An investigation of gender differences in dream content of Ukrainian males and females using quantitative content analysis

Isaac Taitz[1], Miloslava Kozmová[2], Stanley Krippner[3], and Robert Tartz[4]

[1]Palo Alto University, Palo Alto, CA, USA
[2]Lecturer, Psychology Department, University of Massachusetts, Boston, MA, USA
[3]California Institute of Integral Studies, San Francisco, CA, USA
[4]California School of Professional Psychology, Alliant International University, San Diego, CA, USA

Summary. The present study of the unknown Ukrainian nocturnal world asked the question: "Are there content differences between Ukrainian male and female dream reports obtained from individuals attending dream seminars?" The systematic quantitative analysis of the content of dreams from 100 male and 100 female attendees of dream seminars conducted in 1995 and 1998 used Hall-Van de Castle's (1966) scoring instrument. Of the significant content differences, Ukrainian men exhibited higher incidence of assuming the befriender role (initiating friendly actions) and self-experienced negativity (victimization) while more women reported relating to others through friendliness. In the absence of other Ukrainian dream studies, results are interpreted in the context of earlier normative findings. Suggestions for future, culturally relevant research studies are provided.

Keywords: Dreams, gender differences, Ukraine, lifestyle, Hall-Van de Castle scoring system, social interactions in dreams

1. Introduction

The continuity hypothesis of the content of dreams (Hall, 1953) proposes that at least some narratives of dream experiences are closely linked with and reveal dreamers' waking life concerns, interests, and psychological "conceptions" insofar as these create a basis for actions in the world (Domhoff, 2017; Domhoff & Cox, 2015). Sometimes dreams include references to previous verifiable historical events (Bulkeley, 2008). In addition, for individuals living in any given culture, dreams presumably could reflect individual and collective "ways of life" (Shweder, 1999, p. 65), or, in other words, an approach to life unique to and intertwined with the past and present cultural and socio-political zeitgeist. Thus, one could propose that dreams could be impacted by the interactions between the prevailing societal ideas, individual or collective ideology, and/or philosophy of life (including dominant, subdominant, or opposing belief systems; Feinstein & Krippner, 1997). The following example from the authors' archive of Ukrainian dreams illustrates the notion of historical and societal influences on dreams:

I was on a large Japanese ship during the Second World War. I could tell by the colorful uniforms that this was wartime. There was a high-ranking officer, an admiral, and he was respected by his crew. We were competing over the attentions of a beautiful woman from the United States. We had to fight a duel for her affection. But the pistols were strange; the barrel was curved, and the bullets made neat holes through his skull, with no blood. But he did not notice it at all and kept shooting. Finally, I hit him in a place that killed him. Then I forgot about the woman and took command of the ship. I became the new admiral.

By reading the dream via a prima facie method (at first glance), the dream could be understood as a comingling of past historical facts (existence of Japan and United States; the event of the Second World War) as well as past and current psychological desires (ideology, domination, competition, resources, and victory). Upon further analysis, these elements of subjective dreaming experiences appear to express a historically based reflection of specific times. At the same time, the dream offers a collision of deep-seated collective and personal importance for the male dreamer who shared the dream in 1995. Dreams and dreaming are biological, psychological, and cultural events (Barrett & McNamara, 2007; Ellman & Antrobus, 1991; Krippner, 2007). Biological aspects of these nocturnal reoccurring experiences are scientifically accessible through verbal reports and electroencephalographic (EEG) measurements of physiological activities (LaBerge, 2007). The study of dreaming's mental activity has utilized quantitative content analyses of narratives (for a review, see Domhoff, 1996, 2003) and the qualitative analytical methods of inquiry into aspects of subjective experiences (e.g., Kozmová & Wolman, 2006; Wolman & Kozmová, 2007). Considering different ways of life, the characteristics (similarities and dissimilarities) of lived waking and dreaming experiences are embedded and insepara-

ble from the context of cultural traditions and customs (Parman, 1991). An individual's experiences and overall culture mutually influence each other, independent of in-group size (Krippner & Weinhold, 2001, 2002).

In summary, any given society's cultural values (attitudes and scripts for interpersonal and intragroup behavior) could impact the content of dreaming experiences (Hall, 1991; Tartz & Krippner, 2008). Such a notion bears even more relevance regarding how little the field understands the interplay of life embedded, lived, and dreamed in specific cultures (i.e. gender; Kozmová, 2010; Taitz, 2018). The present study of Ukrainian dreams will be a welcome addition to the literature on this topic.

Historical Cultural Context of Life in the Ukraine

Ukrainian dream content needs to be understood in the country's political and cultural context. August 24, 1991, marks the Declaration of Independence of Ukraine from the former Soviet Union. Until this revolutionary change in political regime, the Soviet Union was a society consisting of ethnic, religious, and cultural multiplicities of nations and nationalities subsumed under an overarching philosophy of communism (Holowinsky, 2008; Joo, 2004).

The years following the establishing of Ukrainian statehood in 1991 were a search for national identity. The quest was powerfully informed by history of oppression and subjugation. For example, between the years 1914 and 1948, the country suffered through a Russian civil War; a Polish-Soviet war; World War I; famine; the Great Terror and annexation of Western Ukraine; death camps; German repression during World War II; and "Stalin's campaign against Ukrainian nationalism," a post-war systematic famine/starvation/genocide of the nation (depending on scholarly and political viewpoints; Motyl, 2010, p. 26).

In addition, the former Soviet regime imposed a "socialist realism" (Joo, 2004, p. 586) upon its citizens in all 15 republics, which amounted to an officially authorized culture of censorship (Binyon, 1983). The goal of this restriction of thought and action was to reeducate people, so they accepted an official version of what to think, read, and write. Soviet propaganda used an omnipresent, oppressive, totalitarianism rule to create "the new Soviet man" (Motyl, 2010, p. 27), "a 'new' person, the builder of communist society" (Holowinsky, 2008, p. 30) with a solely Russian identity (Motyl, 2010). "Russification" started as early as nursery school and kindergarten by "de-emphasizing" Ukrainian national identity (Holowinsky, 2008, p. 2).

The psychological identity of Ukrainian inhabitants was considered ecologically bound to geography and climate (open steppes and sunlight; Kulchytsky, n.d., paraphrased in Holowinsky, 2008, p. 8); with psychic life prominently influenced by deep love that could turn, in the presence of disregard, into hatred (Mirchuk, 1949). The idealism of the Ukrainian "soul" presented itself by dominance of feelings over reasoning. Ukrainian idealism represented a fertile ground for customs centered on the notion of "Mother Earth" in tandem with hospitality, agriculture, as well as respect for an individual's dignity and their private property (Holowinsky, 2008). These national characteristics did not bode well with the Russian zeitgeist, which reinforced the will of collective life over individual life and extended "communist party control in the life of every citizen" (p. 38).

Prior to Ukraine's independence in 1991, the Soviet era silenced dissenting voices pursuing freedom of thought and speech by imprisonment in gulags, institutionalization in mental wards, or incarceration (Joo, 2004). The search for individual freedom persisted for decades before the existence of a sovereign Ukrainian statehood faced a communist educational ideology. This ideology carried a notion of "paradoxical humanism" (a term coined by party apparatchik Makarenko, cited in Holowinsky, 2008), which proposed that, "cruelty is the highest form of humanism because it can force an individual to change and accept the goals of the collective, in spite of his own personal will" (p. 42).

Dissenters' specific systems of beliefs consisted of revised Marxism-Leninism ideals of liberal socialism, underground democratic thought, and writings of Slavophiles who pursued national or religious rebirth while disparaging other groups (for reviews of samizdat underground voices opposing the official regime of former Soviet Union, see Joo, 2004). Despite grassroots revolutionary change following the collapse of the Soviet Union, the historical development of national identity and the subjective experiences of oppression continued and approached transcendence. The internal landscape of Ukrainians retained the residual effects of former Soviet life and a nostalgic longing for the past under the Soviet Union (Wanner, 1998).

