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Religious coping among psychotic patients: Relevance to suicidality and treatment outcomes

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ABSTRACT

Religious coping is very common among individuals with psychosis, however its relevance to symptoms and treatment outcomes remains unclear. We conducted a prospective study in a clinical sample of $n=47$ psychiatric patients with current/past psychosis receiving partial (day) treatment at McLean Hospital. Subjects completed measures of religious involvement, religious coping and suicidality prior to treatment, and we assessed for psychosis, depression, anxiety and psychological well-being over the course of treatment. Negative religious coping (spiritual struggle) was associated with substantially greater frequency and intensity of suicidal ideation, as well as greater depression, anxiety, and less well-being prior to treatment (accounting for 9.0–46.2% of the variance in these variables). Positive religious coping was associated with significantly greater reductions in depression and anxiety, and increases in well-being over the course of treatment (accounting for 13.7–36.0% of the variance in change scores). Effects remained significant after controlling for significant covariates. Negative religious coping appears to be a risk factor for suicidality and affective symptoms among psychotic patients. Positive religious coping is an important resource to this population, and its utilization appears to be associated with better treatment outcomes.

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1. Introduction

The conceptualization of religion within the field of psychiatry has changed considerably since Freud's categorical characterization of this domain as neurosis in 1927 (Freud, 1989). It is now widely recognized that religion can have both a positive as well as negative impact on mental health and illness (Pargament et al., 1998). On the one hand, several studies have found that religious engagement is associated with decreased risk for depression and suicidality in the general population and medical samples (Miller et al., 1997; Koenig et al., 1998; Rasic et al., 2009) less hopelessness among individuals with clinical depression (Murphy et al., 2000), and better treatment outcomes (Rosmarin et al., 2013). Further, research on religious coping consistently suggests that religious behavior and belief are important resources for many people in times of life distress (Pargament et al., 2000). However, negative religious coping (also known as spiritual struggle), involving intrapersonal, interpersonal or existential tensions, questions, and conflicts about spiritual/religious issues, is robustly associated with symptoms of psychiatric and medical illness (McConnel et al., 2006; Ironson et al., 2011) and may even precede the onset of psychopathology in some populations (Pirutinsky et al., 2011).

Further research on both the benefits and risks of religious life to psychiatric symptoms and treatment is important, considering that psychiatrists are more likely than other physicians to encounter spiritual domains in clinical settings (Curlin et al., 2007).

Religion is of particular relevance to patients suffering from psychosis. For decades, clinical forensic literature has described the culture-bound presentation of hallucinations and delusions with religious themes (Kraya and Patrick, 1997) and acts of violence committed by patients with such symptoms (Field and Waldfoegel, 1995). More recent literature has identified that religious involvement is highly prevalent among psychotic patients – irrespective of the presence of religiously themed symptoms – particularly in the United States (Kroll and Sheehan, 1989; Tepper et al., 2001). Roughly 80% of psychotic patients engage in religious coping (Tepper et al., 2001; Loewenthal, 2007). Furthermore, religion is the most commonly utilized alternative health practice in this population (Ruszinova and Blanch, 2007), and research suggests that psychotic patients who profess religious beliefs are more likely to seek spiritually-based than medical treatments for their symptoms (Kulhara et al., 2000) and be less medication-compliant (Borras et al., 2007). While religion has been tied to longer duration of psychotic symptoms and poorer functioning, though not clinical severity, in Taiwan (Huang et al., 2011), few studies have examined associations between religion and severity of symptoms or their progression among psychotic patients, and these connections therefore remain largely unclear.

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One landmark study in an outpatient psychotic sample found that positive religious coping was thematically associated with greater subjective hope, comfort, meaning in life, and was perceived to lessen psychotic symptoms (Mohr et al., 2006). Conversely, negative religious coping was subjectively perceived to contribute to negative sense of self, despair, anger, guilt, as well as increased delusions and substance use (Mohr et al., 2006). However, results from quantitative studies vary. On the one hand, current evidence suggests that among psychotic patients, religious coping protects against substance use (Huguelet et al., 2009), and facilitates ethical condemnation of suicide (Huguelet et al., 2007). However, a more recent report found mixed effects of spiritual involvement on outpatient treatment outcomes, depending on baseline levels of positive vs. negative religious coping (Mohr et al., 2011). More research is therefore warranted to evaluate the clinical relevance of religion in this population. In particular, we are unaware of any studies in acute psychiatric settings (inpatient or day treatment programs) that have quantified relationships between religious coping, symptomatology and treatment outcomes.

