

Adaptive effects of the dreams of Ukrainian female refugees to Poland after February 24, 2022: Some remarks on the emotion-regulation theories of dreaming

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Summary. According to the most influential theories, the emotion-regulation mechanism of dreaming is based on hyper-connectivity, i.e. the connections made in dreams between the dreamer's traumatic and non-traumatic experiences. Dream reports obtained from 50 Ukrainian female refugees to Poland after the Russian invasion of Ukraine confirm the importance of hyper-connectivity in adaptive dreams, but they also indicate other ways in which dreams can positively influence the dreamer's mood. In this study, the following categories of adaptive dreams are proposed and described: 1) dreams of return in which the dreamer comes back to Ukraine and/or meets her loved ones; 2) pleasant dreams that cause the feelings of joy, powerlessness, and delight; 3) metaphorical dreams experienced as self-evident and depicting a positive ending of the dreamer's difficult life situation; 4) dreams that are simply understood as good omens, and 5) problem-solving dreams that help the dreamer make an important decision in her waking life. The dreamers' emotional benefits possibly stem from the dream content and not just from sleep. The occurrence of adaptive dreams is positively correlated with a person's level of traumatization which means that people suffering the most have adaptive dreams most often.

Keywords: Adaptive dreams, emotion-regulation theories of dreaming, trauma, PTSD, immigrants' dreams

1. Introduction

Since the beginning of Russia's full-scale invasion of Ukraine, over six million Ukrainian refugees have crossed the Polish border. About one million of them (mainly women and children) have settled in Poland (data from February 2024), which makes the second biggest number of Ukrainian war migrants in Europe. Needless to say, these refugees—especially women—experienced several kinds of war-related and migration-related trauma. In order to better understand the psychological and social aftermath of their experiences, I investigated the dreams of 50 Ukrainian women who fled to Poland after February 24, 2022. The research was restricted to female subjects because women constitute a vast majority of Ukrainian war refugees and their migrant experiences differ substantially from men's experiences. (On gender differences in the dream content of Ukrainian people see Taitz, Kozmová, Krippner, and Tartz 2021. However, their study is based on dream reports collected in the 1990s).

In accordance with the Continuity Hypothesis of Dreaming (Hall and Nordby 1972, Schredl 2019) which states that people dream about their waking activities, emotions, and concerns, the female refugees' dreams reflect their war experiences and current fears. The dreams often have a night-

marish character and cause unpleasant feelings (such as anxiety, sadness, or hopelessness) on awaking. However, as many as 30 women in my sample (60%) reported also helpful dreams that triggered positive emotions and increased their hope in a better future. Interestingly, the most traumatized women reported such dreams more often than the less traumatized ones. These dreams have adaptive properties as they help the dreamers cope with their trauma and adjust to a new life situation. The aim of this present study is to explain the mechanisms behind such adaptive dreams in—and beyond—the light of the existing emotion-regulation theories of dreaming.

There are several emotion-regulation theories in the field of dream studies. The common denominator of all of them is the idea that "dreams help to assist emotional adaptation" and that "the conscious recollection of a dream experience may hold therapeutic value, at least for some people with particular personality traits" (Horton and Malinowski 2019, 106; 112). Among the most influential theories there are Ernest Hartmann's (2011) Contemporary Theory of Dreaming, Rosalind Cartwright's (2010) Twenty-Four Hour Mind Theory (see also Cartwright and Lamberg 2000), Tore Nielsen and Ross Levin's (2007) neurocognitive model of disturbed dreaming (see also Levin and Nielsen 2007; 2009; Nielsen and Lara-Carrasco 2007), Milton Karmer's (2007, 167-187) Adaptive Theory of Dreaming, and Josie Malinowski and Caroline Horton's (2015) Emotion-Assimilation Hypothesis (see also Horton and Malinowski 2019). All of these authors agree that what makes dreaming adaptive is hyper-connectivity, a mechanism of integration of traumatic experiences with other (previous and/or subsequent) memories. As Hartmann (2011, 107) puts it, "emotion-guided making of new connections has an adaptive function in weaving new material into established memory ... This is ... integration of new

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material with old material ... making subsequent new events less stressful." According to Malinowski and Horton (2015), hyperassociativity in sleep—as reflected in dreams—enables emotion assimilation by consolidation of emotionally important information into long term memory structures and integration into pre-existing memory networks. Cartwright (2010, 177) formulates similar observations in the following way: "If the dream narratives include present waking concerns and link this to older memories, the balance of emotion shifts, from negative to positive within the night, instigating a corrective process, a change in the strategy of response to disruptive experiences." The "functional importance of contextualization" for the fear extinction effects of dreams is also highlighted by Nielsen and Levin (2007, 304). Likewise, Barbeau, Turpin, Lafrenière, Campbell, and De Koninck (2022, 1) describe "a desensitization process whereby negative events are replayed within the dream under lower conditions of negative emotionality." In a recent study, Samson et al. (2023, 11) suggest that "dreams can effectively regulate emotions by linking potential dangers with novel, non-fearful dream contexts".

