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Empirical Research on Fantasy Proneness and Its Correlates 2000–2018: A Meta-Analysis

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We reviewed articles that appeared between 2000 and 2018 and that addressed fantasy proneness as measured by the Creative Experiences Questionnaire (CEQ) or the Inventory of Childhood Memories and Imaginings (ICMI). We searched Google Scholar to identify relevant articles and used the Hunter–Schmidt method to meta-analyze the correlates of fantasy proneness. We identified 132 articles describing 139 samples that together included 24,007 research participants. Effect sizes were large (r's > .50) for hallucinatory experiences, magical ideation, perceptual aberration, dissociation, and excessive daydreaming. Contrary to the popular idea that childhood trauma is a prominent precursor of fantasy proneness, we found that the effect sizes for self-reported trauma were small, as was also the case for depression, anxiety, and memory illusions (r's < .30). Strides in this research area can be made when future studies move beyond the fantasy proneness-trauma link to test causal models regarding the antecedents of maladaptive fantasizing.

Keywords: fantasy proneness, creative experiences questionnaire, inventory of childhood memories and imaginings, dissociation, schizotypy

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Wilson and Barber's (1983) pioneering study of highly hypnotizable persons first identified a subset of individuals they called "fantasy-prone persons" who were characterized by profound involvements in fantasy that dated to early childhood. Fantasy-prone individuals reported extensive and intensive immersion in fantasy, which they typically experienced as exceptionally vivid, rewarding, and tightly interwoven into the fabric of their everyday lives. Based on these observations, the researchers proposed that fantasy proneness is a stable, trait-like syndrome that encompasses features such as spending a large part of the time daydreaming and engaging in vivid fantasies, experiencing physical concomitants of fantasies (e.g., feeling sick at the thought

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of eating rotten food), the propensity to have anomalous experiences (e.g., out-of-body experiences), and participating in make-believe activities (e.g., role playing). Wilson and Barber (1983) estimated the prevalence of fantasy proneness to be 2%–4% of the population, an estimate that Lynn and Rhue (1988) adopted in their early research on fantasy proneness, which largely replicated and extended earlier observations on fantasy-prone individuals.

Since Wilson and Barber's (1983) seminal study, researchers have established that fantasy activities are highly prevalent in the general population (Singer, 1996). Fantasy and daydreaming are generally healthy, adaptive, self-enhancing aspects of psychological functioning (Klinger et al., 2009; Plante et al., 2017; Singer, 1996; Smith & Mathur, [illegible]). However, as Wilson and Barber (1983) acknowledged, fantasy involvements can be maladaptive when they are excessive and engender distress and/or interfere with daily functioning (Bigelsen et al., 2016). Lynn et al. (1996) speculated that control over fantasy might be key to distinguishing healthy imaginative tendencies from pathological variants. Relatedly, Cuper and Lynch (2009) later found "that engaging in fantasy is problematic only when it is accompanied by a belief that one cannot control outcomes in his or her life" (p. 263). Interestingly, in many ways, the distinction between adaptive and maladaptive fantasizing resembles that between healthy versus pathological schizotypy (McCreery & Claridge, 2002) and healthy versus problematic anomalous experiences (Goulding, 2005).

Hypnotic Suggestibility

The concept of fantasy proneness is an offshoot of hypnosis research. Accordingly, much of the empirical literature on fantasy proneness published before 2000 focused on hypnotic suggestibility. However, studies converged on the conclusion that the connection between hypnotic suggestibility and fantasy proneness is not particularly impressive. For example, both Braffman and Kirsch (2001) and Green and Lynn (2008) found modest correlations (Pearson r's $\leq .29$) between hypnotic suggestibility and fantasy proneness in student samples. Green and Lynn (2008) noted that only a minority (2 out of 12) of students scoring in the virtuoso range of hypnotic suggestibility tests (i.e., those who passed 11 or 12 out of a possible 12 suggestions on two hypnotic suggestibility tests) attained high fantasy proneness levels. These authors argued that a certain level of imaginative involvement is necessary to successfully respond to hypnotic suggestions. Indeed, in earlier studies (Council & Huff, 1990; Rhue & Lynn, 1989), people low in fantasy proneness emerged as the group distinctly less likely to respond to hypnotic suggestions than individuals medium or high in fantasy proneness. Researchers have determined that other factors, such as expectancies regarding hypnosis, are far more important correlates of hypnotic suggestibility than fantasy proneness (Kirsch et al., 1995; Lynn, Green, et al., 2019).

Although research did not bear out a robust link with hypnotic suggestibility, fantasy proneness can be situated within a broader nexus of constructs empirically related to, yet readily distinguishable from, hypnotic suggestibility (Kihlstrom et al., 1994; Lynn & Rhue, 1986, 1988). For example, absorption and fantasy proneness typically correlate highly (e.g., Platt et al., 1998, $r = .77$, $p < .001$; Rhue & Lynn, 1989, $r = .71$, $p < .001$), whereas imagery vividness and fantasy proneness typically correlate moderately (e.g., Council et al., 1991, $r = .37$, $p < .001$; Lynn & Rhue, 1986, $r = .41$, $p < .001$). Synesthesia, where sensory stimulation produces perceptual experiences in several modalities (e.g., seeing a color in response to sound), is also characterized by rich, vivid imagery, and relates to features of fantasy proneness and absorption (e.g., Thalbourne et al., 2001). Nevertheless, these constructs can be differentiated on theoretical grounds. Absorption, imagery vividness, and synesthesia describe cognitive mechanisms that might facilitate fantasy proneness, which itself is more a behavioral category reflecting a trait-like preference for fantasy immersion (e.g., Plante et al., 2017; Webster & Saucier, 2011).

Trauma

Following the study by Wilson and Barber (1983), many researchers ascribed the genesis of fantasy proneness to adverse childhood experiences and trauma-related psychopathology, particularly dissociative symptoms, and argued that fantasy proneness is fueled by a need to escape adverse childhood experiences and functions as an automatized habitual defensive

reaction (e.g., Bottoms et al., 2012, 2016; Lawrence et al., 1995). Kluemper and Dalenberg (2014), for example, contended that fantasy proneness and dissociative symptomatology overlap because both originate from a traumatic history and both involve absorption (i.e., a state of strong attentional focus), which could be construed as a mental flight from aversive memories (see also [illegible]n & Coyne, 1995). However, Lynn and Rhue (1988; see also Hilgard, 1974) reported that apart from a history of trauma and isolation, a nonmalign pathway to fantasy proneness is acculturation in a nurturing environment that stimulates creativity and adaptive, enjoyable fantasy activities.