Psychology in Ukraine

Ukrainian psychology, for the majority of the 20th century prior to the state's independence was marked by rigid control of thought through the tenets of the Communist Party guided by "Marxist" psychology (dialectical materialism, political activism, and socio-historical determinism; Leontiev, 1968). Independent thinkers either faced execution or exile, unless they glorified the party line to safeguard their lives (Holowinsky, 2008). The leading ideology of collectivism as represented by the collective (who acted as a social agent) was defined as "psychic contents that belong not to one individual, but to a whole group, such as society or a race" (p. 41). The personality psychology was marked by the proposed construction of individuals with "non-free will" via biological and social means (Yaroshevsky, 1974, n.p., cited in Holowinsky, 2008, p. 48). Correspondingly, Ukrainian psychology prior to the state's independence was termed "Soviet" psychology (p. 39).

Post-Soviet Ukraine

The post-Soviet Ukraine was riddled with high prices and unemployment; it was a time when citizens depended heavily upon a network of mutual support for access to material resources, power, and protection, which surpassed language and nationality (Wanner, 1998). In that political and social climate, one of the authors (Krippner), conducted dream seminars through which he solicited subjective dream reports of individuals born in the Ukraine and resided there during the post-Soviet period (in 1995 and 1998). These dream reports present an insight into the life concerns of individuals who formerly lived under an oppressive regime, now living under a new democratic regime. Furthermore, the gender differences in the content of dream experiences opens a unique window into the distinction between categories representing segments of male and female consciousness reflecting post-Soviet Ukraine.

Gender Differences and the Study of Dreams

The systematic study of gender differences in dreams could be traced to the development of Hall and Van de Castle's (1966) breakthrough work The Content Analysis of Dreams, which examined 1,000 dreams; five dreams each that were collected and analyzed from 100 male and 100 female college undergraduates attending Case Western Reserve University between 1947 and 1950. The work developed statistical norms and reliability coefficients for each category and scale. Inter-rater reliability correlations ranged from $r=.76$ (Total Emotions) to $r=.99$ (Total Objects). The percentage of complete agreements ranged from 56% in the "success" category to 100% in the "failure" category. The norms based on college students' reports have been replicated (e.g., Dudley & Fungaroli, 1987; 1982; Tonay, 1990-1991) and demonstrated good stability over a 30-year period from its initial development (for reviews, see Domhoff, 1996, 2003). The coding system has been made user-friendly by DreamSat, a Microsoft Excel program available online (Schneider & Domhoff, 1999).

The Hall and Van de Castle (1966) coding system has been used as an instrument for a variety of research goals where the frequencies of specific dream elements or "categories" were called for. Among these different aims were gender and role influences (Loertie-Lussier, Schwab, & De Konick, 1985), cross-cultural differences (Kane, Mellen, Patten, & Samano, 1993); content of dreams in pregnancy (Krippner, Posner, Pomerance, Barksdale, & Fischer, 1974); and diagnostic categories for self-identified transgender males desiring a sex change operation (Krippner, Lenz, Barksdale, & Davidson, 1974).

For strict binary gender distinctions regarding categories of social relationships based on aggression and friendliness (in other words, reticence/hostility/antagonism/distance and honesty/cooperation/warmth/closeness) studied in collections of dreams positioned in the specific culture-bound nationalities (e.g., Argentina, the United States, England) sparse research revealed some gender distinctions. Krippner, Winkler, Rochlen, and Yashar (1998) reported that in an Argentine sample (M=66; F=60) males reported higher incidence of aggressive acts provided the aggressor was male (p=0.180). In addition, Tartz and Krippner's (2008) study with a larger Argentine sample (M=100; F=100) showed that, compared to female participants, males reported significantly more aggressions per character and scored a higher percentage of dreamers acting as the aggressor. In addition, more male dream reports contained at least one success. In contrast, females scored significantly higher on both the Self-Negativity index and the Negative Emotions index.

In the category of "characters," female participants from the United States generally reported dreams with a higher percentage of familiar characters and an equal number of male and female characters (e.g., Hall & Van de Castle, 1966; Krippner & Weinhold, 2002). Dream characters experienced more friendly interactions and less aggression in female dream reports (e.g., Domhoff, 1996; Krippner & Weinhold, 2002). Characters in male dream reports were twice as often male themselves (e.g., Kramer, Kinney, & Scharf, 1983) and more often strangers (Kramer et al., 1983). In terms of characters' social interactions, male dreamers more often described aggression with other male characters and more friendly interactions with female characters (Domhoff, 1996). English female dreamers reported more experiences of physical aggression (62%) relative to English males (37%) and more bodily misfortunes (47%) than males (7%; Tartz, Baker, & Krippner, 2007). These gender-based results, however, need to be interpreted with caution within the contexts that could serve as interpretative lenses. Coded with Garfield's Revised Bereavement Dream Themes (Black, 2016), and controlling for ethnicity and religion, bereaved female participants tended to dream of their deceased loved ones as either "happy or healthy" or "separating," while men tended to dream of more mundane "other" activities (Taitz, 2018).

One of the most striking results of scoring dream content differences between in strict binary-defined male and female dreamers are so-called "ubiquitous sex differences" (Hall & Domhoff, 1963; Hall, 1984) The term ubiquitous is understood as "present everywhere at the same time," (Hall, p. 1115), and is based upon Hall-Van de Castle's (1966) scoring dream reports from different populations and contexts. The Hall/Van de Castle system involves 10 general categories, divided into two or more subcategories, and counted for frequencies of content categories to be used in comparison. The system was normed on 500 dream reports from male and female students, each, and validated with replication studies (Dudley and Fungaroli, 1987; Dudley and Swank, 1990; Tonay 1990-1991) and is the only normed dream coding system validated to reliably code dream elements (Germain et al., 2004). Various studies included reports from college students, children and adolescents, adults, famous individuals, clinical populations, long dream series, in the laboratory and at home, as well as from dreamers of different national origins (for reviews, see Hall, 1984). The vast majority of results demonstrate that male dream reports contained a higher percentage of male characters other than the dreamer. In contrast, female dream reports were populated with equal numbers of male and female characters unless there were "drastic changes" in life circumstances (Hall, 1984, p. 1113). However, the author also reports some exceptions from 39 studies. Specifically, Peruvian adolescents and college students studied by two samples, Cuna adolescents in Panama, Mexican college students, and Tinguian adults showed a lower frequency of male than female dream characters.

Of the varied dreaming populations studied with the Hall-Van de Castle system, the field lacks data from the storied and dynamic culture of Ukraine. The goal of the present study was to discern gender differences in specific content categories from the dreams of Ukrainian nationals. For this study, the construct of gender was operationalized in a binary division as determined by seminar attendees.

The present study was guided by the question: "Are there significant content differences between male and female dream reports obtained from individuals attending dream seminars conducted in Ukraine?" The presumed differences in quantitatively established categories were thus researched within the dream reports that could be considered "content-laden symbolic states of human being" (Shweder, 1999, p. 67). The main assumption being that no specific culture of people (gender included) could become an assumed and unquestioned, universal, normative baseline for human development (Shweder, 1991), mental health (Kleinman, 1991), or mental states (Shweder, 1999). Interpretations focused on binary differences between the ends of an assumed gender spectrum, culturally defined within individuals living in Ukraine when the dreams were collected.

The present study of dreams of Ukrainian males and females, collected within their culture, could be an initial beginning for the disciplined inquiry of dreams of motivated individuals residing in Ukraine. The focus of this investigation was on the gender differences of dream categories of Ukrainian dreamers recalled during workshops in 1995 and 1998.

2. Method

2.1. Sample

Participants were recruited in Italy via the Internet, through The research participants attended dream seminars conducted by one of the authors (SK) in Ukraine in 1995 and 1998 (range: 20-70 years old). Participants were protected under the Institutional Review Board of Saybrook University. Due to the entrance fee and colleges/university venues, attendees over-represented the upper and middle classes with higher educational relative to the general Ukrainian population (for socio-economic terms classification, see Stephen, 1997). The researchers mitigated this socio-economical difference by providing several scholarships for highly motivated individuals.

2.2. Procedure

Prior to the dream work seminars, participants were invited to write down one recent dream in their native language, with their gender and nationality as their only identifying information. Participants were asked to report a recent dream as opposed to a memorable dream in order to collect a more representative sample of the population's normative dreams (Taitz, 2018). The participants then placed their dream reports in a basket on a centrally located desk. General age range was estimated by Ukrainian assistants; however, no age was assigned to any specific dream report.