We therefore conducted a prospective study in which we assessed for both positive and negative religious coping as predictors of pre-treatment symptoms, and subsequent treatment outcomes, in a cohort of psychotic patients at McLean Hospital. We predicted that positive religious coping would be associated with lower symptoms at baseline and greater treatment gains, and that negative religious coping would conversely predict greater pre-treatment symptoms and poorer outcomes.

2. Methods

2.1. Procedures

Over an 8-month period (October, 2010 to June, 2011), $n=47$ patients participated in this study. Subjects were recruited in the context of larger investigation within a diagnostically heterogeneous day treatment program at McLean Hospital for patients with acute symptoms, on the relevance of spirituality and religion to symptoms and treatment outcomes. Patients were approached in a common area during the lunch hour to participate in “a research study”. In order to prevent selective recruitment of patients with personal interest in spirituality/religion, the terms “spirituality” and “religion” were not mentioned during recruitment, and the subject matter of the study was only revealed upon provision of formal informed consent. The refusal rate after provision of informed consent was less than 1%, suggesting that this approach was effective in recruiting a largely representative sample of McLean Hospital patients. This study was approved by the McLean Hospital Institutional Review Board, and all subjects provided written informed consent prior to participation. No monetary or other compensation was offered or provided for participation.

All participants engaged in multi-disciplinary treatment, including case management, psychopharmacology management, psycho-vocational counseling, consultation with psychology trainees, milieu therapy, and group treatments focused on the acquisition of Cognitive Behavioral Therapy skills. Mean average length of treatment was 7.95 days (S.D.=4.53). Approximately 50% of patients were referred to the day program as a step-down from inpatient treatment, and approximately 50% of patients were referred from the community (e.g., outpatient psychopharmacology management) for treatment at a higher level of care.

Prior to treatment, diagnoses were conferred with both the Mini International Neuropsychiatric Interview (Sheehan et al., 1998) and consultation with supervising psychiatrists. Overall level of functioning in daily activities was assessed with the Global Assessment of Functioning (GAF). Subjects received an additional interview module prior to treatment to assess for suicidality over the past month. Patients also completed self-report and interview measures of general religious involvement and religious coping. At both the start and conclusion of patients' hospital stay, psychosis, depression, anxiety and psychological well-being were assessed with self-report measures.

2.2. Measures

2.2.1. Demographic characteristics

We assessed for patient age, gender, race, marital status, current employment, previous hospitalization, and homelessness.

2.2.2. Religious involvement

Religious affiliation was assessed with an open ended item (What is your religious preference?) and two additional items assessed for belief in God (To what extent do you believe in God?) and importance of religion (How important is religion in your life?) using a 5-point Likert-type scale with anchors ranging from “Not at All” to “Very”. We also included two items from the Duke Religion Index (Koenig et al., 1997) to assess for public (How often do you attend church or other religious services? Anchors ranging from “Never” to “More than once/wk”) and private religious activity (How often do you spend time in private religious activities, such as prayer, meditation or Bible study? Anchors ranging from “Rarely or Never” to “More than once a day”).

2.2.3. Religious coping

Patients completed the Brief RCOPE (Pargament et al., 1998) a well-validated 14-item measure that assesses how frequently respondents use both positive (e.g., seeking spiritual support/connection, benevolent religious reappraisals) and negative religious coping strategies (e.g., spiritual discontent, punishing God/demonic reappraisals) in response to life stressors. Mean values in the sample were 18.05 (S.D.=3.11) and 17.23 (S.D.=3.24) for positive and negative religious coping, respectively, and both subscales spanned the entire range of possible scores (12–28).

2.2.4. Suicidality

We assessed for pre-treatment suicidal ideation with the Suicidality Module from the Miniature International Neuropsychiatric Interview (Sheehan et al., 1998) a well-validated screening instrument for DSM-IV Axis I symptoms. Patients were asked about the extent to which they experienced suicidal ideation over the past month. Trained raters coded responses using a 4-point Likert-type scale in terms of both frequency (ranging from never to very often) and intensity (ranging from none to severe).