Although psychological trauma became a prominent theme in the empirical literature on fantasy proneness, early research provided clues that fantasy proneness might be related to a variety of other constructs including schizotypy (e.g., Kihlstrom et al., 1994), anomalous experiences (e.g., Spanos et al., 1993), creativity (Lynn & Rhue, 1986), symptom overreporting (Allen & Coyne, 1995; Rhue & Lynn, 1987), sleep disturbances (Belicki & Belicki, 1986), memory functioning (e.g., Platt et al., 1998), absentmindedness (Merckelbach et al., 1999), and interrogative suggestibility (e.g., Ost et al., 1997; but see Malinoski & Lynn, 1999). These older leads inspired more recent articles, leading to a substantial database that reflects the wholesale expansion of inquiry regarding fantasy proneness to diverse realms of research.

Measures of Fantasy Proneness

The burgeoning literature pertaining to fantasy proneness would not be possible without the development of self-report scales that capture the hallmark features of fantasy proneness. The earliest example is the Inventory of Childhood Memories and Imaginings (ICMI; Wilson & Barber, 1983), a 52-item yes–no questionnaire covering recall of childhood fantasizing and present state fantasizing (e.g., "When I was a child, I lived in a make-believe world much or most of the time"; "As an adult, I still enjoy fairytales.").[1] Later, researchers developed the 25-item Creative Experiences Questionnaire (CEQ; Merckelbach, Horselenberg, et al., 2001), which contains three types of yes–no items: Questions about the developmental antecedents of fantasy proneness ("As a child I was encouraged by adults to fully indulge myself in fantasies and daydreams"), items that describe intense involvement in fantasy ("I spend more than half the day fantasizing or daydreaming"), and items that describe the consequences of fantasizing ("I tend to confuse my fantasies with memories of real events"). In more recent years, researchers have developed several new measures. Some of these new measures are much broader than the CEQ or ICMI because they cover the entire range of fantasy engagement, including its beneficial effects on, for example, problem solving, creativity, and recreational activities (e.g., the Imaginative Involvement Scale; Naylor & Simonds, 2015; the Fantasy Engagement Scale, Plante et al., 2017; the Fantasy Questionnaire, Weibel et al., 2018). Others are narrower than the ICMI or CEQ in that they focus on specific aspects of fantasy proneness, such as imaginary companions and pretend play during childhood (e.g., the Retrospective Childhood Fantasy Play Scale; Kirkham et al., 2019). However, as these scales are fairly recent, researchers have not yet employed them on a wide scale, and little is known about how they relate to other indices (e.g., measures of schizotypy or dissociation).

Questions exist as to which superordinate dimension best covers the lower order facet of fantasy proneness. Traditionally, researchers have linked fantasy proneness to Openness to Experience (Kihlstrom et al., 1994; McCrae & Costa, 1997; but see Sánchez-Bernardos & Avia, 2004), the least-understood Big Five factor that encompasses curiosity, novelty seeking, and unconventionality. More recently, however, some authors have posited, on the basis of factor analytic data, that fantasy proneness is a lower order facet of Big Six Oddity (Watson et al., 2008; but see Ashton & Lee, 2012), whereas other authors contend that it occupies an extreme position in the Openness/Intellect domain (DeYoung et al., 2012).

The Current Meta-Analysis

Although researchers have studied a wide range of potential correlates of fantasy

[1] The original ICMI contained 103 items, but the 52-item version is mostly employed (e.g., Lynn & Rhue, 1988). Myers (1983) described a 48-item version of the ICMI that is also in use (e.g., French et al., 2008; Hutchinson-Phillips et al., 2005).

proneness and created an extensive database, what is lacking is a meta-analysis of the strengths of the zero-order correlations that researchers have obtained. Apart from providing a useful starting point for much needed theoretical refinement in conceptualizing fantasy proneness (e.g., Plante et al., 2017), such an evaluation could help to answer an important preliminary question, which we raise based on the literature that we discussed above: Do the connections among fantasy proneness, self-reported trauma, and dissociative symptoms predominate in terms of effect size compared with other potential correlates (e.g., anomalous experiences)? If fantasy proneness is linked to a similar extent with both dissociative symptomatology and to experiences with no apparent origins in a traumatic background (e.g., anomalous experiences and excessive daydreaming), then theoretical accounts of fantasy proneness should take this pattern of findings into account (Merckelbach & Giesbrecht, 2006).

With these issues in mind, we reviewed the empirical literature on fantasy proneness between 2000 and 2018. Our approach was inductive and descriptive. Our ambition was not to test hypotheses or propose a new theoretical framework, but rather to taxonomize the spectrum of fantasy proneness correlates in terms of effect sizes. Our choice to exclude empirical studies before 2000 was based on the following considerations. First, the English version of the CEQ began circulating in 2000 and to facilitate comparisons between ICMI and CEQ, we selected 2000 as the starting point. Second, studies using the ICMI up to 2000 were mainly focused on hypnotic suggestibility, a correlate that we, for the reason explained above, decided to ignore in our meta-analysis. Third, the degree of specificity with which psychological researchers present psychometric results has changed over time. Thus, many studies on ICMI and its correlates before 2000 do not provide descriptive information (mean values, *SD*'s) about the ICMI.[2] Relatedly, attempts to retrieve missing information from authors of articles with underspecified psychometrics published before 2000 would be futile: It is long ago, data were not electronically stored, and some of the most prolific authors have passed away. Fourth, up to 2000, several versions of the ICMI circulated and sometimes it is impossible to determine what version (and how many items) authors were using.[3] Finally, much of the relevant literature on fantasy proneness, dissociation, suggestibility, and memory up to 2000 was covered in older reviews (e.g., Brenneis, 1996; Eisen & Lynn, 2001; Lynn et al., 1996; Lynn & Rhue, 1988; Platt et al., 1998). We choose 2018 as the final year because we conducted our search in March 2019, that is, when our overview of fantasy proneness articles appearing in 2019 was incomplete.

Method

Search Strategy

Using Google Scholar, we searched for articles in English peer-reviewed journals from 2000 to 2018 and that contained the term "fantasy proneness" along with "ICMI" and/or "CEQ". We employed Google Scholar because it is a more inclusive resource that also covers journals not indexed by medical or psychological databases (e.g., journals on marketing, aesthetics, sports, and hypnosis; see also Shultz, 2007: Gehanno et al., 2013) but that are potential outlets for publications on fantasy proneness. We focused on research in which the ICMI and/or CEQ were administered because these two instruments are the most widely used measures of fantasy proneness. Other fantasy proneness questionnaires (i.e., the Imaginative Involvement Scale, Fantasy Engagement Scale, Fantasy Questionnaire, and Retrospective Childhood Fantasy Play Scale) are of more recent vintage (2015–2019) and have not yet been employed on a sufficiently large scale. Our search returned 546 publications from which we extracted publications based on inclusion and exclusion criteria.

