Personality Characteristics Associated With the Dream Lucidity Ability: Fact or Fiction.

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Two areas of particular interest to me about lucid dreaming are: (1) individual differences; is there a certain type of person who is likely to have these experiences and (2) systematic analysis of the content of the experience. I'll be talking about the content analysis later. Right now, I'm going to talk about the type of person who is likely to have this dream. A complete review of our program of research on in-dividual differences will

soon be available (Snyder & Gackenbach, in press).

This research began with my dissertation in the mid-1970's. Today I decided to focus on the personality correlates to the dream lucidity ability, and thus the title. I feel frustration working with personality variables. Those of you who are Clinical, Social or Personality Psychologists, (I am a Social Psychologist by training) may appreciate my frustration. As in the personality literature in general, the amount of variance that personality accounts for in predicting the lucidity ability is minimal. In the literature about 30% of the behavioral variance is accounted for by personality. I'd say that's probably comparable when predicting the lucidity ability using personality. Imaginational, perceptual and spatial variables have been much more effective predictors (see Snyder & Gackenbach, in press). None-the-less, there are a few variables which are worth talking about.

I'm going to first consider some methodological issues for those of you who aren't familiar with these (see Table 1).

Table 1
Methodological Considerations When Investigating Individual Differences Associated With Dream Lucidity

1. lucid ability conceptualized as an act frequency
2. controls
   a. verification of understanding
   b. dream recall
   c. social desirability
   d. others (i.e., with intelligence measures also controlled for education attained)
3. subjects
   a. college Introductory Psycology students
   b. adults who self-selected due to high interest in dreams
4. procedure
   a. paper and pencil self-reports
      1) typically used scales with reliability and validity information available
   b. experimental testing
      1) used established procedures from the psychological literature

In my work, I conceptualize the lucidity ability in terms of its act frequency. That is, I simply ask people how frequently they have this experience. There is precedence in the personality literature for this sort of conceptualization. However, certain controls are vital to any work with lucid dreaming, especially with self-report information. The first control, is the verification of the subjects under-standing of dream lucidity. In one study with 707 Introductory Psychology students we lost 341 people because they could not, or

would not, give us a lucid dream transcript that we could be reasonably confident demonstrated their understanding. Our criteria was the inclusion of a recognition phrase (i.e., 'Then I knew I was dreaming.' or 'I was so relieved to then realize that it only was a dream,') as part of the lucid dream transcript. In other words, we lost about half of the people in the normative sample (Introductory Psychology students in the University of Northern Iowa) because they misunderstood. Researchers must be sure that subjects understand.

We've found that in study after study people who tend to have a lot of lucid dreams also had a tendency to report dreaming a lot, so you also have to control for dream recall. Finally, we controlled for variables such as social desirability and other confounds that one would expect from the personality literature.

We worked with two basic types of subjects. I tried to stick with the Introductory Psychology students, as any good psychologist knows that all human behavior is based on knowledge about white rats and college sophomores! So I stayed with the college sophomore! However, every now and again I have been enticed into working with adult subjects. Unfortunately, the adults that I have worked with are typically highly interested in dreaming. Consequently, they represent a select and biased sample. Additionally, we've found that they tend to be from a higher economic strata, better educated, and more intelligent as well as very interested in dreaming. For these reasons, the sophomores at UNI are my normative referent.

Regarding procedural considerations, most of my work is 'paper and pencil'. Although I have used some 'experimental' procedures. Most of the studies in this area are my work with my students at UNI. Other studies referenced in this talk include the work of Sally Kueny, Keith Hearne, Susan Blackmore, Henry Reed, and Harry Hunt. But the work has been predominantly my own. In a review of 25 studies in the area of individual differences and dream lucidity, the majority of which were mine, 77% used self-report frequency as the estimate of lucidity. In texts of verification of understanding the concept, 62% con-trolled for it. Only 45% have controlled for dream recall, which I consider a major methodological flaw. Concerning type of subjects, 72% are students. (I do try to stay with that sample!) In terms of the proce-dure, 65% are based on self-report scales. Finally, the statistical analyses were either analysis of variance formats or correlational procedures. (In more recent research I have been moving toward a multi-variant model.)

