobiological substrates, but sleep neuroimaging studies combined with prospective dream sampling are necessary to test this possibility.

There are several limitations of this study, which include the absence of a bereaved group without CG and of a non-bereaved, age- and sex-matched comparison group, the use of the retrospective MRD form, small samples of men and of dreams of the deceased, and the cross-sectional design of this ancillary study. In the absence of comparison groups of bereaved individuals without CG and non-bereaved age- and sex-matched adults, it is not possible to determine whether the observed dream characteristics are specific to CG, more generally reflect bereavement, and whether age- or cohort specific effects may have influenced the findings. Although studies to date have found that age, and ethnic and racial backgrounds have limited impact on dream content, the inclusion of such comparison groups will be critical in future studies. However, the present findings nevertheless suggest that bereavement with CG is associated with detectable changes in dream content relative to well-established norms. Gender differences observed in this preliminary and exploratory study are highly tentative given the very small sample of dreams that were collected from men and available for analysis. Larger samples are necessary to obtain a sufficient number of dreams from bereaved men (with and without CG) to more definitely study gender

differences in dream content, and their emotional correlates. Longitudinal collection of nightly dream reports by using dream diaries may reveal different content patterns in CG patients compared to standard normative data. Longitudinal studies that include individuals across the spectrum of the grief responses are also necessary to determine how dreams related to waking life experiences of bereavement and grief. Dream patterns early after the loss may be an important indicator of bereavement-related psychological outcomes. However, given our sample only included CG patients, and given the cross sectional nature of this study, we could not examine the possibility that dreaming of the deceased may be related to emotional well-being in the normal bereavement process, or that dreaming of the deceased may be associated with adaptive reconfiguration of mental representations among individuals who do not develop CG following bereavement (Field, Gao, & Paderna, 2005). Future studies are required to further explore these hypotheses. Finally, the addition of laboratory-based dream collection concurrent with polysomnographic (sleep) studies could further the understanding of the potential impacts of bereavement and CG on mental representations across the sleep-wake cycle. Objective sleep measures derived from polysomnographic studies have been shown in bereaved individuals with CG and depression (McDermott et al, 1997). Identifying objective sleep parameters that relate to disturbed dreaming and daytime emotional distress in bereavement and/or CG could provide new objective indices to identify bereaved individuals at risk to develop CG.

Despite these limitations, findings from this exploratory study suggest that investigating the effect of bereavement and CG on dream content may provide valuable insights into the psychological mechanisms that characterize this prolonged grief syndrome during wakefulness, sleep, and dreaming. Investigating the effects of CG treatments on dream content may also provide new insights into the reorganization of cognitive-affective representations of lost significant attachment figures.

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**Table 1**

Proportion of dreams containing occurrences of selected H/V subscale in CG patients and dream norms.

| | Women | | | Men | | |
|---|---|---|---|---|---|---|
| **% of Dreams** | **CG %** | **Norm %** | ***H*** | **CG %** | **Norm %** | ***h*** |
| Familiarity | 61 | 58 | .06 | 83 | 35 | .83** |
| Family | 45 | 19 | .57** | 42 | 12 | .70** |
| Deceased characters | 4 | 1 | .20* | 0 | 0 | −.12 |
| Aggression | 13 | 44 | −.71** | 7 | 47 | −.97** |
| Friendliness | 21 | 42 | −.46** | 29 | 38 | −.20 |
| Success | 1 | 8 | −.31* | 0 | 15 | −.80** |
| Failure | 13 | 10 | .11 | 7 | 15 | −.27 |
| Good Fortune | 3 | 6 | −.13 | 21 | 6 | .47 |
| Misfortune | 18 | 33 | −.36** | 0 | 36 | −1.29** |
| Positive Emotion | 3 | 20 | −.58** | 29 | 20 | .21 |
| Negative Emotion | 21 | 80 | −1.29** | 8 | 80 | −1.64** |

* $p < .05$

** $p < .01$