2.2.5. Psychosis

The psychosis subscale from the 24-item Behavior and Symptom Identification Scale [BASIS-24; Eisen et al., 2004], was used to assess psychotic symptoms over the past week. The BASIS-24 has good psychometric properties and has been validated as a reliable assessment of psychopathology and associated distress across various levels of psychiatric care (e.g., inpatient, partial, outpatient). A full range of scores was present at both timepoints and mean values were .94 (S.D.=0.90) and .73 (S.D.=0.88) at pre- and post-treatment, respectively.

2.2.6. Depression

Patients completed the 10-item Center for Epidemiological Studies Depression Scale (Andresen et al., 1994), a widely used, brief instrument assessing for depression. At pre-treatment, scores ranged from 4 to 31 with a mean of 16.04 (S.D.=7.59) and at post-treatment scores ranged from 4 to 26 with a mean of 12.64 (S.D.=6.53).

2.2.7. Anxiety

We used the abbreviated version of the Penn State Worry Questionnaire (Hopko et al., 2003), a well-validated, single factor, 8-item measure designed to assess worry severity. At both pre- and post-treatment, scores spanned from 8 to 40 (across full range of the scale) with mean values of 27.04 (S.D.=10.05) and 23.95 (S.D.=9.80) at pre- and post-treatment, respectively.

2.2.8. Psychological well-being

The Schwartz Outcome Scale (Blais et al., 2008), a well-validated and reliable measure, was used to assess overall psychological well-being. At pre-treatment scores ranged from 10 to 65 with a mean of 35.0 (S.D.=13.32), and at post-treatment scores ranged from 24 to 70 with a mean of 44.03 (S.D.=12.03).

2.3. Analytic plan

We began by identifying significant covariates in the dataset with an examination of correlations and ANOVAs between demographics, religious involvement, positive and negative religious coping, and pre-treatment suicidality as well as symptoms (psychosis, depression, anxiety and well-being). Demographic variables were unrelated to negative religious coping (r s ranging from -0.15 to 0.22 , n s for all tests), however positive religious coping was associated with age ($r=-0.40$, $p<0.01$) and non-Caucasian race ($r=-0.44$, $p<0.01$). As such, we controlled for age and race in subsequent analyses.

We then created a metric for treatment effects by subtracting pre-treatment scores from post-treatment scores for psychosis, depression, anxiety and psychological well-being. It should be noted that positive change scores indicate greater improvements (i.e., reductions) in psychosis, depression and anxiety and declines (i.e., increases) in psychological well-being. We then computed correlations between positive and negative religious coping and these variables, and conducted additional analyses controlling for significant covariates using partial correlations. Bonferroni correction was utilized in the interpretation of multiple comparisons.

3. Results

3.1. Participants

Mean age in the sample was 29.72 years (S.D.=10.62) and 57.5% of participants were female. Most participants were White (80.9%) and single (87.2%). All patients presented with either a current (48.9%, $n=23$) or past (51.1%, $n=24$) psychotic disorder (i. e., schizophrenia, schizoaffective disorder, or mood disorder with psychotic features). Comorbidity in the sample was high; 95.7% presented with a mood disorder, 29.7% presented with one or more anxiety disorders, 14.9% presented with past substance abuse or dependence, 2.1% presented with an eating disorder, and mean number of comorbid diagnoses in the sample was 2.52 (S.D.=1.43, Range=0–6). Impairment in the sample was also high in that 63.8% of participants were unemployed, 68.1% had been previously hospitalized during the past 6 months, and 12.8% were homeless. Symptom acuity in the sample was also high in that all patients presented with GAF (Global Assessment of Functioning) scores of <45 prior to treatment. However all participants demonstrated sufficient cognitive functioning to complete the assessment and engage in treatment. These clinical characteristics are broadly representative of the clinical program from which subjects were recruited (Björgvinsson et al., submitted for publication).