The first variable I'd like to discuss is risk-taking (see Table 2). This came from the work of Joe Dane, who had the idea that people who were spontaneously having lucid dreams were probably people who were willing to take a risk of some sort. So he and Bob Van de Castle, his major professor, developed the Dane-Van de Castle Risk-Taking Scale. They had a few items characterizing internal risks, such as, 'Do you like to take drugs?' or 'Would you be willing to participate in an hypnosis experiment?' and some

querying external risks, such as, 'Do you like to climb mountains?' or 'Would you jump out of airplanes?'. In his study, as well as my own, we found that risks, both external and internal, seemed to be characteristic of the frequently lucid female (see Table 2).

Then in 1983, I further investigated the notion of risk by looking at some of the classic measures of risk. The Choice Dilemma Questionnaire, developed by Stoner, is the major instrument used in the measure-ment of the risky shift phenomena. That is, the finding that groups make riskier decisions than individuals. We also administered Zuckerman's Sensation Seeking Scale. Sensation seekers are defined as people who need varied, novel, and complex sensations and experiences to maintain an optimal level of arousal. We administered all three scales in1983 to UNI students. We found nothing with the Dane-Van de Castle scale. For the choice dilemma, we noted a positive relationship meaning risky choices were associated with the dream lucidity ability. However, a negative relationship with sensation seeking surprised us, as it was the opposite of what we'd been finding with the Dane-Van de Castle Scale. Consequently, we did some interscale correlations.

Table 2

Summary of Results With "Risk Taking" Variables

Scale	Dane-Van de Castle Internal		Dane-Van de Castle External		Choice Dilemma[2]		Sensation Seeking[3]	
Sex of Sub.	M	F	M	F	M	F	M	F
Gackenbach, 1980 (Students)	0+[1]	+	0	0				
Gackenbach, et al, 1983 (Adults) (tested 1982)	0	+	0	+				
Gackenbach, 1983 (Students)	0	0	0-	0	0+	+	-	0-
Gackenbach, 1984a (Students)	0	0	0-	0			-	0-
Gackenbach, 1984b (Students)	0	0	-	0			-	0

1. + = Risk associated with lucidity; - = No risk associated with lucidity; 0 = No Relationship; Two signs mean a borderline relationship
2. Dane-Van de Castle and Choice Dilemma not correlated whereas Sensation Seeking and Dane-Van de Castle are significantly correlated (M = .58; F = .30).
3. Sensation Seeking and Choice Dilemma scales have primarily external risk items.

Scores on the Choice Dilemma Questionnaire were unre-lated to scores on the Dane-Van de Castle Scale, but the Sensation Seeking Scale was positively correlated to it (see Table 2). If you look at the item content, the Dane-Van de Castle Scale is really a shorter version of the Sensation Seeking Scale. Consequently, we administered these two scales on two more occa-sions, the following spring and summer of 1984. The negative relationship, with the lucidity ability, particularly with the Sensation Seeking Scale, emerged again. In the 1983 and 1984 studies the risk-lucidity associations were only happening with males, whereas in 1980 and 1982, I wasn't getting much at all with males. This is how I interpret these findings. If you read the items in the Sensation Seeking Scale, 90% of them characterize externally risky situations. Furthermore, it is a much longer scale than the eight item Dane-Van de Castle. It seems that male lucid dreamers do not like externally risky situations. In other words, they are not sensation seekers. Among females, there was more preference for risk, espe-cially internal. You'll see that this sex difference reverberates throughout our work.