Most of the authors observe a decrease in the intensity of emotions during sleep and suggest that dreaming plays an important role in this process. Kramer (2007) demonstrates that the change in mood across the night is related to the dream content of the night (especially to the types of characters, descriptive elements, and activities occurring in dreams). The decrease in intensity most often concerns negative emotions, although positive emotions were also found to be calmed during sleep and dreaming (Yu 2007).

The adaptive dreams of the Ukrainian female refugees confirm the importance of hyper-connectivity as a mechanism of mood improvement. However, the benefits of these dreams are not restricted to the integration of traumatic experiences with other memories. The adaptive dream effects often consist in triggering the feelings of joy, happiness, or powerfulness, which persist long after awaking and strengthen the dreamer's optimism and hope. These dreams not only reduce negative emotions, but, more importantly, they produce the positive ones, which goes in line with my earlier findings on the healing effects of the dreams of nursing home residents (Owczarski 2014), Auschwitz inmates (Owczarski 2018, 2020, 2023), and people in bereavement (Owczarski 2021).

All the benefits reported by the Ukrainian women are connected with the content of their dreams, not just with sleep. It does not mean, however, that I propose a theory of a dream function. As dream researchers commonly admit, the current state of knowledge is insufficient to describe a function of dreaming in isolation from sleep (although researchers often formulate suggestions of possible dream functions). Besides, adaptive dreams make a minority of all dreams reported by my informants, so it would be impossible to propose a general theory of dreaming on this basis. The aim of my study is simply to characterize the ways in which some dreams of some people can contribute to the improvement of their psychological wellbeing.

2. Material and methods

Between January and September 2023, I conducted face-to-face interviews with 50 Ukrainian female refugees who reported a total of 214 dreams from the period of their stay in Poland. I asked them questions about dream content and dream experiences (about their most recent dreams, war-re-

lated and emigration-related dream content, characteristics of nightmares, potential adaptive effects of some dreams, my informants' dream beliefs and dream sharing customs, and generally the ways in which they experienced and understood their dreams), as well as their waking PTSD symptoms as defined in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychiatric Association 2013). I also collected demographic data such as the interviewees' age, education, and marital status.

The sample size was determined in accordance with William Domhoff's (1996, 64-67) suggestion that for quantitative dream content research a set of 100 dream reports is sufficient, but larger sets (above 200 dream reports) enable more reliable results. Also, a sample of 50 participants meets the standards of interview-based qualitative research, as many authors state (e.g. Hennink, Kaiser, and Marconi 2017; van Rijnssoever 2017).

The women were from 18 to 75 years old (the mean age was 40,88 years). Most of them were well educated (higher education—70%, college students—12%, secondary education—14%, vocational education—4%). 56% of them were singles (among the singled women: unmarried and not in a relationship—28%, divorced—16%, widowed—12%).

Most of my informants came to Poland from eastern Ukraine one or two weeks after the outbreak of the war. All of them experienced different forms of war trauma (bombardments, staying in a shelter, difficulties with escaping from Ukraine, separation from husbands or sons who were taken to the army, witnessing someone's injury, and other). 54% of the women met the criteria sufficient to diagnose PTSD.

Our talks were held in Russian (as it is the mother-tongue for most Ukrainians from the eastern part of the country), in Polish (with those who spoke this language fluently), and, in one case, in English.

In the whole sample of dreams I isolated those that could be considered adaptive. The only criterion of qualifying a dream as adaptive was the dreamer's clear statement that a particular dream brought a particular benefit to her psychological wellbeing, mood, or social functioning.

Subsequently, I conducted qualitative analyses of the adaptive dream descriptions and the dreamers' comments on how the dreams influenced their waking feelings. In doing so, I paid special attention to the question of whether my informant's experiences could be explained in light of the abovementioned emotion-regulation theories of dreaming.