See Table 1 for descriptive values of religious involvement in the sample, and a comparison to regional norms. While 53.2% of participants reported moderate or greater belief in God, only 21.3% of participants reported that religion was “moderately” or “very” important in life. Similarly, only 14.9% of participants reported weekly or greater attendance of public religious services and 17.1% reported daily or greater private prayer or other religious practice. These values are considerably lower than the regional population of Massachusetts (Pew Forum, 2009; see Table 1). Nevertheless, 84.8% of the sample reported at least some use of religious coping strategies, and mean levels of both positive ($M=13.17$, S.D.=5.67) and negative religious coping ($M=11.96$, S.D.=5.21) were similar to those observed in other studies with psychotic patients (Harrison et al., 2001). This suggests that religion was used to cope with distress by many non-religious patients within the sample.

3.2. Religious coping and symptoms

Table 2 presents partial correlations between religious coping and pre-treatment levels of patient symptoms, controlling for significant demographic factors (age and race). Positive religious coping was unrelated to any symptom index. By contrast, negative religious coping was associated with substantially higher suicidality, accounting for 46.24% of the variance in frequency of ideation ($r=0.68$, $p<0.001$), and 37.2% of the variance in intensity of ideation ($r=0.61$, $p<0.001$) (see Figs. 1 and 2). Negative religious coping was also associated with greater depression ($r=0.41$, $p=0.006$), a trend toward greater anxiety ($r=0.33$, $p=0.10$), and less psychological well-being ($r=-0.41$, $p=0.02$), but not psychotic symptoms ($r=0.22$, ns), prior to treatment. These findings suggest that negative religious coping is strongly correlated with greater suicidal ideation as well as greater affective symptoms among psychotic patients entering acute psychiatric treatment, but positive religious coping was not associated with better (or worse) functioning.

3.3. Religious coping and treatment outcomes

Table 3 presents associations between religious coping and symptom change over the course of treatment. Positive religious

Table 1
Religious involvement in the sample.
(Source: Pew Forum, 2009).

	N	%	% in Massachusetts
Religious affiliation			
Catholic	9	19.1	
Protestant or Other Christian	11	23.4	
Jewish	3	6.4	
Buddhist	3	6.4	
Hindu	1	2.1	
Other	3	6.4	
None	17	36.2	
Belief in God			
Very	21	44.7	60 ^a
Moderately	4	8.5	
Fairly	4	8.5	
Slightly	9	19.1	
Not at all	9	19.1	
Importance of religion			
Very	4	8.5	40 ^b
Moderately	6	12.8	
Fairly	8	17.0	
Slightly	11	23.4	
Not at all	18	38.3	
Frequency of public religious activity			
≥1 × /week	7	14.9	30
<1 × /week	40	85.1	
Frequency of private religious activity			
≥1 × /day	8	17.1	41
<1 × /day	39	82.9	

^a Represents % of population that believes in God with “certainty” (Pew Forum, 2009).

^b Represents % of population that reports religion is “very important” on a 4-point scale (Pew Forum, 2009).

Table 2
Correlations between religious coping and symptom levels prior to treatment.

	Positive religious coping	Negative religious coping
Frequency of suicidal ideation	0.24	0.68***
Intensity of suicidal ideation	0.19	0.61***
Psychosis	0.12	0.22**
Depression	0.23	0.41*
Anxiety	0.26	0.33 [#]
Psychological well-being	-0.11	-0.41*

Table presents partial correlations between positive/negative religious coping and symptom levels prior to treatment, controlling for significant demographics (age and race). Frequency/intensity of suicidal ideation were assessed via patient interview. Depression, anxiety, psychological well-being, and psychosis were assessed via patient self-report.

[#] $p\leq 0.10$.

* $p\leq 0.05$.

** $p\leq 0.01$.

*** $p\leq 0.001$.

coping was associated with significantly greater improvements in depression ($r=0.50$, $p=0.004$), anxiety ($r=0.60$, $p<-0.001$), and psychological well-being (i.e., increases in psychological well-being; $r=-0.37$, $p=0.05$), accounting for 25%, 35% and 13.7% of the variance in change scores for these respective variables. However, positive religious coping was not associated with change in psychosis over the course of treatment ($r=0.22$, ns). Negative religious coping was associated with greater improvement in depression ($r=0.41$, $p<0.05$) only.