Presenters utilized some dreams as illustrative examples for conceptualizations of terms and themes examined during seminars, and a few reports were explored in detail with the participation of a contributor. Contributors who felt uncomfortable with the idea that their dreams would be used for research had a choice to withdraw their dream report after the end of the seminar.

2.3. Coding Instrument

Content analysis is a research procedure that can utilize a qualitative, quantitative, or mixed approach. The instrument was initially developed to systematically label and map a range of qualitative processes, themes, and trends in narratives (Smith, 2000) and has been applied to dream narratives as well (e.g., Kozmová & Wolman, 2006; Wolman & Kozmová, 2007). On the other hand, quantitative content analysis focuses on the frequency, range, and pervasiveness of investigated elements (e.g., characteristics, categories, and themes) in text or narrative (e.g., Domhoff, 1996). In dream studies, these quantifiable elements of the content of dreams could be considered formal features of text - contrasting to the formal aspects or the form in which dreams could exist (e.g., discontinuities, incongruities, uncertainties; Hobson, 1988). Other systematic inquiries consider formal features of dream mentation that could characterize differences and similarities in waking and dreaming consciousness (Hobson, Pace-Schott, & Stickgold, 2000; Wolman & Kozmová, 2007).

Regarding interpretation, generalization, use, and applicability of content analysis as a research procedure, any results of the analysis could be utilized for comparative purposes of the same sample whose narratives were collected at different times. Comparisons with different samples for the purpose of generalization undoubtedly need to take into consideration cultural and social sensitiveness within the world's pluralistic realities.

For the purposes of the present study, The Content Analysis of Dreams (Hall & Van de Castle, 1966) offered an objective quantitative coding system suitable for assessing the frequencies of dream content using ten, empirically inferred categories. These groups of elements are: Characters, Social Interactions, Activities, Striving: Success and Failure, Misfortunes and Good Fortunes, Emotions, Physical Surroundings: Settings and Objects, Food and Eating, Elements from the Past, and Descriptive Elements. The landmark study investigated 1,000 dreams collected from 200 students of Case Western Reserve University and Baldwin-Wallace College between 1947 and 1952. The authors reported inter-rater reliability correlations ranged from r = .99 (Total Objects) to r = .76 (Total Emotions), and percentage of perfect agreement ranged from 100% (Failures) to 56% (Successes). The coding system was found to be reliable and valid beyond initial concerns through various replication studies (Van de Castle, 1969; Winget and Kramer, 1979; and Domhoff, 1996).

Coding with Hall and Van de Castle's (1966) system involves scoring all content elements for each dream report. In the present study, a following step involved converting the content element frequencies into percentages and rates for their use in various indices within broad categories. These categories are: Characters, Social Interactions, Settings, Self-Concept, and dreams with at least one identifiable element of Aggression, Friendliness, Sexuality, Misfortune, Good Fortune, Success, Failure, and Striving (Domhoff, 1996).

2.4. Data Analysis

Each dream report was understood as each participant's written words that communicated "some sense of complex, organized, perceptual imagery" and "the imagery had undergone some temporal progression or change" (Weinstein, Schwartz, & Arkin, 1991, p. 174). In agreement with a standard procedure for dream content analysis proposed by Domhoff (1996), all dream reports with less than 50 or more than 300 words were eliminated from data analysis. To balance the total quantity of dream reports at 100 for each gender, the authors randomly eliminated four dream reports for females and none for males.

Using Schneider and Domhoff's (2005) Dream Statistical Analysis Tool (DreamSAT) with standard scales, 28 standard indices were calculated within each of the ten categories. Formulas used in DreamSAT to compute scores for major content categories are presented in Table 1. All 28 indices were compared between genders. For some indices (e.g., A/C defined as number of aggressions per dream characters), no effect size or significance test could be calculated since the results are ratios and not true proportions. In this case, the data simply represent numerical differences between one ratio and another.

Two-tailed tests were performed to determine statistical differences between two independent proportions (or 2x2 chi-square analyses), which resulted in a z-score and p value. As stated elsewhere (e.g., Tartz & Krippner, 2008), the frequencies of each dream element occurring within each dream set were the n values used to determine effect size and significance for each comparison. Cohen's (1977) h-statistic was used to compute effect size. When interpreted correctly, effect size prevents one from regarding small but statistically significant differences as containing important meaning; it also prevents disregard for statistically non-significant results that could be in fact meaningful (i.e., it controls for false positives and negatives). Domhoff and Schneider's (1999) extensive review of statistical techniques for dream researchers suggests that for dream research, effect sizes above .40 should be considered large, while effect sizes between .21 to .40 should be considered moderate, and effect sizes below .20 should be considered small.

2.5. Raters and Reliability

Four judges worked independently and blindly to each dreamer's country of origin and gender in order to perform the content analysis of dream reports. The raters coded the dream reports following the rules outlined by Hall and Van de Castle (1966) as well as those more recently contributed by Domhoff (1996), who has described the complete Hall-Van de Castle system.

The major Hall-Van de Castle (1966) categories coded in each of the 200 dream reports were: Characters; Aggressive, Friendly, and Sexual Interactions; Activities; Successes and Failures; Misfortunes and Good Fortunes; Emotions; Settings; Objects; and Modifiers. Inter-coder reliability scores were determined for the four coders using the percentage-perfect-agreement method outlined by Hall and Van de Castle (1966, p. 146). Inter-coder reliability scores for all 13 major categories ranged between 71% (Social Interactions) to 90% (Modifiers).

Table 1. Formulas used in DreamSat to compute scores for major content categories

Dream Content Index	Equation (Hall-Van de Castle Elements)
Characters	
1 Male/Female Percent	Males / (Males + Females)
2 Familiarity Percent	Familiar / (Familiar + Unfamiliar)
3 Friends Percent	Friends / All humans
4 Family Percent	(Family + Relatives) / All humans
5 Dead & Imaginary Percent	(Dead + Imaginary characters) / All characters
6 Animal Percent	Animals / All characters
Social Interactions	
1 Aggression/Friendliness Percent	Dreamer-involved Aggression / (Dreamer-involved Aggression + Dreamer-involved Friendliness)
2 Befriender Percent	Dreamer as Befriender / (Dreamer as Befriender + Dreamer as Befriended)
3 Aggressor Percent	Dreamer as Aggressor / (Dreamer as Aggressor + Dreamer as Victim)
4 Physical Aggression Percent	Physical aggressions / All aggressions
Social Interaction Ratios	
1 A/C Index	All aggressions / All characters
2 F/C Index	All friendliness / All characters
3 S/C Index	All sexuality / All characters
Settings	
1 Indoor Setting Percent	Indoor / (Indoor + Outdoor)
2 Familiar Setting Percent	Familiar / (Indoor + Outdoor)
Self-Concept	
1 Self-Negativity Percent	(D as Victim + D-involved Misfortune + D-involved Failure) / (D as Victim + D-involved Misfortune + D-involved Failure + D as Befriended + D-involved Good Fortune + D-involved Success)
2 Bodily Misfortunes Percent	Bodily misfortunes / All misfortunes
3 Negative Emotions Percent	Negative emotions / All emotions
4 Dreamer-Involved Success Percent	Dreamer-involved Success / (Dreamer-involved Success + Dreamer-involved Failure)
5 Torso/Anatomy Percent	(Torso + Anatomy + Sex body parts) / All body parts
Percentage of Dreams with at Least One:	
1 Aggression	Dreams with aggression / Number of dreams
2 Friendliness	Dreams with friendliness / Number of dreams
3 Sexuality	Dreams with sexuality / Number of dreams
4 Misfortune	Dreams with misfortune / Number of dreams
5 Good Fortune	Dreams with good fortune / Number of dreams
6 Success	Dreams with success / Number of dreams
7 Failure	Dreams with failure / Number of dreams
8 Striving	(Dreams with success + Dream with failure) / Number of dreams

3. Results

Considering 28 comparisons, on average, a researcher could regard one comparison as significant at the .05 alpha level by chance alone (e.g., false positive or type 1 error). However, correction for the 28 multiple comparisons would require a criterion for p of .05/28 = 0.0018. On this criterion, with the smallest p value being .017, none of the p values are significant and all near-significant findings are considered qualitative trends. Therefore, the results do not indicate any significant differences between males and females, but rather relative, non-significant trends.