[2] An example would be Robertson and Gow's (1999) article on fantasy proneness and past-life experiences in which neither descriptive statistics nor first-order correlations are given. Another example would be Pekala et al.'s (1999) article on fantasy proneness and dissociation, which does not provide the reader with descriptive information and gives some, but not all first-order correlates.

[3] An example would be Lawrence et al.'s (1995) study on paranormal belief, childhood trauma, and fantasy proneness in which "only those items from Myers' (1983) ICMI:C that refer explicitly to childhood fantasy" (p. 211) were employed, but no further details are given.

Inclusion and Exclusion Criteria

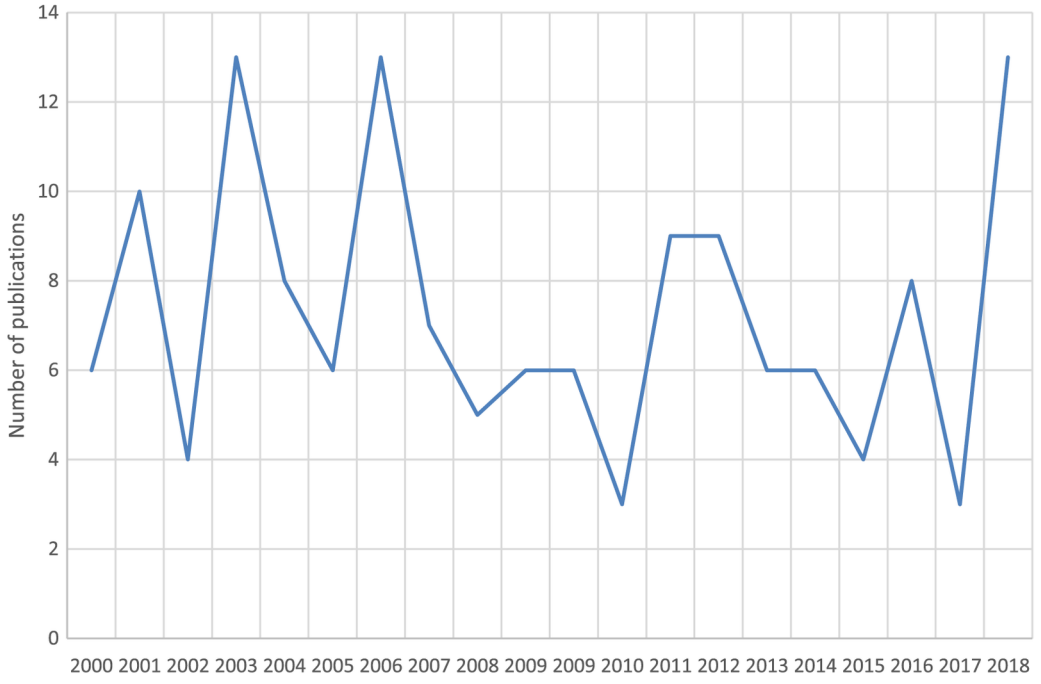
We screened the title and abstract of each article and excluded articles that did not meet the following eligibility criteria: (a) an original research article involving a sample of 10 or more; (b) written in English and published in a peer-reviewed journal (we included studies accepted for publication, but that to date appeared only in the published-ahead-of-print-section of journals); (c) used the ICMI and/or CEQ and reported descriptive data about these measures in (sub) sample(s) and/or correlations with other constructs; and (d) provided sufficient background data regarding the sampling method (e.g., whether research participants were students, people from the general population, or patients).

From the 546 records identified, we excluded 144 unpublished articles (e.g., doctoral theses); 56 non-English publications; 99 books, book chapters, review articles, case studies, letters, or conference summaries; 7 articles that appeared in non-peer-reviewed journals; 74 empirical articles in which only a small subset of ICMI or CEQ items were used or in which ICMI or CEQs were merely employed as a screener or filler and no data were reported; 10 articles that were not retrievable; and 24 titles that overlapped with other articles or were duplicates. We identified 132 eligible articles encompassing 139 separate studies (*k*) and 24,007 research participants. Of the 139 studies, 122 involved nonclinical participants, 6 relied on patient groups, and 11 consisted of both patients and nonclinical participants (i.e., mixed samples). In 96 studies (69%), fantasy proneness was measured with the CEQ; in 41 studies (30%), it was measured with the ICMI; and in 2 studies, both measures were administered. Articles that we included in our meta-analysis are denoted with an "*" in the reference list. Figure 1 shows how eligible articles were distributed over the years.

Data Extraction

We extracted from the eligible publications demographic information regarding the sample,

Figure 1
Distribution of Eligible Publications Across 2000–2018



sample size, CEQ, and/or ICMI mean values and standard deviations, and associations of CEQ and/or ICMI with other constructs. We opted for the correlation coefficient (*r*) as an effect-size indicator, as the overwhelming majority of relevant articles relied on cross-sectional data.

We did not further explore the link between fantasy proneness and hypnotic suggestibility. As we stated earlier, researchers up to 2000 had secured sufficient evidence to conclude that the association between the two constructs is at best modest (e.g., Lynn & Rhue, 1988). We did, however, examine correlations of fantasy proneness with interrogative suggestibility and compliance, which are distinguishable from hypnotic suggestibility (e.g., Malinoski & Lynn, 1999).

Whenever researchers used several measures of the same construct (e.g., several indices of absorption, DeYoung et al., 2012), we pooled the correlations. In the case of self-reported trauma measures, we attempted to differentiate between global trauma measures, (sub)scales probing emotional abuse or neglect, and subscales covering violent forms of trauma such as physical and sexual abuse (e.g., Berkowski & MacDonald, 2014). Measures of neglect and of emotional abuse can both be seen as operationalizing nonphysical maltreatment (Rogers & Lowrie, 2016), and therefore, we placed them in the same category.

We treated measures of anomalous beliefs and anomalous experiences as one category because self-reports of anomalistic experiences imply belief in and acceptance of such experiences (e.g., Gow et al., 2004). A more technical point is that items in questionnaires measuring acceptance of anomalous phenomena often do not allow for differentiating between belief and experience. Consider, as an example, a superstition item of the widely used Paranormal Belief Scale (PBS; Tobacyk & Milford, 1983): "The number thirteen is unlucky." What does it mean when people endorse this item? That they (only) have a belief? Or that they have experienced this? The latter might well be the case and in fact, some investigators (e.g., Blackmore & Troscianko, 1985) have argued that paranormal belief is the overinterpretation of coincidences that individuals might experience (i.e., the probability misjudgment account of anomalous beliefs). At the empirical level, French et al. (2008) found that the psychological profile of experiencers (e.g., of alien abduction) is an extreme version of the profile of believers. We prefer the term "anomalous" over "parapsychological" or "supernatural" because it is broader and also includes phenomena such as déjà vu or near-death-experiences, which are not traditionally viewed as parapsychological or supernatural in nature (Gow et al., 2009).