3. Results and discussion

3.1. Quantitative findings

I found 49 adaptive dreams in the interviewees' reports, which makes 23% of all dreams in my sample. The adaptive dreams were reported by 30 women (60% of all women in my sample). 57% of women with adaptive dreams suffered from PTSD, while among women without adaptive dreams this percentage was 50% (and 54% in the whole sample). Of all women with PTSD, 63% had adaptive dreams compared to 57% in women without PTSD.

These numbers show that people who have adaptive dreams suffer from PTSD slightly more often than those who do not have such dreams, and that adaptive dreams occur slightly more often in people with PTSD than in those

Table 1. Percentage of women with and without specific post-traumatic symptoms among women with and without adaptive dreams.

Post-traumatic symptom	Women with adaptive dreams (N=30)	Women without adaptive dreams (N=20)
Women with PTSD	57%	50%
Women without PTSD	43%	50%
Women with nightmares	67%	45%
Women without nightmares	33%	55%
Women with dissociation	60%	45%
Women without dissociation	40%	55%
Most traumatized women	33%	10%
Least traumatized women	10%	20%

without PTSD. The positive correlation between PTSD and adaptive dreams is weak as the percentages do not differ significantly. However, the lack of fully developed PTSD in 46% of the Ukrainian female refugees does not mean that they were not traumatized. In order to identify the most and the least traumatized women in my sample, I decided to use additional criteria—the dissociative specification (depersonalization and derealization) and the occurrence of nightmares.

According to DSM-5, PTSD can be diagnosed if a person experiences sufficient numbers of conditions and symptoms in the following criteria: stressor (one condition out of four is required), intrusion (one symptom out of five is required), avoidance (one symptom out of two is required), negative alterations in cognition and mood (two symptoms out of seven are required), and alteration in arousal and reactivity (two symptoms out of six are required). Additionally, the symptoms have to last for more than one month, cause distress or functional impairment, and they must not be triggered by medication, substance use or an illness.

The Ukrainian women in my sample who did not meet these PTSD criteria often revealed a lot of symptoms except for the two in the criterion of avoidance. In such cases, PTSD could not be diagnosed, in spite of the fact that other symptoms were experienced by the women very severely. Unwanted upsetting memories, negative affects and thoughts, feelings of isolation, hypervigilance, sleep problems and other afflictions occurred frequently to the refugees in my study. Moreover, 43% of women who did not

meet the criteria of PTSD reported having either or both of the two symptoms of the dissociative specification—depersonalization and derealization—an additional indicator of PTSD severity recommended in DSM-5.

Additionally, 58% of my interviewees answered positively when asked if they had experienced nightmares since their arrival in Poland, although not all of them were able to recount a nightmarish dream. 59% of nightmare sufferers met the criteria of PTSD, and 63% of women with PTSD reported having nightmares. Nightmares are just one of the symptoms of PTSD, but it is important to know how frequently they coexist with adaptive dreams in traumatized people. (Dream researchers demonstrate that nightmares can also have adaptive effects [Revonsuo 2000; Hartmann 2001; Wilmer 2001; Davis 2009; Krippner 2016; Revonsuo, Tuominen, and Valli 2016; Taylor 2016; Owczarski 2018, 2023; Hoss 2020], but in this study I investigate only those dreams that were recognized as adaptive by the dreamers themselves. None of my informants found adaptive properties in her nightmares). Therefore, in the whole sample of the Ukrainian refugees I isolated two subsamples: the most traumatized women—those who suffered from PTSD, the symptoms of dissociation, and nightmares (24% of all informants), and the least traumatized women—those who did not suffer from any of the three complaints (14% of all informants).

It turned out that as many as 83% of the most traumatized women had adaptive dreams, while in the group of the least traumatized refugees this percentage was 43%. Among all informants with adaptive dreams, 33% were the most traumatized women and only 10% were the least traumatized ones. 67% of the adaptive dreamers suffered from nightmares compared to 45% in the group of women without adaptive dreams. Symptoms of dissociation were found in 60% of adaptive dreamers and only in 45% of non-adaptive dreamers.

These numbers support the hypothesis that adaptive dreams occur more often in people who need them the most than in those who seem relatively well adapted to their new life situation. Hence, it can be supposed that adaptive dreams appear on purpose, not randomly, most often in situations when the dreamers are helpless and most vulnerable. (All percentages supportive of these hypotheses are shown in Table 1 and Table 2).

In terms of the informants' age, education, and marital status there were no significant differences between those who had adaptive dreams and those who had not. Again, it seems that the most important condition on which the occurrence of adaptive dreams depends is the level of a person's traumatization. (More quantitative data concerning the Ukrainian female refugees' dreams are avail-

Table 2. Percentage of women with and without adaptive dreams among women with and without specific post-traumatic symptoms.