Table 2 presents the gender differences in Ukrainian nationals' dream content along selected categories. Table 3 demonstrates frequencies and percentages of standard Hall-Van de Castle scales for Ukrainian females and males. Table 4 illustrates differences in aggression and friendliness between Ukrainian females and males. Figure 1 graphically presents results in terms of effect size (h) between Ukrainian male and female dream content.

3.1. Near-Significant Trends

In social interactions—varying between friendly, aggressive, and sexual categories—Table 2 shows that Ukrainian males' dreams scored a near-significant trend of a higher (p=.017) percentage of Befriender (initiator of friendliness) per character (77%) than Ukrainian females (38%). This result had a large effect size (h=-.82). In the Self-Concept category (including self-experienced negativity, bodily misfortunes, negative emotions, dreamer-involved success, and torso/anatomy), Ukrainian males' dreams scored a higher (p=0.023) self-negativity percentage (81%) than did female dreams (62%). This result had a medium effect size (h=-.44). Females' dreams scored significantly higher (p=.029) in the Friendliness category (21%) compared to males (10%), with a medium effect size (h=.+31).

In the category of Self-Concept, Ukrainian males' dreams scored a higher prevalence of Bodily Misfortunes (50%) than females' dreams (23%). This result trended (p=. 062) with a large effect size (h=-.58). It is interesting to note that in the same Self-Concept category, male dreamers scored higher on the Torso/Anatomy subcategory (39%) than fe-

Table 2. Gender differences of dream content categories in 200 dreams of Ukrainian nationals (N=Number of frequencies)

	Ukraine Females set	Ukraine Males set	*h*	*p*	N Females	N Males
Characters						
Male/Female Percent	57%	57%	+.00	.984	110	119
Familiarity Percent	47%	41%	+.13	.223	179	173
Friends Percent	21%	18%	+.05	.607	179	173
Family Percent	21%	18%	+.07	.520	179	173
Dead & Imaginary Percent	04%	05%	-.02	.857	201	185
Animal Percent	10%	05%	+.20	.053	201	185
Social Interactions						
Aggression/Friendliness Per.	49%	59%	-.20	.349	49	39
Befriender Percent	38%	77%	-.82	.017	24	13
Aggressor Percent	22%	24%	-.05	.870	23	21
Physical Aggression Percent	79%	69%	+.21	.407	28	36
Social Interaction Ratios						
A/C Index	.14	.19	-.13		201	185
F/C Index	.14	.10	+.09		201	185
S/C Index	.01	.04	-.07		201	185
Settings						
Indoor Setting Percent	45%	48%	-.06	.687	94	86
Familiar Setting Percent	48%	36%	+.24	.265	46	39
Self-Concept Percent						
Self-Negativity Percent	62%	81%	-.44	.023	60	48
Bodily Misfortunes Percent	23%	50%	-.58	.062	22	20
Negative Emotions Percent	75%	75%	-.01	.965	44	69
D-Involved Success Percent	50%	27%	+.49	.210	12	15
Torso/Anatomy Percent	26%	39%	-.28	.113	58	72
Dreams with at Least One						
Aggression	17%	21%	-.10	.470	100	100
Friendliness	21%	10%	+.31	.029	100	100
Sexuality	02%	05%	-.17	.237	100	100
Misfortune	17%	11%	+.17	.219	100	100
Good Fortune	02%	02%	0	1.000	100	100
Success	07%	04%	+.13	.348	100	100
Failure	07%	09%	-.07	.601	100	100
Striving	12%	13%	-.03	.831	100	100

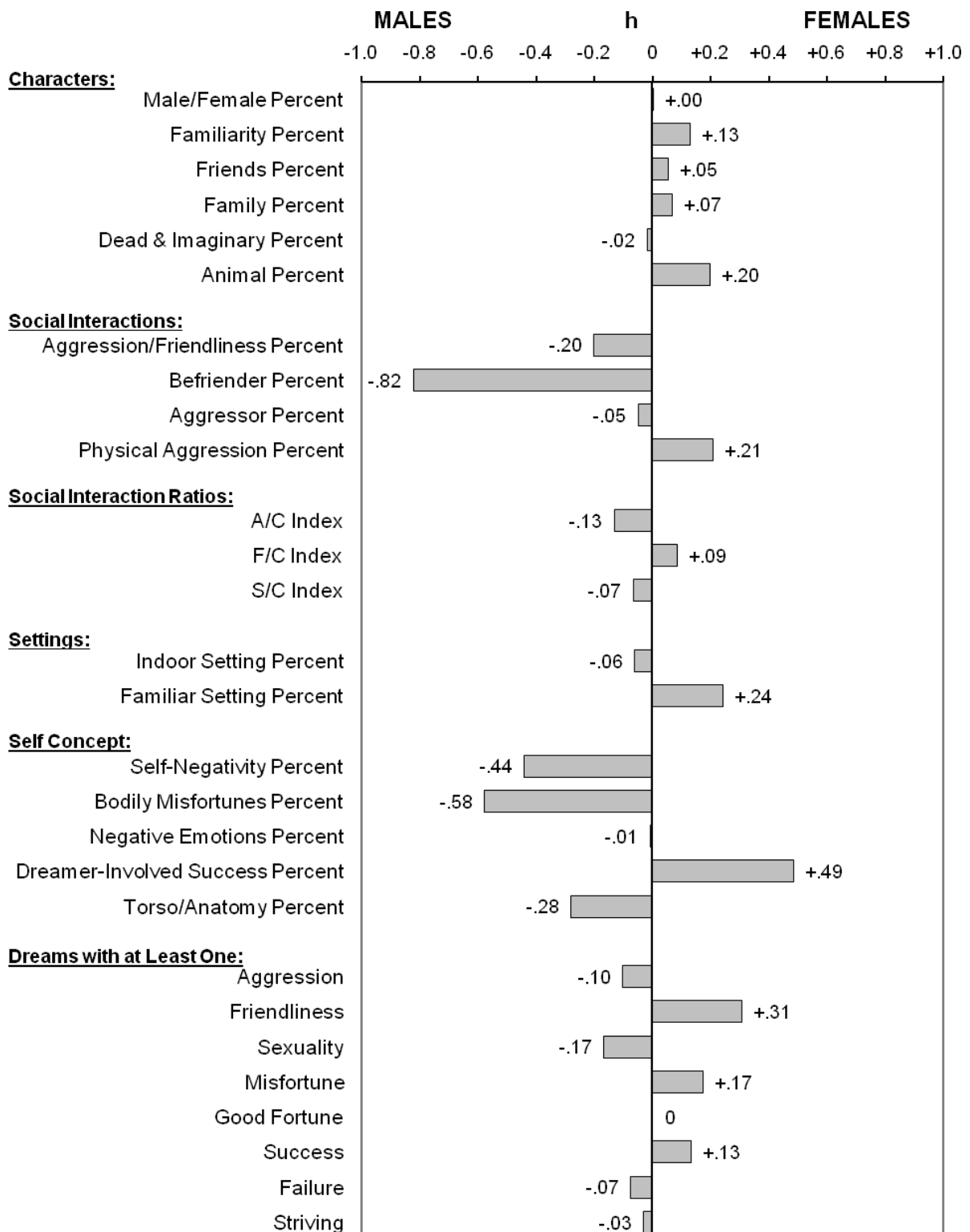|	MALES	h	FEMALES

Figure 1. Effect size (h) comparisons between Ukrainian male dream content and female dream content

male dreamers (29%). This trend (p=.113) had a medium size effect (h=-.28).

Another similar result was in the Animal Characters category. In 100 dream reports, females indicated 20 Animal Characters out of 201 Characters (10%). This represents a near-significant (p=.053) trend with a small effect size (h=+.20). In 100 dreams, males reported only 9 Animal Characters out of 185 Characters (5%).