We included correlations with anxiety (along with neuroticism) and depression separately. When authors reported correlations of fantasy proneness with global measures of distress, which encompassed anxiety and depression symptoms (e.g., Bacon & Charlesford, 2018), we entered these correlations for both anxiety and depression. We used a similar approach when researchers used a compound measure of, for example, magical ideation and dissociation (e.g., Ashton & Lee, 2012; Study 1).

Sometimes, researchers excluded CEQ or ICMI items (e.g., Rogers & Lowrie, 2016), for example, because their content overlapped with other measures (e.g., anomalous beliefs). In those cases, we estimated the average score by multiplying the observed mean with the fraction of 25/*i* (CEQ) or 52/*i* (ICMI), with *i* referring to the number of included items. When authors used for the CEQ or ICMI a different (e.g., 1–7) scoring format than the yes/no format (e.g., Panero et al., 2016), we converted the dimensional score to a dichotomous score.

Correlations reported in some studies were based on different sample sizes, for example, a correlation between fantasy proneness and dissociation for the full sample and a correlation between fantasy proneness and abuse frequency for a subsample (e.g., Bottoms et al., 2012, 2016). In such cases, we decided to weight in our Hunter–Schmidt analyses (see below) with the smaller (more conservative) sample size.

Some measures of underlying constructs—for example, imagery ability (Questionnaire upon Mental Imagery; QMI; [illegible]han, 1967)—are keyed negative (lower scores imply higher self-reported imagery ability). In that case, we dropped the negative signs of correlations with fantasy proneness.

Some studies did not report mean fantasy proneness scores or their statistical association with other constructs. In such cases, we invited authors to send us these details. When they did not provide us with this information, we excluded their study from the meta-analysis if it presented

neither mean fantasy proneness scores, nor statistical data regarding links with other constructs. In a number of studies ($k = 2$; 23%), other metrics than r (e.g., t or F statistics; e.g., iel & Mason, 2015) were reported. In those cases, we transformed these metrics to r using the standard formula.

Data Analysis

First, we examined the demographics of the samples and some basic psychometric findings with regard to the CEQ and ICMI. Second, we used jamovi (version 1.0.4; The jamovi project, 2019) to conduct a meta-analysis on the correlates of fantasy proneness. We applied the Hunter–Schmidt method, which is based on the random-effects assumption and calculates effect size (r) by employing sample size as a weight. Basically, the Hunter–Schmidt approach assumes that the populations sampled by the studies in a meta-analysis are not homogeneous and have average effect sizes that vary randomly. Thus, this approach involves estimating an additional error term. Referring to several examples, Field and Gillett (2010) argued that the random-effects assumption should be the norm in social science data. Below, we present r's along with 95% Confidence Intervals (CIs). In accordance with conventional standards, r's $> .50$ were qualified as strong, those between .30 and .50 as moderate, and those <.30 as small. We also report the I^2 statistic as a measure of between-study heterogeneity (i.e., an indicator of what proportion of the observed variance would remain if sampling error variability across studies were eliminated, Borenstein et al., 2017). I^2 may range from 0% to 100%, with values of >50% indicating considerable heterogeneity. Furthermore, we present fail-safe N's. This parameter refers to the number of statistically nonsignificant results in the metaphorical file drawer that is required to turn the effect size essentially into zero. The jamovi estimate of this parameter is based on Rosenthal's (1979) conceptual analysis of the file-drawer problem, an analysis that has not gone unchallenged (e.g., Rothstein, 2008).

We decided to include only those correlates of fantasy proneness in our meta-analytic calculations that several research groups have studied repeatedly. Concretely, we limited our meta-analysis to correlates that were reported in at least five articles by at least two different laboratories (but see Supplemental Table for r's based on $2 < k < 5$).

Results

Demographics

Sex of participants and their scores on either the CEQ or ICMI were specified in 104 studies. The mean proportion of women in these studies was 0.71 ($SD = 0.20$). The Pearson product-moment correlation between this proportion and mean CEQ scores was $r(80) = -0.10$, $p = .40$. The correlation between proportion of women and ICMI scores was $r(24) = -0.28$, $p = .17$.

Age of participants and their CEQ or ICMI scores were specified in 97 studies. Mean age across these studies was 25.89 years ($SD = 11.27$). The correlation of age with mean CEQ scores was $r(77) = -0.01$, $p = .93$, and that of age with ICMI scores was $r(20) = -0.17$, $p = .45$. In light of the nonstatistically significant associations of fantasy proneness with sex and age, we did not further consider these demographic variables in the results reported below.

Reliability

In 71 studies, Cronbach's alphas were reported, but it only makes sense to average them when sample sizes are taken into account. Sample sizes varied widely from 21 to 1,543, with the mean sample size being 173 ($SD = 198$; median sample size = 106). Cronbach's alphas for the CEQ and ICMI averaged across studies and corrected for sample size were 0.76 (based on $k = 57$; $N = 10{,}659$) and 0.84 (based on $k = 14$ and $N = 2{,}316$), respectively. Internal reliabilities were thus satisfactory, with that of the ICMI being significantly higher than that of the CEQ, $t(69) = 6.52$, $p < .01$, Cohen's $d = 1.45$, which is not surprising given that the ICMI is more than twice the length of the CEQ.

As to stability, in the article introducing the CEQ, Merckelbach, Horselenberg, et al. (2001) reported that its test–retest correlation over a 6-week period is high ($r = 0.95$ in a sample of 17 students). In subsequent research, Merckelbach (2004; Study 2) retested a subgroup of students ($n = 24$) after a 6–8 months interval

with the CEQ and obtained a correlation of 0.82. Schelleman-Offermans and Merckelbach (2010) administered the CEQ twice to 30 low and 30 high fantasy-prone individuals, with several weeks in between, and found a test–retest correlation of 0.92. Chiu et al. (2012) reported a 6-week test–retest stability of 0.76 for the Chinese version of the CEQ in a student subsample ($n = 84$).

We did not find any articles that appeared after 2000 and that presented test–retest data for the ICMI. Older studies, however, suggest adequate stability. For example, Myers (1983) administered her version of the ICMI (48 items) twice to a group of 104 children and adolescents with a mean interval of 2.5 days and found a test–retest correlation of 0.87. Lynn and Rhue (1986) reported a test–retest correlation of 0.93 for the ICMI administered to students ($N = 62$) on two separate testing sessions (average time interval: 10.2 days). Thomson and Jaque (2015) found similar ICMI scores for professional (>5 years training) and preprofessional (<5 years training) dancers, which suggests that extensive training in itself does not increase ICMI levels.