Self perception is the next variable I will consider. Specifically, we have examined self concept, self monitoring, self control and self consciousness (see Table 3). Looking at some of my own work as well as the work of others, these variations on self percep-tion pretty much washed out as predictors of the dream lucidity ability. Most of this work has been on self-consciousness, an idea initially proposed Steve LaBerge who first administered that scale at Stanford and found that private self consciousness, habitual attendance to one's thoughts, motives and feelings, was characteristic of the frequently lucid dreamer. For public self consciousness, defined as a concern for one's social appearance of the impression one makes on others, there was no relationship. Several studies followed this initial inquiry. For both the Gackenbach et al. (1983) and Kueny (1985) studies, adult subjects and appropriate controls were used, but these were also the same controls used in the initial study. The combined results are muddy. However, there is one particularly noteworthy finding. Gackenbach et al. (1983) regressed intelligence, creativity, several personality measures and self consciousness onto self report lucid dreaming frequency. We found that for males, private self consciousness was the best predictor. That seemed to support LaBerge's original notion. However, Kueny (1985) reported negative relationships on very small samples (see Table 3).

Table 3

Summary of Results With Self-Perception Variables

Reference	Variable	Control(s)	Sample	Findings Male	Findings Female
Belicki, Hunt & Belicki, 1978	Typical, Ideal or Private self-perception	None	Students	0[1]	
Kueny, 1985	CPI: Good Impression- Concern With How Others React To Self. Self-control-Degree & Adequacy Of Self-regulation & Self-control	1. Dream Recall 2. Understanding 3. Premotivation to become lucid	Adults	0 0	0+ 0
Gackenbach, 1978	16PF: Self-sentiment Control- Controlled & Socially Precise.	None	Adults	0	
Gackenbach, 1986	16PF: Self-sentiment Control	None	Students Adults	0 +	0 0
Gackenbach, 1984c	Self-monitoring-Self-observation & self-control guided by situational cues to social appropriateness.	1.Dream Recall 2.Understanding 3.Social Desirability	Students	0	+

Table 3

Summary of Results With Self-Perception Variables

LaBerge & Gackenbach, 1982	Private Self-Consciousness-Habitual attendance to ones thoughts, motives & feelings	1.Dream Recall 2.Understanding	Students	+	
	Public Self-consciousness-A concern for one's social appearance and the impressions one makes on others.		Students	0	
Gackenbach, Curren, LaBerge, Davidson & Maxwell, 1983	Private Self-consciousness	1.Dream Recall 2.Understanding 3.Social Desirability	Adults	+	0
	Public Self-consciousness-4.Sex-role identity		Adults	0	0+
Kueny, 1985	Private Self-consciousness	1.Dream Recall	Adults	-	2
		2.Understanding	Adults	0	-
	Public Self-consciousness				0

1. 0 = No relationship; + = Positive relationship between lucid dream estimate and self-perception variable; - = Negative relationship; Two signs = Borderline relationship.
2. For males correlation is with self-report estimate while for females it is with number of signal verified lucids. Numbers of subjects per cell are very small (M = 10; F = 6).

Anxiety, thought to be the best predictor of self concept, has also been repeatedly investigated (see Table 4). Basically, the use of the anxiety scales listed here, resulted in mixed findings. Lets focus on social anxiety from the Self Consciousness Inventory (see Table 14*).* These studies use good con-trols whereas the earlier ones, by and large, did not. For females, there is some indication of low anxiety, associated with lucidity. This is consistent with the earlier studies. Weighting for the use of controls there a positive relationship between anxiety and lucidity for males has been found.

You can see a picture emerging. I believe that sex role identity is the pivotal variable. My inter-pretation of individual differences associated with dream lucidity comes from the findings with sex role identity, which is the extent to which an individual exhibits traits that are consistent with the traditional male or female social role. Gackenbach (1978, 1986) found a masculine factor from a factor analysis of the 16FF and other personality measures and she noted a positive relationship of it to lucidity. In the second study on Table 5 the Personal Attributes Questionnaire (PAQ), one of the standard measures of masculinity and femininity, subscales for males were both positively related to lucid dreaming frequency. The female data was less clear (see Table 5). In Kueny's (1985) study when subjects were separated for sex, nothing emerged but she had very few subjects. When she collapsed across sex a positive relationship with femininity emerged. It's important to point out that for the Gackenbach et al. (1983) females there's no relationship between femininity and lucidity. Although these subjects were more masculine than the PAQ norms, they are <u>not less feminine</u> than those same norms. What we see, espe-cially for males, is that an androgenous individual is a lucid dreamer.