3.2. Non-significant Result with Large Effect Size

Although non-significant (p=.210), females reported higher Dreamer-Involved Success (Self-Concept subcategory;

Table 3. Frequencies and percentages of standard Hall-Van De Castle's scales for Ukrainian females and males (N=200)

	Females		Males			
	f	%	f	%	h	p
Characters	201		185			
Males	63	31%	68	37%	-.11	.513
Females	47	23%	51	28%	-.10	.635
Unfamiliar	94	47%	102	55%	-.17	.241
Familiar	85	42%	71	38%	+.08	.620
Human	179	89%	173	94%	-.16	.135
Animal	20	10%	9	5%	+.20	.623
Friends	37	18%	32	17%	+.03	.904
Family	38	19%	32	17%	+.04	.862
Group	55	27%	54	29%	-.04	.832
Dead	9	4%	9	5%	-.44	.345
Aggression	28		36			
D-involved	24	86%	23	64%	+.51	.078
Witnessed	4	14%	13	36%	-.51	.369
D as Aggressor	5	18%	5	14%	+.11	.863
D as Victim	18	64%	16	44%	+.40	.243
D as Reciprocal	1	4%	1	3%	+.05	.974
D Mutual	0	0%	1	3%	-.33	1.000
D Self Aggression	0	0%	0	0%	0	-
Male	6	21%	8	22%	-.02	.972
Female	0	0%	1	3%	-.33	1.000
Physical	22	79%	25	69%	+.21	.475
Friendliness	28		19			
D-involved	25	89%	16	84%	+.15	.639
Witnessed	3	11%	3	16%	-.15	.854
D as Befriender	9	32%	10	53%	-.42	.363
D as Befriended	15	54%	3	16%	+.83	.192
D as Reciprocal	0	0%	2	11%	-.66	1.000
D Mutual	1	4%	1	5%	-.08	.953
D Self-Friendliness	0	0%	0	0%	0	-
Male	6	21%	4	21%	+.01	.989
Female	8	29%	9	47%	-.39	.422
Sexual	2		7			
D-involved	2	100%	5	71%	+1.13	.178
Witnessed	0	0%	2	29%	-.1.13	1.000
D Initiated	2	100%	1	14%	+2.37	.052
D Reciprocates	0	0%	0	0%	0	-
D as Reciprocal	0	0%	0	0%	0	-
D Mutual	0	0%	4	57%	-1.71	1.000
D to Self	0	0%	0	0%	0	-
Male	2	100%	0	0%	+3.14	1.000
Female	0	0%	5	71%	-2.01	1.000

to be continued

50%) than males (27%), with a large effect size (h=+.49). Similarly in two other categories, Ukrainian females scored higher on the Familiar Settings (48%) than males (36%; p=.265; h=+.24) and on experiencing Physical Aggression (79%) than males (69%; p=.407; h=+.20).

3.3. Other Findings in Social Interactions

Male dreams had a higher A/C index (number of Aggressions per dream characters; .19) than females (.14), as well as a higher S/C index (Sexual Interactions per dream character; 0.4) compared to females (0.1). Alternatively, the F/C index (number of Friendly Interactions per dream character) was higher for females (.14) than for males (.10). Since there results are not true proportions, Cohen's h-statistic could not be applied to these rations, and thus no statistical comparison could be made.

As shown in Table 4, further analysis regarding differences between Aggression and Friendliness revealed that female participants clearly reported more friendliness (.17) and no aggression (0) toward female characters. Further, in female dreams, aggression and friendliness toward male dream characters was evenly distributed (0.10 each). Male dream reports illustrated more aggression toward male (0.12) than female characters (0.02). Additionally, male dreamers were friendlier with female characters (0.18) than with male characters (0.06).

Table 3. (Continued)

	Females		Males			
	f	%	f	%	h	p
Activities	407		372			
D-involved	273	67%	244	66%	+.03	.721
Physical	242	59%	212	57%	+.05	.594
D Physical	169	42%	132	35%	+.12	.285
Physical	106	26%	93	25%	+.02	.866
Movement	118	29%	96	26%	+.07	.603
Location	18	4%	23	6%	-.08	.802
Visual	71	17%	70	19%	-.04	.832
Auditory	3	1%	7	2%	-.10	.881
Verbal	71	17%	66	18%	-.01	.964
Expressive	7	2%	8	2%	-.03	.952
Cognitive	13	3%	9	2%	+.05	.914
Successes	7		4			
D-involved	6	75%	4	100%	-.78	.230
Failures	8		11			
D-involved	6	75%	11	100%	-1.05	.039
Misfortune	22		20			
D-involved	13	59%	12	60%	-.02	.963
Physical	5	23%	10	50%	-.58	.292
Good fortune	2		2			
D-involved	2	100%	2	100%	0	1.000
Emotions	44		69			
Negative	33	75%	52	75%	-.01	.970
D-involved	37	84%	61	88%	-.13	.547
D-negative	28	64%	45	65%	-.03	.891
Settings	105		99			
In	42	40%	41	41%	-.03	.896
Out	52	50%	45	45%	+.08	.689
Familiar	22	21%	14	14%	+.18	.599
Unfamiliar	24	23%	25	25%	-.06	.844
Objects	536		525			
Body	58	11%	72	14%	-.09	.617
BA+BT+BS	15	3%	28	5%	-.13	.685
Modifiers	199		158			
Strivings (Su+FI)	15		15			
Negative (A, F, MF) (Victim+D-S+D-Misfortune)	37		39			
Positive (F, S, GF) (Befriended+D-S+D-GF)	23		9			

Females reported a total of 28 Aggressive Interactions, with only four of those witnessed (in contrast to acted out) by the dreamer (14%). Males reported a total of 36 Aggressive Interactions, with 13 witnessed by the dreamer (36%).

3.4. Physical Activities and Misfortunes

Regarding female dream reports with Activities, females reported 169 dreamer involved Physical Activities out of 407 total activities (42%). In contrast, males reported 132 Physical Activities out of 372 total Activities (35%). In dream reports with Misfortunes, 22 total occurrences of misfortune were reported by females with 13 dreams containing at least one occurrence (59%). Males reported 20 total occurrences of misfortunes with 12 dreams containing at least one occurrence (60%).

3.5. Categories with Zero Frequency

The findings of zero frequency are also of interest. In their self-selected dreams, Ukrainian female and male dreamers neither experienced Self-Aggression nor Self-Friendliness. Dreamers themselves did not act as sexual reciprocates or reciprocals and reported no sexual activities toward themselves.

3.6. General descriptions of categories and examples of dreams

The explanations of categories and dream examples from Ukrainian males illustrate the above-mentioned gender differences in near significant and non-significant, yet interesting, aspects of the results. These portrayals of dreaming aspects of consciousness analyzed in terms of categories

Table 4. Differences in aggression and friendliness between Ukrainian females and males (N=200)

Ukraine-Females set		
	Aggressions (A/C index)	Friendliness (F/C index)
With male characters	.10	.10
With female characters	.00	.17
Ukraine-Males set		
	Aggressions (A/C index)	Friendliness (F/C index)
With male characters	.12	.06
With female characters	.02	.18

serve as a rare snapshot into the nocturnal dream world of Ukrainians in 1995 and 1998. For this reason, some of the non-significant findings (in terms of values of p or h) will also be displayed as documenting particularities of dream content.

Examples of male dreams

1. Social interactions

The type of social interaction termed "Friendliness" is understood in Hall and Van de Castle's scoring system (1966) and detailed in Domhoff's (1996) practical manual for using the system as a "deliberate purposeful act," which entails "support, help, kindness, gift giving" and similar companionable and sociable attitudes towards other characters (p. 37). Distinctions between defining types of friendliness involves dreamers' direct involvement compared to their mere witnessing it in the dream. Further categories involve the dreamer being an initiator of friendliness (the *Befriender*) or its beneficiary (the *Befriended*). Friendliness could additionally be defined as *reciprocated*, *mutual*, and *self-directed* (Domhoff, 1996). The following dream report demonstrates friendliness as initiated by the male dreamer — thereby the befriender/initiator of benevolent actions. After quantitative analysis, this Befriender percentage represents a trend of gender difference compared to female dream reports. For distinction, applicable coded parts are italicized:

Male Befriender:

a) A large lake suddenly appears near the village where I was born. Many people are in the water. But none of these people can swim! There are both men and women in the water. The only person who can swim is me. *I have to save them, so I start taking them out one by one.*

b) I am in a great desert. There is a huge oil pipeline going way beyond the horizon. A girl of my age runs out of a building, so the two of us run along the pipeline. Soon she becomes exhausted and falls down. *I carry her further in my hands.* Soon I began to see my home. When I come in, the first thing that attracts my attention is a picture of something. Then I see my male and female friends. I am sure they are my friends even though I don't recall their faces.