Validity

In 109 studies, data regarding mean CEQ and/or ICMI scores of (sub)samples were specified. Table 1 shows overall mean and standard deviations weighted by sample sizes. Table 2 shows the top five ranking CEQ and ICMI scores and their (sub)sample characteristics, as well as the bottom ranking groups. In generating this list, we discarded studies in which subsamples were recruited based on extreme CEQ or ICMI scores. As shown, (sub)samples selected based on their role-playing or their acceptance of anomalous experiences are strongly represented in the top rankings. This pattern provides indirect support for the content validity of the CEQ and ICMI because both types of phenomena require suspension of reality, which is a first step in fantasy immersion (Hilgard, 1974).

Two studies examined the correlation between CEQ and ICMI, and their findings underline the concurrent validity of these instruments. Merckelbach, Wiers, et al. (2001) administered the CEQ and ICMI to a group of 52 students and obtained a correlation of 0.77 between both measures. Kluemper and Dalenberg (2014) included both the CEQ and ICMI in their study on suggestibility in adults ($N = 92$) and found a correlation of 0.87. Plante et al. (2017) gave the CEQ and a subset of ICMI items that probe anomalous beliefs to their participants ($N = 124$) and reported a correlation of 0.71 between both measures.

Table 1
CEQ and ICMI Mean Values (M) and Standard Deviations (SD) Across Studies (k) Weighted by Sample Sizes (N). M and SD Across Both Measures Expressed as Proportion of Maximum Possible Score (POMP) Are Also Shown, With Maximum Possible Scores Being 25 for CEQ and 52 for ICMI (CEQ = Creative Experiences Questionnaire; ICMI = Inventory of Childhood Memories and Imaginings)

	CEQ	ICMI	POMP
k	82	27	—
N	13,219	4,334	—
M	8.50	22.49	0.36**
SD	3.98	8.02*	0.08**

Note. * In two studies (with a total *N* of 192), standard deviations of ICMI scores were not reported; ** based on $k = 109$ and $N = 17{,}553$.

Factor Structure

Factor analytic studies of the CEQ and ICMI suggest that these measures cover several dimensions, not all of which are maladaptive. For example, Sánchez-Bernardos and Avia (2004) factor-analyzed the CEQ and found a three-factor solution: fantasy vividness, fantasy to escape, and make-believe. Using a 9-point Likert scale, Webster and Saucier (2011) replicated in their exploratory factor analysis of the CEQ dimensions of fantasy intensity and make-believe, but additionally found a dimension best described as extrasensory experiences. Sánchez-Bernardos et al. (2015) factor-analyzed data obtained with a 15-item version of the CEQ in a sample of students and again replicated the fantasy vividness and make-believe dimensions. Similarly, Klinger et al. (2009) found that the ICMI is a factorially complex measure that involves two dimensions: Weakened boundaries between reality and fantasy and enjoying fantasy fiction.

Table 2

Top Five CEQ and ICMI Scores, Proportions of Maximum Possible Scores (POMP), and Sample Characteristics (CEQ = Creative Experiences Questionnaire; ICMI = Inventory of Childhood Memories and Imaginings)

	M (*SD*)	POMP	*n*	Subsample selection
CEQ (highest)				
Reyes et al. (2017)	15.20 (4.30)	0.61	105	Cosplayers
Daniel and Mason (2015)	14.08 (3.89)	0.56	24	Individuals high on hallucination scale
Somer et al. (2016)	13.75 (4.01)	0.55	341	Excessive daydreamers
Panero et al. (2016)	13.39 (4.30)*	0.54	20	Actors
Parra and Argibay (2012)	12.77 (3.58)	0.51	40	Psychic abilities claimants
CEQ (lowest)				
Geraerts et al. (2006)	4.20 (3.50)	0.17	20	Control participants
Labuschagne et al. (2010)	4.10 (3.05)	0.16	14	Control participants
Horselenberg et al. (2006	4.00 (2.20)	0.16	19	Low absorption participants
Vissia et al. (2016)	3.81 (3.12)	0.15	16	Control participants
Rogers et al. (2007)	3.00 (0.93)	0.12	250	Community sample
ICMI (highest)				
Gow et al. (2008)	39.17 (–)**	0.75	15	Hypnosis seminar attendees
Thomson and Jaque (2012	31.49 (6.72)	0.60	39	Actors
Gow et al. (2001)	30.50 (–)**	0.58	12	contactees
Bresnick and Levin (2006)	28.86 (7.28)	0.56	21	uasca seminar attendees
Thomson et al. (2009)	28.74 (7.94)	0.55	130	Artistic professionals
ICMI (lowest)				
Bottoms et al. (2012)	16.82 (7.25)	0.32	1679	Female students
Gow et al. (2003)	15.70 (6.52)	0.30	89	Community sample
and Spei (2004)	14.58 (8.50)	0.28	376	Community sample
h et al. (2008)	13.21 (10.16)***	0.28	19	Community sample
Levin et al. (2004)	9.29 (5.20)	0.18	14	Control participants

Note. * Based on conversion from 7-point to dichotomous scale; ** Standard deviation not reported; *** Based on a 48-item version of the ICMI.

Correlates of Fantasy Proneness and Their Effect Sizes

Table 3 shows the 19 most studied correlates of fantasy proneness (as measured by either CEQ or ICMI) and their effect size estimates (in *r*). Rank ordered from high to low, the largest effect sizes (*r*'s > .50) were obtained for: Absorption, mostly measured with Tellegen's Absorption Scale (TAS; Tellegen & Atkinson, 1974); hallucinatory experiences as indexed by the Launay–Slade Hallucination Scale (LSHS; Launay & Slade, 1981); magical ideation, which is a schizotypal feature typically measured with the Magical Ideation Scale (MIS; Eckblad & Chapman, 1983); perceptual aberrations, which is another schizotypal aspect, typically measured with the Perceptual Aberration Scale (PAS; Chapman et al., 1978); dissociative symptoms (mostly measured with the Dissociative Experiences Questionnaire; DES; Bernstein & Putnam, 1986); and excessive daydreaming (as measured with the Maladaptive Daydreaming Scale; MDS; Somer et al., 2016).

Correlates of fantasy proneness with a medium effect size (.30 < *r*'s < .50) were as follows: Unusual sleep experiences, such as nightmares and hypnagogic hallucinations (as measured by the Iowa Sleep Experiences Survey; Watson, 2001); taxon items (i.e., items addressing the pathological manifestations of dissociation) of the Dissociative Experiences Scale (DES-T; Waller et al.,); acceptance of anomalous phenomena (as exed, e.g., by the Paranormal Beliefs Scale; PBS; Tobacyk & Milford, 1983); and suspiciousness/paranoia (e.g., suspiciousness items of the Schizotypy Subscale; STA; Claridge & Broks, 1984).