Table 4
Summary of Results With Anxiety Variables

Reference	Variable Source	Control(s)	Sample	Findings: Male	Female
Gackenbach, 1978	16PF	None	Adults	-	
	Self-analysis Form	None	Adults		-
Gackenbach, 1986	16PF	None	Students	+	0
			Adults	0	0
	Self-analysis Form	None	Adults	0-	-
Gackenbach, 1980	Zuckerman Affect-Adjective Checklist	Dream Recall Understanding	Students	+	
LaBerge & Gackenbach, 1982	Social Anxiety From The Self-Consciousness Inventory (SCI)	Dream Recall Understanding	Students	1st + 2nd -	
Gackenbach, Curren, LaBerge, Davidson & Maxwell, 1983	Social Anxiety From SCI	Dream Recall Understanding	Adults	+	-
Kueny, 1985	Social Anxiety From SCI	Dream Recall Understanding	Adults	+	0

1. 0 = No relationship; + = Positive relationship between lucidity estimate and anxiety measure; - = Negative relationship; Two signs = Borderline relationship

Table 5
Summary of Results With Sex-Role Identity Variables

Reference	Variable Source	Control(s)	Sample	Findings	
				Male	Female
Gackenbach, 1978	Masculine Factor	None	Adults		+[1]
Gackenbach, Curren, LaBerge, Davidson & Maxwell, 1983	Personal Attributes Questionaire (PAQ) PAQ Masculinity	Dream Recall Understanding Social Desirability	Adults	+	0+[2]
	PAQ Femininity			+	0
Kueny, 1985	CPI Femininity	Dream Recall Understanding	Adults	0 +[3] 0	

1. 0 = No relationship; + = Positive relationship between lucid dream estimate and sex role identity variable; - = Negative relationship; Two signs = borderline relationship
2. This sample of adult females were significantly more masculine than the PAQ norms. Therefore there may be a ceiling effect accounting for the boarderline relationship.
3. A significant positive correlation was found when the data for the sexes were collapsed. This was possibly due to Kueny's small sample sizes.

In Table 6 are listed studies which examined extroversion. When weighted for controls no relation-ship has been found to extroversion. Snyder and Gackenbach (in

press) argue that Kueny's (1985) remarkable finding of the number of signal verified lucid dreams as highly significantly correlated with introversion (r = -.90) for only three men is theoretically important. Specifically we note that, "introverts have been said to maintain a higher level of arousal than extroverts due to constitutionally-determined properties of the central and autonomic nervous systems (p.145)." Furthermore, we argue that lucid dreaming involves a higher level of arousal during sleep. Therefore, her finding deserves further inquiry.

Table 6
Summary of Results With Extraversion Variables

Reference	Variable Source	Control(s)	Sample	Findings	
				Male	Female
Hearne, 1978	Eysenck Personality Inventory	None	Students	0	0
Gackenbach, 1978	16PF	None	Adults		+
Gackenbach, 1986	16PF	None	Students	0+	0
			Adults	0	0
Gackenbach, 1984	Self-Monitoring Extraversion Subscale	Dream Recall			
		Understanding	Students	0	0
		Social Desirability			
Kueny, 1985	CPI/Social Presence--Enthusiastic, Talkative	Dream Recall	Adults		
		Understanding			
		Premotivation	Adults	-2	0
		To Dream Lucidly			

1. 0 = No relationship; + = Positive relationship; 00 = Marginally positive relationship between lucidity estimate and extroversion; - = Negative relationship
2. This is correlated with the number of signal verified lucid dreams in a sleep laboratory for three males (r = -.90).