Since the Hall-Van de Castle (1966) scoring system allows for combinations of sub-categories into a larger category, one such grouping of dream content categories is "Self-Concept." This larger category includes five aspects: 1) Self-Negativity, 2) Bodily Misfortunes, 3) Negative Emotions, 4) Dreamer-Involved Success, and 5) Torso/Anatomy.

"Self-negativity" represents a compilation of elements when the dreamer becomes a victim, is involved in fatalistic misfortune outside their control, or experiences failure in reaching the goal. Bodily Misfortunes are understood as "illnesses, injuries, bodily defects or mental problems suffered by a dream character... death of a character though illness, injury, or some unknown cause" (Domhoff, 1996, p. 27). Negative Emotions refer to "explicitly stated" feelings, either one or several of four emotional states of anger, apprehension, sadness, and confusion (p. 20). Dreamer-Involved Success is a sense of "striving to succeed;" for example, the dream character "expend[s] energy and show[s] perseverance in pursuit of a goal," either on behalf of oneself or a group, physically or non-physically, or as part of or excluded from social interaction. Hence, reaching a goal determines "success" or "failure" (p. 18). Finally, Torso/Anatomy is understood as "mentions of torso, anatomical parts, and sexual organs" (Domhoff, 1996; p. 27).

The following three examples of Ukrainian male dreams represent self-negativity in which males exhibited a trend of scoring higher percentages in comparison to females. The type of self-negativity they specifically illustrate are a) being victimized and b) the experiencing of failure:

a) Being victimized:

I was in our courtyard, standing in front of a tenement as Nazis come out of the front door of our house. They notice me, *shoot, but miss*. I fall down on the ground; I do not know why. *Then another Nazi comes over and he shoots at my head*. My mother runs out of the building and shouts at him. But I do not hear her. After some time, elapses, I rise. My fall is all covered with blood but there is no hole in my head.

b) Experiencing failure:

I had a dream in which I was running from a shark. The shark was not swimming but could run on the land. In a little while, the shark turned into a pushy guy who chased me too. *In no way could I achieve the speed I wanted*, and my heart was beating wildly.

In additional trending results, some characters in Ukrainian male dream reports also contain Torso/Anatomy mentions:

a) I found myself on the landing of a stairway. Somebody shot at me, and I was thrown against the wall by the energy of the bullets. I somehow crept home and on my way I met my mother who is a teacher. She helped me to get to my own place. *My chest and belly hurt badly.* I managed to ring the bell of my apartment. My father opened the door and would not let me in. He threw chunks of asphalt at me. I tried to hide behind trees. Then my friend Dima helped me by stopping my father.

b) I am back in the war in Afghanistan. I partake in action as a tank driver. The dream lasts from morning until evening. I am right on the battlefield fighting against Afghans, then we advance and seize and little village. Our troops find several rebels there who we shoot down. Then we make an offensive again and capture a camp of rebels and destroy everything in it. I remember well that after a battle *we find a lot of bodies, disfigured*, so at that moment we begin to bury them. I feel very unusual.

Examples of female dreams

In the category of dreams with at least one example of Friendliness (defined earlier), Ukrainian females trended

higher percentages than males. The following dream report illustrates this occurrence without further distinction of subcategories:

> My friends and I spent our holidays in a strange place in this dream. It was near the sea, but there were swimming pools also. I am afraid of water a little bit but only in the sea; in the pool it is okay. So I decided to swim in a pool. A little girl swam besides me. In this dream I swam badly, but that girl swam surprisingly well. But suddenly she began to sink, and a lot of people gathered around the pool and I rushed to save her. *I took the girl ashore and carried her in my hands to some building.*

4. Discussion

The quantitative analysis of Ukrainian male and female dream reports represents a novel contribution to the study of dream life of individuals who lived part of their life in the ideologically restricted Soviet Union. As such, the results of this study require cautionary interpretation, whether from either the former Soviet or Western perspectives. Given these disclaimers, this discussion serves as a starting point for future scholarly dialogue.

The findings between gender distinctions with trending differences and the results in general (Tables 2-4) lend themselves to: a) speculation about gender differences linked to cultural and historical background; b) contribution of the present study to psychology; as well as c) limitations of the present study and scoring system.

4.1. Speculative Interpretations of Near Significant Gender Differences

As participants self-selected dreams and the numerical incidences in categories are grounded in differing starting numbers of elements in male and female dream reports (see Table 3), interpretation of gender differences is cautious at best.

There are two near significant gendered results in Ukrainian dream reports that deserve speculative interpretation: Males acted more often as Befrienders (e.g., in rescuing efforts) and appeared to collectively experience higher percentages of Victimization and Bodily Misfortune than females. In addition, some of the male dream reports made historical mentions of war (Japanese, [Nazi]Germany, Afghanistan). These near significant results and trends may illustrate the degree to which historical acts of aggression and victimization on large, national scales (e.g., wars and political oppression of thoughts and actions) could impact the psyche of males. These residual dream themes may follow a similar processing trajectory as PTSD nightmares (Krippner & Taitz, 2017). The hospitable, non-combatant, and non-conquering psychological nature of Ukrainian males (Holowinsky, 2008) seems to lend credence to such speculation. Similarly, these instances could be considered symbols of the dreamers' unprocessed history and preoccupations in the years 1995 and 1998.

The *historicity* in dreams are based on constant reminders of the 20th century wars in Europe, and specifically those in Ukraine, which painted males in the image (or archetype) of heroes, defenders, and rescuers. As such, they were also at risk to experience bodily consequences as a protector against actual or perceived oppression. Perhaps it is possible that the decades of war reminders (especially the Sec-

ond World War, annual celebrations of victories over Nazi oppression, and the war in Afghanistan) resonated in the Ukrainian male psyche and collective social consciousness through their dreams. Additionally, the epitome of Befriender and Defender (through Bodily Misfortunes) alike may have permeated Ukrainian male dreams via preoccupation with national sovereignty. In summary, these heightened categories could symbolically represent the concrete realities of life affected by previous wars and official Soviet-era oppressions.

Alternatively, female dream reports illustrated trends of greater incidents of friendliness (both being Befriended and acting Friendly toward others). These results may reflect women's waking reliance on larger social support networks than men (Stroebe & Stroebe, 1989; Taitz, 2018). Even so, there were multiple similarities between genders in this study. Because of the wars and omnipresent threats of war, it is possible that women (as well as men) were in a state of constant monitoring activity. This serves as a qualitative example of how culture can affect dream content; the past several decades have mobilized women, bypassing their traditional roles. The result of these cultural trends is an increased gender similarity in dream content.

4.2. Study's Contribution to Psychology

As the *"historicity"* of events (memories of the past) informed participants' dreaming experiences, so too does the modern cultural and political milieu influence this study. This current study represents a systematic content analysis of the cultural psychology in the Ukraine, potentially generalizable to other post-Soviet or even post-oppression populations. While an applicable cohort for comparison, the Ukrainian sample may further illustrate the psychological effect of international conflict, given the recent annexation of Crimea and brewing conflicts. Future and continuous research on the effect of international clashes on either nation's mental health could illustrate both the negative impact of such conflicts as well as the global similarities despite cultural borders (national, ethnic, gendered, or otherwise).