Small effect sizes (*r*'s < .30) were evident for the following correlates: imagery vividness (e.g., QMI; Sheehan, 1967), depression (e.g., Beck Depression Inventory; BDI; Beck & Steer, 1984), anxiety (e.g., Beck Anxiety Inventory; BAI; et al., 1988), global trauma self-reports

Table 3
Effect Sizes for Correlates of Fantasy Proneness(DES = Dissociative Experiences Questionnaire)

	r	*k*(*N*)	*Z*	95% CI	I^2	Fail-safe *N*
Related concepts						
Absorption	.64	24 (5219)	26.7**	.59–.68	87%	47796
Imagery vividness	.29	6 (1028)	6.7**	.21–.38	48%	193
Dissociation and trauma						
Dissociative symptoms	.52	72 (10961)	26.3**	.48–.56	88%	138636
DES–Taxon	.40	14 (2716)	25.0**	.37–.43	0%	2590
Global trauma	.26	19 (3527)	14.9**	.23–.30	15%	1700
Violent trauma	.10	5 (1517)	2.3*	.02–.18	58%	20
Negative affect						
Depression	.29	10 (1119)	10.7**	.24–.35	0%	358
Anxiety	.26	14 (2781)	10.3**	.21–.30	39%	889
Schizotypy						
Hallucinatory experiences	.64	5 (329)	19.4**	.58–.70	0%	617
Magical ideation	.59	8 (2152)	29.2**	.55–.63	46%	4756
Perceptual aberration	.58	5 (809)	18.0**	.51–.64	45%	1092
Suspiciousness/paranoia	.36	5 (1028)	5.9**	.24–.48	77%	260
Acceptance of anomalous phenomena	.40	14 (2742)	14.2**	.34–.45	63%	2761
Daydreaming						
Excessive daydreaming	.51	5 (1593)	21.5**	.46–.56	35%	1314
Absentmindedness	.25	10 (1237)	5.2**	.16–.34	58%	278
Unusual sleep experiences	.49	6 (698)	14.8**	.42–.55	18%	582
Interrogative suggestibility	.17	5 (780)	3.0**	.06–.27	36%	29
Memory						
Memory illusions	.17	20 (1877)	6.5**	.12–.22	18%	391
Memory hits	.14	8 (927)	1.9	.00–.29	76%	37

Note. * $p < .05$. ** $p < .01$.

(e.g., Childhood Trauma Questionnaire; CTQ; Bernstein et al., 2003), absentmindedness (e.g., Cognitive Failures Questionnaire; CFQ; Broadbent et al., 1982), interrogative suggestibility/compliance (e.g., as measured with the Gudjonsson Suggestibility Scale; GSS; Gudjonsson, 1984), memory illusions (e.g., as measured with the Deese–Roediger–McDermott paradigm; DRM; Roediger & McDermott, 1995), memory hits (e.g., on the DRM task), and self-reports of violent childhood trauma (e.g., physical and sexual abuse items of the Child abuse and Trauma Scale; CATS; Kent & Waller, 1998).

Discussion

Researchers have published empirical articles on fantasy proneness at a steady pace over the past two decades, but what is missing is an overview of its most robust correlates. Our meta-analysis provides such an overview and may serve as a starting point for the much-needed conceptual housecleaning in this research domain. Below, we will elaborate on our key findings, but an important preliminary issue concerns the psychometric qualities of the CEQ and ICMI. Studies included in our meta-analysis generally concluded that their reliabilities are adequate. The fact that markedly raised CEQ or ICMI scores are consistently found in actors, dancers, artists, opera singers, and cosplayers (e.g., McCain et al., 2015; Reyes et al., 2017; Schelleman-Offermans & Merckelbach, 2010; Thomson & Jaque, 2012, 2015) supports the face validity of these instruments: These are groups in which a preference for fictional narratives, pronounced fantasy immersion abilities, and a talent for make-believe might be expected (Panero et al., 2020). Still, several authors (e.g., Klinger et al., 2009) have questioned whether the CEQ and ICMI are conceptually cohesive measures. These authors refer to factor-analytic studies (e.g., Klinger et al., 2009; Sánchez-Bernardos & Avia, 2006) in which fantasy proneness, as measured by the CEQ or ICMI, emerged as a multidimensional concept rather than as the unitary

syndrome-like phenomenon sketched by Wilson and Barber (1983) in their original case vignettes. One dimension that researchers have identified repeatedly can best be described as a preference for exploring the limits of reality and convention, which, in principle, is a benign feature closely related to counterfactual thinking (i.e., construing alternative scenarios). Not surprisingly, Bacon et al. (2013) found in their student samples (N = 106 and 76) that fantasy proneness is positively related to the ability to generate counterfactuals (r's = .55 and .58).

In contrast to older studies that observed higher fantasy proneness levels in women than in men (e.g., Myers, 1983) and more fantasy engagement in younger people than in adults (e.g., Singer, 1975), our meta-analysis provides no indication for the importance of these demographic variables. If there exists any sex or age differences at all, they are probably very small (e.g., Lucas et al., 2013).

Some authors (e.g., Merckelbach, Rassin, et al., 2000) have expressed concern that high fantasy-prone individuals may endorse items in an indiscriminant way, thereby producing spurious links between fantasy proneness and other constructs. If true, one would expect an amorphous pattern of uniformly strong effect sizes across different correlates. However, the effect sizes that we obtained for the correlates of fantasy proneness constitute a variable pattern, ranging from large (e.g., hallucinatory experiences) to weak effects (e.g., self-reported violent trauma). This refutes the hypothesis that fantasy proneness engenders indiscriminate item endorsement.[4]

Dissociation and Trauma

The best studied correlate in this domain is, by far, dissociation. Its popularity as a research topic stems from debates about the relevance of fantasy proneness to dissociative symptomatology, which some authors (Vissia et al., 2016) question. Our meta-analyses show that empirical findings do not support this position: The effect size of the link between fantasy proneness and dissociative symptomatology is large (r = .52), and given that it is based on 72 separate studies aggregating close to 11,000 research participants, it is among the most reliably replicated and most robust findings in this domain. Thus, any comprehensive theory about dissociation would need to take its intimate relation with fantasy proneness into account (see also Giesbrecht et al., 2008).