Consistent with previous research, it was observed that positive and negative religious coping were positively correlated in this study ($r=0.49$, $p<0.001$). As such, in order to identify the

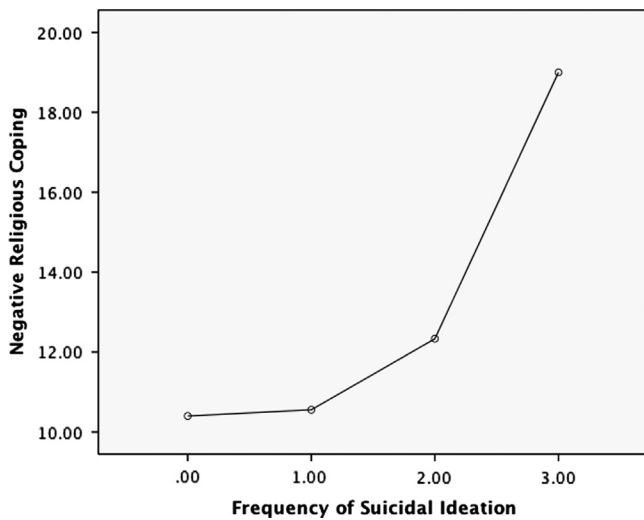


Fig. 1. Negative religious coping and frequency of suicidal ideation among psychotic patients. Notes: Y-axis reflects observed range of Negative Religious Coping scores in the sample.

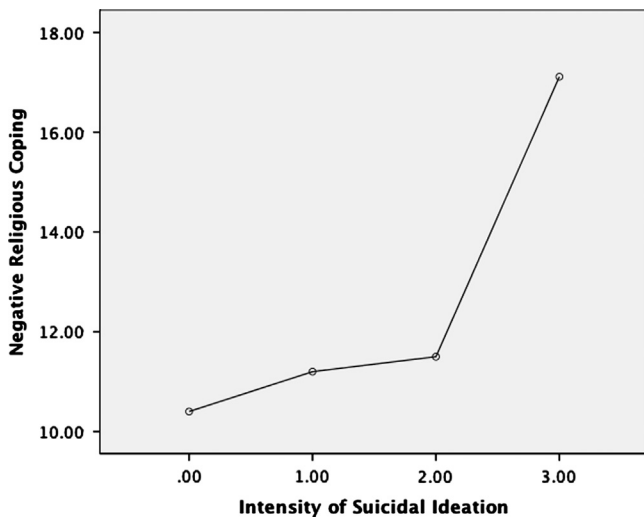


Fig. 2. Negative religious coping and intensity of suicidal ideation among psychotic patients. Notes: Y-axis reflects observed range of Negative Religious Coping scores in the sample.

Table 3
Correlations between religious coping and symptom change over treatment.

	Positive religious coping	Negative religious coping
Change in psychosis	0.22	0.00
Change in depression	0.50**	0.41†
Change in anxiety	0.60***	0.34
Change in psychological well-being	−0.37†	−0.29

Table presents partial correlations controlling for significant demographics (age and race). Positive religious coping is associated with greater improvement in depression, anxiety and psychological well-being over the course of treatment. Relationship between negative religious coping and depression is not significant controlling for positive religious coping (see text).

* $p \leq 0.05$.
 ** $p \leq 0.01$.
 *** $p \leq 0.001$.

distinctive effects of positive and negative religious coping on changes in depression, (where both of these factors were significant predictors), post hoc regression analyses were performed. After controlling for negative religious coping, positive religious coping remained significantly tied to changes in depression ($\Delta r^2 = 0.09$, $\Delta f = 4.46$, $p < 0.05$). However, negative religious coping was no longer tied to changes in depression ($\Delta r^2 = 0.04$, $\Delta f = 1.97$, ns) once positive religious coping was controlled. Taken as a whole, these findings suggest that positive but not negative religious coping was associated with greater reductions in symptoms within the sample over the course of treatment.

4. Discussion

While clinical lore and a handful of empirical studies have recognized the subjective importance of religion to psychotic patients, quantitative research on links between religious coping, symptoms and treatment outcomes in this population has been sparse, particularly in the context of acute psychiatric treatment. The present prospective study therefore assessed for both positive and negative religious coping in a sample of patients with current and/or past psychotic symptoms presenting for partial (day) treatment at McLean Hospital. Statistical analyses examined the links between religious coping with pre-treatment symptomatology, and changes in symptomatology over treatment.