5. Selective Limitations and Future Directions

5.1. Sample limitations

Self-selection bias is inherent in a sample that attended a workshop specifically about dreaming. Though scholarships were offered, variables of higher social-economic status, age, motivation for attending, years of schooling, introspection, and openness to an American presenter may still run risks to the generalizability of this Ukrainian sample. As these uncontrolled variables serve as limitations to generalizability, future studies should assess for the impact of these demographic characteristics. In addition, though requested to submit a recent dream, participants may have selected their most memorable dreams (based on its perplexing quality) and excluded an ordinary or even a more recent dream that might better represent the continuity of their waking life. This may be due to observation effects (given the public nature of the workshop), which may also challenge generalizability. Future studies should utilize the Most Recent Dream form (MRD; Domhoff,1996) for greater accuracy in data collection. Additionally, collecting one dream per person compared to Hall-Van de Castle's (1966) original collection of five, may also limit the depth and breadth of

dreamers' narrative reports. Future studies may also collect and compare the specific dates of when dreams occurred (not just collected), to determine and control for any historical or maturation effects. Furthermore, while the prevalence of aggression or war themes in the dreams of Ukranian nationals appears to be greater than those in the Hall/Van de Castle normative sample group, too many historical effects exist between such chronologically disparate populations to compare beyond qualitatively. Future studies may compare and contrast Ukranian dreams against either American or even Russian attendees of dream workshops at similar timeframes, or perhaps against future Ukranians (a generation spent entirely in democratic rule), in order to further assess the impact of culture on dreaming (specifically aggressive interactions, miscellaneous warfare, and references to death [self or third]).

5.2.   Coding instrument limitations

The Hall-Van de Castle (1966) coding instrument focuses on the frequencies of specific occurrences of individual categories in a dream report according to judge's ratings. Though this study showed high inter-coder reliability percentages, the analysis conducted by four judges may serve as a threat to variability which future studies may consider addressing with further checks for interrater reliability, potentially using the Fleiss kappa adaptation of Cohen's kappa for three or more raters (McHugh, 2012). Additionally, the American college students' dreams-based instrument was developed in the social climate supporting heteronormative sexuality and binary division of gender (male/female). More than 50 years later, the reality of individual variance in personal expression and perception of gender and sexuality is illustrated by the following dream by a Ukrainian female:

> I see my best friend, who is dead. She wears a school uniform and pleats in her hair. I am glad to see her, but even realize in the dream that she is dead. She embraces me, rejoicing in my company and my appearance, and wants to kiss me. I don't let her do it, saying, in a joking manner, "No need to express such strong emotions. The others could think that we are lesbians."

Though this is the only mention of "lesbians" in this Ukrainian dream sample, it indicates the psychological reality that the Hall-Van de Castle's scoring system (constructed in the social consciousness of 1950-60), did not take into consideration. The study of dreams will need to balance the experiences of individuals (un)consciously constricted by conditioned gender socialization (e.g., Bursik, 1998) and professional roles (e.g., Lortie-Lussier, Simond, Rinfret, & De Koninck, 1992) with those unrestrained within and without the gender and sexuality spectra.

5.3.   Limitations on the study of emotions

Some limitations exist around exclusively using the Hall-Van de Castle (1966) scoring system. Judges coding dream reports gives the impression of more than five types of dream emotions ("positive" emotion of Happiness; "negative" emotions of Anger, Sadness, Apprehension, and Confusion; Domhoff, 1996). However, a more humanistic approach to dream content may illustrate a different, subjective interpretation closer to the dreamer's experience. Furthermore, those future studies asking dreamers themselves to rate their own emotional experiences, may differently and ex-

pansively illustrate the demand characteristic of research as "transposed" assumptions about waking life emotions (as reviewed by Domhoff, 2005). Furthermore, some investigators assert that dream texts are not dependable manifestations of actual emotions experienced in dreams (Strauch & Meier, 1996), and may require revisualization to capture the true nature of the dreamed experience (Taitz, 2014).

In terms of the neurocognitive understanding of the dreaming brain via the active limbic system (Hobson, 1988), future directions of research may include more sophisticated measures including eliciting emotions which affect the actual dream experiences (e.g., Hartman, 2007). Subsequently, the specific postulate which guides Hall-Van De Castle's (1966) scoring system, that "the five categories turn out to be quite adequate for the limited role they are called on to play in the quantitative study of dream content" (Domhoff, 1996, p. 20) represents only one focus for the study of dreams. Deciphering underlying emotional concerns influencing dreams (e.g., Hartmann, 2007) might be better served through culturally informed investigations on the links between past events and current emotional concerns represented in dreams. Nevertheless, dreamers' culturally influenced, emotional experiences could be more diverse and varied than anticipated.

5.4.   Future directions

Given the current spectrum of gender and sexual orientations (Herbenick, Bowling, Fu, Dodge et al., 2017), scoring systems for dreaming research will need to account for experiential shifts in self-identity and in accompanying consciousness. This point is even more poignant as studies of consciousness focus on subjective experiences investigated as internal states. In addition, dreaming studies following the continuity hypothesis (waking daily content is reflected in dreams; Domhoff, 1996; Pesant & Zadra, 2006) seem particularly promising as gender studies are expounded and interpreted in the spirit of equality and egalitarianism. The exception could be experiences of health, illness, and healing, which include combinations of individual, cultural, and gender-based constructivism.

Furthermore, the customary binary gender distinction remains a source of anxiety, oppression, and powerlessness in professional settings if the contexts of power relationships are unaddressed (Stewart & McDermott, 2004). Additionally, this struggle pervades multiple cultures (Maraldi & Krippner, 2019). Thus, the Hall-Van de Castle (1966) binary coding system might be of great use as future studies investigate gender-based social interactions within the context of social relationships (both liberating and oppressive) in waking and dreaming life. The authors propose that future studies of gender differences be undertaken as a cultural and culturally transcendent aspect of life that are, in terms of subjective experiences, subject to more than a binary biological distinction and require incorporation into life contexts. Thus, regarding specific cultures and gender, the systematic inquiry of dreams requires us to make investigative space for adding knowledge about the way of life in any specific culture including gender-based experiences in their transcendent making. When studying specific cultures, researchers must consistently consider the intersection of gender with each other sub-culture, as it appears an influential basis for the human experience, along any developmental point on or off a spectrum.

In conclusion, the present study's main contributions rest in the quantitative dream analysis of gender differences with the purpose of recording and mapping an understanding of a way of life via the dream life of individuals residing in the now democratic Ukraine.

Acknowledgments

References

Barrett, D., & McNamara, P. (Eds.). (2007). The new science of dreaming. Vol. 1-3. Praeger.

Binyon, M. (1983). Life in Russia. Pantheon.

Bulkeley, K. (2008). American dreamers: What dreams tell is about the political psychology of conservatives, liberals, and everyone else. Beacon Press.

Bursik, K. (1998). Moving beyond gender differences: Gender role comparison of manifest dream content. Sex Roles, 38, 203-214.

Cohen, J. (1977). Statistical power for the behavioral sciences. Academic Press.

Craig, A. P. (2003). Culture and individual. Theory & Psychology, 13, 629-650.

Domhoff, G. W. (1996). Finding meaning in dreams: A quantitative approach. Plenum Press.

Domhoff, G. W. (2003). The scientific study of dreams: Neural networks, cognitive development, and content analysis. American Psychological Association.

Domhoff, G. W. (2005). The content of dreams: Methodologic and theoretical implications. In M. H. Kryger, T. Rotgh, & W. C. Dement (Eds.), Principles and practice of sleep medicine) 4th ed. (pp. 522-534). W. B. Saunders.

Domhoff, G.W. (2017). The emergence of dreaming: Mind-wandering, embodied simulation, and the default network. Oxford University Press.

Domhoff, G.W., & Fox, K.C. (2015). Dreaming and the default network: A review, synthesis, and counterintuitive research proposal. Consciousness and Cognition, 33, 342-353.

Domhoff, G. W., & Schneider, A. (1999). Much ado about very little: The small effect sizes when home and laboratory collected dreams are compared. Dreaming, 9, 139-151.

Dudley, L., & Fungaroli, J. (1987). The dreams of students in women's' college. ASD Newsletter, 4, 6-7.

Dudley, L., & Swank, M. (1990). A comparison of the dreams of college women in 1950 and 1990. ASD Newsletter, 7, 3.

Ellman, S. J., & Antrobus, J. S. (1991). The mind in sleep: Psychology and psychophysiology. John Wiley.

Feinstein, D., & Krippner, S. (1997). The mythic path. Jeremy P. Tarcher/Putnam.