Much of the research exploring the connection between fantasy proneness and dissociation was predicated on the assumption that both originate from traumatic experiences. Our meta-analysis, however, reveals that self-reported (childhood) trauma is a small, albeit significant correlate of fantasy proneness.[5] In a number of studies, fantasy proneness and self-reported trauma turned out to be independent variables. For example, Thomson and Jaque (2011) found that actors and controls did not differ with regard to self-reported trauma, but the two groups did differ with regard to fantasy proneness and dissociation, with actors having higher levels of both. This is in line with the study by Lynn et al. (2014) who reviewed evidence indicating that the overlap between fantasy proneness and dissociation cannot be accounted for entirely in terms of self-reported trauma. Rogers and Lowrie (2016; see also Rogers et al., 2007), Bigelsen and Schupak (2011), and Martial et al. (2018) provide further examples of a disconnect between fantasy proneness and trauma. All in all, these findings support the alternative idea that there are nontraumatic routes to fantasy proneness such as genetic predisposition (Ott et al., 2005), parental encouragement of creativity (Lynn & Rhue, 1988), boredom (Bigelsen et al., 2016). However, the simple fact that fantasy proneness may have a nontraumatic origin is not dispositive regarding whether it may take a maladaptive route.

Some authors (e.g., Kluemper & Dalenberg, 2014) have argued that the connection between dissociative symptoms and fantasy proneness depends on the absorption items in measures of these constructs (i.e., DES and CEQ or ICMI). Following this line of reasoning, one would predict that fantasy proneness would be unrelated to taxon items of the DES-T (Waller et al., 1996), which represent pathological manifestations of dissociation (e.g., dressed in clothes but not remembering putting them on), rather than (benign) absorption (e.g., absorbed in TV or movie story). However, although the effect size

[4] However, the connection between fantasy proneness and symptom overreporting is associated with a medium effect size (r = .41; see Supplemental Table).

[5] An additional indication for this are the effect sizes for PTSD and nonphysical maltreatment (see Supplemental Table): r = .27 and r = .22, respectively.

for the link of fantasy proneness with DES–Taxon items was lower than that with general dissociation, it was still in the medium range (95% CI [.37, .40]).

Schizotypy

Our review shows that the connection of fantasy proneness to positive schizotypal features is as strong (i.e., perceptual aberration and magical ideation) as its link with dissociation, and sometimes even stronger (i.e., hallucinatory experiences; see Lynn, Maxwell, et al., 2019). Also, the heterogeneity (I^2) that is fairly typical for measurements of dissociative symptomatology (see also Lyssenko et al., 2018) was largely absent in the case of schizotypal correlates (three of four I^2's < 50%). An important question is how these findings relate to literature (Sanchez-Roige et al., 2018) suggesting that bipolar and schizophrenic characteristics are genetically coincident with an extreme form of Big Five Openness, a superordinate trait linked with fantasy proneness (but see Sánchez-Bernardos & Avia, 2004). For example, in their genome-wide analysis study, Lo et al. (2017) concluded that Openness, bipolar disorder, and schizophrenia tend to cluster and that "all three share phenotypic commonality in that they have been linked to heightened creativity and dopamine activity" (p. 155; see also Ott et al., 2005).

Daydreaming, Sleep, and Memory Illusions

Two further correlates of fantasy proneness with effect sizes hovering around .50 are unusual sleep experiences and excessive daydreaming, respectively. In the case of excessive daydreaming, one could make the point that this finding is almost circular because frequently engaging in vivid daydreaming is a key aspect of fantasy proneness (Wilson & Barber,1983 1984 t see Bigelsen et al., 2016; Bigelsen & Schu , 2011; Somer et al., 2016). However, unusual sleep experiences are an interesting correlate of fantasy proneness in light of the many studies that consistently found interconnections between sleep disturbances, dissociative symptomatology, and positive schizotypy (for reviews, see Barton et al., 2018; Koffel & Watson, 2009; Lynn, Maxwell, et al., 2019).

Some researchers have speculated that fantasy proneness fosters susceptibility to interrogative suggestibility (Ost et al., 1997) and memory illusions (Geraerts et al., 2005). Although the effect sizes associated with suggestibility and memory illusions are significant, our meta-analysis contradicts the idea that they are prominent correlates of fantasy proneness (see also Patihis, 2018). However, Frost et al. (2013) advanced a more fine-grained two-stage model of fantasy proneness and memory illusions that awaits further testing. According to this model, the first stage is acceptance of misleading information, which is related to trust in sources of misinformation rather than to fantasy proneness. It is only during the second stage—integration of misleading information into existing schemas—that fantasy proneness comes into play. Indeed, Frost et al. (2013) found in their sample of undergraduates that fantasy proneness predicted false recognition of misinformation after a 1-week interval but not at immediate testing.

Fantasy Proneness and Psychopathology

What, then, is fantasy proneness? On the basis of its most prominent correlates—absorption, positive schizotypy, dissociation, and unusual sleep experiences—we would argue that it is a trait-like inclination to attach additional value or meaning to perceptual and cognitive representations. This inclination may be manifested in a number of ways, ranging from anomalous beliefs to adopting a fictional identity. In principle, this inclination may benefit people (see also Smith & Mathur,). For instance, fantasy proneness may fac e the ability to become mentally transported in the narratives provided by movies and novels (Chen, 2015), to interpret the world in a spiritual way (ier & Skrzypińska, 2006), and to create s ul art and fiction (Dunn et al., 2004).

Still, researchers have well established that rates of psychopathology are markedly elevated in fantasy-prone people (McCutcheon et al., 2016; Merritt & Waldo, 2000; Rauschenberger & Lynn, 2003; Waldo & Merritt, 2000). We do not currently understand under what conditions fantasy proneness may take on psychopathological qualities, although there are some interesting clues. Thus, one promising idea is that the tendency to assign a surplus of significance to stimuli may promote healthy creativity as long as sufficient executive control exists (DeYoung et al., 2012; Fisher et al., 2013). However, a lack or

breakdown of executive control may lead to over-inclusive thinking, aberrant salience, and seeing connections where none exist, which are maladaptive manifestations variously called overencoding (Hoshi et al., 2011), apophenia (DeYoung et al., 2012), Oddity (Watson et al., 2008), or hyperassociativity (Lynn, Maxwell, et al., 2019). It may well be that distal factors, such as traumatic experiences and sleep disturbances, contribute to the breakdown of executive control (Knox & Lynn, 2014).