As hypothesized, negative religious coping was associated with greater suicidality in our sample. While direction of influence between these variables is unclear given our study design, the strength of these relationships suggests that spiritual struggle potentially represents a significant safety concern for psychotic patients. As such, this domain warrants specific assessment as a risk factor in the context of psychiatric care. It is also notable that negative religious coping was associated with greater depression and anxiety, and less well-being, but not psychotic symptoms. As a whole, these results speak to the clinical importance of spiritual struggle for affective symptoms within this population. The findings may suggest that negative religious coping – which can involve a sense of being abandoned or punished by God – is not associated with exacerbation of delusions or hallucinations, per se, but rather with hopelessness and despair, which in turn facilitates suicidality. This is an important possibility, worthy of future study. More importantly, given the potential safety risks associated with negative religious coping, further research evaluating potential causal connections between spiritual struggle and mood symptoms among psychotic patients, as well as possible mediating factors, is a priority topic for further research in this area.

It is also of interest that positive religious coping was associated with substantially greater treatment gains in depression, anxiety and psychological well-being, but not psychosis. The degree of variance accounted for by religious coping was large, underscoring the clinical as well as statistical significance of religious coping for this population. In light of the associations between spiritual struggle and distress observed in this study, it is possible that the use of positive, adaptive and functional religious belief and practice as a coping strategy is particularly helpful for psychotic individuals. It is further possible that utilization of positive religious coping may facilitate amelioration of spiritual struggle. In other words, the fact that negative religious coping is associated with greater suicidality and depression at pre-treatment may heighten the importance of positive religious coping for psychotic patients. To this end, it should be noted that a number of spiritually-integrated treatment programs have been developed for individuals with serious mental illness. Most of these programs have been interfaith in design, and involve psycho-education about links between spiritual/religious involvement and symptoms, guidelines for disentangling genuine spirituality/religion

from religious psychotic symptoms, and opportunities to identify spiritual/religious resources that may be helpful to patients in the course of recovery (Phillips et al., 2002; Kehoe, 2007; Pargament, 2007; Wong-McDonald, 2007). Findings from the present study highlight the potential clinical utility of these programs. However, it must be emphasized that research on spiritually integrated interventions is in its infancy, and further study is necessary to determine not only treatment effects, but clinical heuristics to identify appropriate candidates for such treatments.

It is also noteworthy that nearly 85% of the sample in this study reported utilizing at least some religious coping strategies when faced with life distress. This number is as much if not slightly higher than that observed in previous studies (Huguelet et al., 2007, 2009; Mohr et al., 2011), and greater than expected given that the sample was by and large irreligious and reported substantially less religious involvement than national and even regional norms (Pew Forum, 2009). It is possible that acuity of symptoms within the current sample was a reason for high levels of religious coping; religious coping may be common for other non-religious patients with acute symptoms. Further study to explore the prevalence of religious coping among psychiatric patients in the absence of general religious involvement is warranted. As well, these findings highlight the importance of multi-dimensional assessment of religious variables across both general (e.g., belief, practice, affiliation) and functional (e.g., religious coping, faith, connection with God) domains, particularly in clinical populations, as general levels of religious belief and practice may not preclude utilization of religion in a specific manner.

This study has a number of limitations including a small though adequately powered sample size, heterogeneity of comorbid diagnoses, relatively limited measures of psychotic symptoms, and reliance on self-report for treatment outcomes. Further, religious coping was only assessed at one time point, encumbering our ability to determine directions of effect with symptoms and treatment outcomes. It is possible, for example, that patients who were ready for change and hopeful about treatment reported greater positive religious coping and also demonstrated greater treatment gains. Nevertheless, this study represents the first to quantitatively evaluate the relevance of religious coping to treatment outcomes in an acute psychiatric setting through a prospective design. Additionally, it is noteworthy that patients were recruited from a naturalistic clinical context with diagnostically heterogeneous patients. Further, low levels of religious involvement in the sample may have provided a conservative estimate of effect sizes of religious coping among psychotic patients. These factors provide for greater generalizability of study findings. It is therefore hoped that this study will spawn further research into this understudied yet important subject matter.

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