Germain, A., Krakow, B., Faucher, B., Zadra, A., Nielsen, T., Hollifield, M., ... & Koss, M. (2004). Increased mastery elements associated with imagery rehearsal treatment for nightmares in sexual assault survivors with PTSD. Dreaming, 14(4), 195-206.

Hall, C. S. (1953). The meaning of dreams. Harper.

Hall, C. S. (1984). "A ubiquitous sex difference in dreams" revisited. Journal of Personal and Social Psychology, 5, 1109-1117.

Hall, C. S. (1991). The two provinces of dreams. Dreaming, 1, 91-93.

Hall, C. S., & Domhoff, B. (1963). A ubiquitous sex difference in dreams. Journal of Abnormal and Social Psychology, 96, 278-280.

Hall, C., & Van de Castle, R. L. (1966). The content analysis of dreams. Appleton-Century-Crofts.

Hall, E. T. (1981). Beyond culture. Anchor Books/Doubleday.

Hartmann, E. (2007). The nature and functions of dreaming. In D. Barrett & P. McNamara (Eds.), The new science of dreaming. Vol. 3. Cultural and theoretical perspectives (pp. 171-192). Praeger.

Herbenick, D., Bowling, D., Fu, T., Dodge, B. et al. (2017). Sexual diversity in the United States: Results from a nationally representative probability sample of adult women and men. PLoS One, 12, 181-198.

Hobson, J. A. (1988). The dreaming brain. Basic Books.

Hobson, J. A., Pace-Schott, E. F., & Stickgold, R. (2000). Dreaming and the brain: Toward a cognitive neuroscience of conscious states. Behavioral and Brain Sciences, 23, 793-842.

Holowinsky, I. Z. (2008). Psychology in Ukraine: A historical perspective. University Press of America.

Joo, H.-M. (2004). Voices of freedom: Samizdat. Europe-Asia Studies, 4, 571-594.

Kane, C. M., Mellen, R. R. Patten, P. & Samano, I. (1993). Differences in the manifest dream content of Mexican, Mexican American, and Anglo-American college women: A research note. Hispanic Journal of Behavioral Science, 15, 134-139.

Kleinman, A. (1991). Rethinking psychiatry: From cultural category to personal experience Simon and Schuster.

Kozmová, M. (2010). Cognitive processes investigated in threatening dreams of Japanese and Ukrainian dreamers. [Abstract]. International Journal of Dream Research, 3, Supplement 1, S6.

Kozmová, M., & Wolman, R. N. (2006). Self-awareness in dreaming. Dreaming, 16, 196-214.

Kramer, M., Kinney, L., & Scharf, M. (1983). Sex differences in dreams. Psychiatric Journal of the University of Ottawa, 83, 1-4.

Krippner, S. (2007). Anomalous experiences and dreams. In D. Barrett & P. McNamara (Eds.), The new science of dreaming. Vol. 2. Content, recall, and personality correlates (pp. 285-306). Praeger.

Krippner, S., & Weinhold, J. (2001). Gender differences in the content analysis of 240 dream reports from Brazilian participants in dream seminars. Dreaming, 11, 35-42.

Krippner, S., & Weinhold, J. (2002). Gender differences in a content analysis study of 608 dream reports from research participants in the United States. Social Behavior and Personality, 30, 388-410.

Krippner, S., Lenz, G., Barksdale, W., & Davidson, R. (1974). Content analysis of 30 dreams from 10 pre-operative male transsexuals. Journal of the American Society of Psychosomatic Dentistry and Medicine, monograph supplement 2

Krippner, S., Posner, N. A., Pomerance, W., Barksdale, W., & Fischer, S. (1974). An investigation of dream content during pregnancy. Journal of the American Society of Psychosomatic Dentistry and Medicine, 21, 111-123.

Krippner, S., & Taitz, I. (2017). Psychotherapeutic approaches for post-traumatic stress disorder nightmares. International Journal of Dream Research, 101-109.

Krippner, S., Winkler, M., Rochlen, A., & Yashar, B. (1998). Gender, national, and regional differences in a content analysis of 799 dream reports from research participants in Argentina, Brazil, and the United States. Interamerican Journal of Psychology, 32, 71-97.

LaBerge, S. (2007). Lucid dreaming. In D. Barrett & P. McNamara (Eds.), The new science of dreaming. Vol. 2. Content, recall, and personality correlates (pp. 307-328). Praeger.

Leontiev, A. N. (1968). Karl Marx n psikhologickeskaya nauka [Karl Marx and psychological science]. Voprosy Psikhologii, 5, 3-17.

Lortie-Lussier, M., Simond, S., Rinfret, N., & De Koninck, J. (1992). Beyond sex differences: Family and occupational roles impact on women's and men's dreams. Sex Roles, 26, 79-96.

Maraldi, E. d. O., & Krippner, S. (2019). Cross-cultural research on anomalous experiences: Theoretical issues and methodological challenges. Psychology of Consciousness: Theory, Research, and Practice, 6(3), 306-319.

McHugh M. L. (2012). Interrater reliability: the kappa statistic. Biochemia medica, 22(3), 276–282.

Mirchuk, I. (1949). Ukraine and its people. Ukrainian Free University.

Motyl, A. J. (2010). Deleting the Holodomor: Ukraine unmakes itself. World Affairs, 173.3, 25-33.

Parman, S. (1991). Dream and culture; An anthropological study of the Western intellectual tradition. Praeger.

Schneider, A., & Domhoff, G. W. (1999). DreamSat. Retrieved from http://dreamreserch.net.

Schwartz, S. (1994). Beyond individualism/collectivism. New cultural dimensions of values. In U. Kim, H. C. Triandis, & G. Yoon (Eds.), Individualism and collectivism: Theory, method, and application (pp. 85-122). Sage.

Shweder, R. A. (1991). Thinking through cultures: Expeditions in cultural psychology.
Harvard University Press.

Shweder, R. A. (1999). Why cultural psychology? Ethos, 27, 62-73.

Smith, C. P. (2000). Content analysis and narrative analysis. In H. T. Reis & C. M. Judd (Eds.), Handbook of research methods in social and personality psychology (pp. 313-335). Cambridge University Press.

Stephen, L. (1997). Woman and social movements in Latin America. University of Texas Press.

Strauch, I., & Meier, B. (1996). In search of dreams: Results of experimental dream research. State University of New York.

Stroebe, M., & Stroebe W. (1989). Who participates in bereavement research? A review and empirical study. Omega – Journal of Death and Dying, 20, 1-29.

Taitz, I. Y. (2014). Clinical applications of lucid dreaming therapy. In R. Hurd & K. Bulkeley, (Eds.), Lucid dreaming: New perspectives on consciousness in sleep (Vol. 1: Science, Psychology, and Education, pp. 167–192). ABC-CLIO.

Taitz, I. Y. (2018). Cultural differences in bereavement dream categories (Doctoral dissertation). Retrieved from Proquest. (10937527)

Tartz, R. S., Baker, R. C., & Krippner, S. (2007). Cognitive differences in dream content between English females and females attending dream seminars using quantitative content analysis. Imagination, Cognition and Personality, 26, 325-344.

Tartz, R., & Krippner, S. (2008). Cognitive differences in dream content between Argentine males and females using quantitative content analysis. Dreaming, 18, 217-235.

Tonay, V. (1990-1991). California women and their dreams: A historical and sub-cultural comparison of dream content. Imagination, Cognition, and Personality, 10, 83-97.

Wanner, C. (1998). Burden of dreams: History and identity in Post-Soviet Ukraine. Pennsylvania State University Press.

Weinstein, L. N., Schwartz, D. G., & Arkin, A. M. (1991). Qualitative aspects of sleep mentation. In S. J. Ellman, & J. S. Antrobus (Eds.), The mind in sleep: Psychology and psychophysiology (pp. 172-213). Wiley.

Wolman, R. N., & Kozmová, M. (2007). Last night I had the strangest dream: Varieties of rational thought processes in dream reports. Consciousness and Cognition, 18, 838-849.

Yaroshevsky, M. G. (1974). Lenin and the problem of socio-historical determination of the mind. Voprosy Psikhologii, 1, 3-23. (In Russian)