Transliminality

The profile of prominent correlates of fantasy proneness resembles that of transliminality, (e.g., Evans et al., 2019; Thalbourne & Houran, 2000). Transliminality refers to a heightened sensitivity to internally generated representations and can be measured with the Revised Transliminality Scale (RTS; Lange et al., 2000). The RTS contains 17 items that span fantasy proneness, magical ideation, mystical experience, and absorption. Psychometric analyses suggest that these items form a single dimension and share a common underlying factor. Whereas fantasy proneness is a descriptive term, transliminality is a more explanatory concept. Specifically, Thalbourne et al. (2003) argued that defective gating of irrelevant material is the key feature of transliminal persons, leading to fluidity and interconnectedness in their train of thought. Transliminality has been successfully linked to tasks that measure aspects of perceptual gating. For example, persons high in transliminality exhibit a heightened sensitivity to subliminally presented stimuli (Crawley et al., 2002). Furthermore, Soffer-Dudek and Shahar (2009) conducted a longitudinal study in which transliminality predicted sleep-related disturbances and lucid dreams, which, the authors stated, imply "a feeling of unusual connectedness to one's dreams, images, and perceptions" (p. 901). A promising next step would be for fantasy proneness researchers to use the example of transliminality research to inspire studies that include performance measures and employ longitudinal designs. More importantly, the overarching and so far unanswered questions are whether transliminality, fantasy proneness, overencoding, apophenia, Oddity, and hyperassociativity all map onto a general tendency to experience alterations in consciousness and, if so, whether defective gating and/or lack of executive control underlies the psychopathological manifestation of this tendency.

Limitations

Five limitations of our meta-analysis deserve comment. First, we excluded empirical studies on fantasy proneness that appeared before 2000. We do not think that the overall pattern of effect sizes would reveal a drastically different picture with the inclusion of these older studies. A Google Scholar search of ICMI and fantasy proneness before 2000 yields 59 results. Of those, 17 are unpublished dissertations, conference proceedings, or articles in obscure periodicals, whereas 42 concern articles in peer-reviewed journals. Of these 42 articles, 11 are reviews, chapters, and theoretical articles, leaving 31 empirical articles in the set. Of these 31 articles, 19 (61%) focus on hypnotic suggestibility. Adding the 12 remaining articles (on, e.g., dissociation, trauma, and anomalous experiences) to our database of 132 articles would result in a total of 144 articles spanning the period 1981–2018; 12 articles would constitute a fraction of only 8% of the literature that we missed.

Second, we restricted our meta-analysis to studies that survived peer review. Accordingly, we cannot rule out the possibility that some of the effect sizes we found are inflated due to file-drawer problems. The fail-safe *N*'s shown in Table 3 suggest that for some correlates (e.g., violent trauma and memory illusions), this is a more significant problem than for others (e.g., dissociative symptoms and magical ideation). Third, most research that we included in our meta-analysis relied on self-reports, which are not necessarily accurate. For example, Aleman and de Haan (2004) administered the CEQ to students and found that high CEQ scores were related to self-reported imagery vividness, but not to objective performance on a mental imagery task. Likewise, Lucas et al. (2013) showed that self-reported creativity is more strongly associated with fantasy proneness than are more objective indices of divergent thinking. Fourth, the great majority of studies included in our meta-analysis employed cross-sectional designs. Thus, our overview is highly dependent on first-order correlations. Although some causal interpretations can be suggested (e.g., fantasy proneness as an antecedent or mediator of acceptance of anomalous phenomena; see Irwin, 1990;

Lawrence et al., 1995), first-order correlations preclude the test of causal models. Our ambition was to provide a descriptive overview, but our findings show that it is important to move beyond that descriptive level. Specifically, 7 of the 19 effect sizes shown in Table 3 have I^2 values exceeding 50%, which indicates substantial heterogeneity and suggests that potential moderators are at play. A more sophisticated moderator variable analysis would be the logical next step, but such an approach would require a different type of data set with sufficient information about candidate moderators.

Future Research

The extant literature has not addressed a number of questions related to fantasy proneness, although they are essential to examine in order for the field to progress on a theoretical and empirical basis. Most importantly, we need psychometric studies to clarify the potential jangle fallacy (e.g., referring to the same construct by different terms; Lilienfeld et al., 2015) in this research field. This way, we can determine to what extent labels such as fantasy proneness, transliminality, Oddity, and apophenia denote a similar underlying conceptual space. Furthermore, it is now well established that there are various constituents (i.e., dimensions) of fantasy proneness (Klinger et al., 2009; Lynn & Rhue, 1988), but only few studies have related these constituents to the various correlates in our meta-analysis. Arguably, future fantasy proneness research that capitalizes on factor analytic and structural equation modeling and evaluates the conceptual cousins or twins of fantasy proneness (e.g., transliminality) and their correlates would motivate more sophisticated theoretical formulations of the construct of fantasy proneness.

What is also needed are longitudinal studies to test causal models regarding fantasy proneness and psychopathology. The developmental trajectories, environmental influences, and genetic profiles of adaptive and maladaptive fantasy may well differ and are worthy of systematic investigation. As noted, one distinct possibility is that adverse experiences interact with sleep disturbances to undermine executive control, which in turn unleashes a variant of fantasy proneness marked by a loss of contact with reality or interference with psychosocial functioning. Another, but related, issue warranting systematic study pertains to the psychological vulnerability that fantasy proneness might imply. For example, what happens when patients high on fantasy proneness are exposed to metaphors in psychotherapy that refer to child schemas or personality states as distinct personalities, such as when therapists use names to refer to shifting moods or personality states and treat them "as if" they were manifestations of indwelling personalities? Do patients come to accept and reify such metaphors as fixed entities, which become prominent in cases of dissociative identity disorder, for example? Does the boundary blur between metaphor and the self to the detriment of the patient? We know very little about these potential risks (but see Brenneis, 1996), and to address them would require longitudinal studies that track fantasy proneness and its correlates over an extended time period.

Finally, research has mainly focused on high fantasy-prone people and their allegedly superior abilities (e.g., acting) and/or psychopathologies. We know virtually nothing about people who score extremely low on fantasy proneness and the potential advantages and disadvantages in abilities and functioning (e.g., poor counterfactual thinking) they might possess. There are indications that fantasy proneness correlates negatively with alexithymia (Fuchs et al., 2007), a trait associated with lack of creativity and constricted imagination, but further research is needed.

Conclusions

Fantasy proneness is a multidimensional construct that can be assessed with valid and reliable measures. Since Wilson and Barber's (1983) early identification of fantasy-prone individuals, we have learned much about the correlates of fantasy proneness, and a literature has accumulated that implies that, although fantasy proneness is a strong correlate of dissociation, a history of childhood trauma appears to be insufficient to fully account for the expression of fantasy proneness in adulthood. Nevertheless, further research is needed to elaborate (a) the biological underpinnings of the link between fantasy proneness and schizotypy; (b) the positive, hedonic value of fantasy in everyday life; and (c) variables associated with diverse trajectories of adaptive and maladaptive fantasy across the lifespan.

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