Table 7

Summary of Results With Religiousity, Neuroticism and Hypnotizability Variables

Reference	Variable	Control(s)	Sample	Findings Male	Female
Palmer, 1974	Religiousity	None	Students	0	
	Self-report	None	Adults	0	2
Gackenbach, 1978	Religiousity	None	Adults		+
	Detailed Self-report	Dream Recall		E 0	3
Gackenbach, 1984c	Religiousity	Dream Recall		E 0	+
	East-West Philosophies Scale	Understanding	Students	W 0	+
	Self-report	Social Desirability		R-	0
Hearne, 1978	Neuroticism	None	Students	0	0
	Eysenck Personality Inventory				
Gackenbach, 1978; 1986	Neuroticism	None	Students	0	4 0
	16PF		Adults		+/-
Dane, 1984	Hypnotizability	Dream Recall	Adults		+
		Understanding			
Kuenz, 1985	Hypnotizability	Dream Recall	Adults	-/+	5 0

1. 0 = No relationship; + = Positive relationship between lucidity estimate and personality variable; - = Negative relationship.
2. Lucid dreamers tended to evidence interests and attitudes associated with western religious/philosophical beliefs while non-lucid dreamers were more likely to evidence eastern perspectives.
3. E = East; W = West; R = General religiousity.
4. Frequently lucid and non-lucid dreamers were significantly less neurotic than infrequently lucid dreamers.
5. For males there was a negative relationship between hypnotizability and the number of signal verified sleep lab lucid dreams while there was a significant positive relationship between hypnotizability and one of the several self-report lucid frequency estimates.

Finally, the findings with religiousity, neurotisism, and hypnotizability will be briefly described (see Table 7). Religiosity correlations resulted in a mixed picture, depending on how you ask about it. Gackenbach (1984c) found that lucid women. seemed to exhibit both an eastern and a western philosophy of life. But in the same study there was a negative relationship such that males who frequently have lucid dreams seem not to identify themselves as highly religious.

We also didn't find much for correlations with neuroticism (see Table 7). With hypnotizability, Dane selected female non-lucid dreamers, who were high in hypnotizability, and was remarkably successful in inducing lucid dreams in their one night in the sleep laboratory. Kueny (1983) did a group induction and found a mixed picture (see footnote 5 of Table 7).

To summarize: What I think - and what frankly surprises me, but seems to gel with my initial gut feeling from my dissertation in 1978 - is that the "average" male lucid dreamer (not the sophisticated 500 lucid dreams lucid dreamer) is not a sensation seeker, has some social anxiety, seems androgenous and introverted, and possibly has a lot of inner orientation. This, as versus the female lucid dreamer, who is a risk taker, self monitoring, sensitive to social cues, low in anxiety, high in masculinity and hypnotizable. What I think we're seeing here, is an androgenous model. Lucid women stepping out of their sex roles to become more masculine and to take risks, is consistent with that model. Masculinity has been found in the sex role literature to be the key to psychological well-being and not androgyny. You can have femininity or not; it's the presence of masculinity which is important. The lucid dreaming woman is not anxious, she's a risk taker. I think that she's doing well. She's also hypnotizable and sensitive to social cues. A good, strong self-concept emerges fitting with the Transcendental Meditation (TM) concept of "witnessing" a dream (i.e., a variation on lucidity). The theory behind TM is that it is an evolved state of conscious-ness and people who practice it are psychologically
healthier than non-practitioners. To the extent to which consciousness evolution, parallels psychological well-being, the female data here fits their model. For the male, however, the TM model is problematic. For a man to engage in these activities, (i.e., at-tending to his dreams) is out of role and consequently risky. There is a lot of negative pressure from his environment about engaging in nontraditional activities. Consequently, he may suffer social anxiety. It's a very risky path to take in life with lots of negative feedback.

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