Occurrence of adaptive dreams	Women with PTSD (N=27)	Women without PTSD (N=23)	Women with nightmares (N=29)	Women without nightmares (N=21)	Women with dissociation (N=27)	Women without dissociation (N=23)	Most traumatized women (N=12)	Least traumatized women (N=7)
Women with adaptive dreams	63%	57%	69%	48%	67%	52%	83%	43%
Women without adaptive dreams	37%	43%	31%	52%	33%	48%	17%	57%

able in the Mendeley Data repository [Owczarski 2024] at <https://data.mendeley.com/datasets/k5pp237b98/2>).

3.2. Qualitative analyses

Based on the Ukrainian female refugees' reports and comments, I identified five categories of adaptive dreams. I called them dreams of return, pleasant dreams, metaphorical dreams, good omen dreams, and problem-solving dreams.

Studies on the dreams of people who survived from wars, genocides or collective disasters (e.g. Aron 2001, Siegel 2001; Wilmer 2001; Hartmann 2003; Sliwinski 2017, Schredl and Bulkely 2020; Owczarski 2023) show some common types of post-traumatic dreams, such as repetitive scenes of the dreamer's actual experiences, imagined scenarios of "what could have been" (sometimes including the dreamer's death) or different kinds of metaphorical depiction of a threat (e.g. a tidal wave, a firestorm, being chased by an aggressor, etc.). There are no, however, commonly observed types of adaptive dreams after trauma. Some of the dream categories identified in this study are similar to my earlier findings (Owczarski 2014, 2018, 2021, 2023), but it seems that in the realm of helpful dream effects the specific circumstances of the dreamers' experiences are crucial and more important than the "universal" human reactions to trauma. After all, even in studying the most typical post-traumatic dreams it should be recommended to pay attention to the peculiarities of the dreamers' situation. As Adrienne Aron (2001) brilliantly demonstrates on the example of Central American refugees, dreams with such a common motif as being pursued by somebody can have totally different endings depending on the dreamers' psychological features, individual experiences, past traumas, and so on. Hence, the categories of adaptive dreams that I found in the Ukrainian women can be recognized in other populations as well, but the helpful mechanisms of these dreams are strictly connected to the specificity of the Ukrainian female refugees' situation.

3.2.1 Dreams of return

The most frequent and most evidently adaptive dreams belong to the category I called dreams of return. These are dreams about coming back to Ukraine and/or meeting the loved ones. 17 women reported 25 dreams of return that had healing properties. The following are two examples characteristic of this category:

"I often dream about my home in Ukraine. There are my husband, our friends and neighbors with me. I know that the war is on and that I live in Poland actually, but in this dream, like in a time machine, I come back to the past and am happy to see all these people. After waking up I am calm and happy that at least in a dream I could be at home. I'd like to have such dreams every night."

"I was in our cottage house which was bombed and destroyed in March 2022. In my dream, the house wasn't ruined yet. There were my grandparents (who used to live in this house but died some years before the war), my father (who is in Ukraine), and our cottage animals. It was a very nice atmosphere there. My grandma served a meal, but I didn't manage to eat anything because the dream ended. I felt perfectly well when I woke up. After some days, I still

wanted to remember this dream and find something new, good, and pleasant in it."

Dreams about returning home and/or meeting the loved ones (alive or deceased) appear frequently in traumatized people and often have therapeutic effects. The healing properties of these dreams consist in the dreamers feeling happy again (Owczarski 2014, 2021, 2023). This feeling, as well as an optimistic attitude to life, remain with them in their waking state—sometimes for hours, sometimes for days, sometimes for much longer.

Dreams of return can be explained by Carl Jung's (1974) idea of the compensatory dream function. The Ukrainian migrants dream of what they lack and what they long for. These dreams can be also understood in Freudian terms as an undisguised wish fulfilment. In his theory, Freud (2010) emphasized the role of a disguised wish fulfilment that could be revealed in a dream interpretation, but he also wrote about dreams (mostly in children) that fulfilled a wish openly, without any distortions.

The contemporary emotion-regulation theories of dreaming propose the idea of hyper-connectivity. The Ukrainian women's dreams of return can be analyzed in this context. In many of these dreams, traumatic experiences are integrated into the dreamers' memories of their happy past. It is clearly visible in the first example quoted above. The woman, while dreaming about her home in Ukraine, is aware that "the war is on" and that she lives in Poland. The interweaving of her joyful memories with her stressful present situation is possible due to hyper-connectivity. In accordance with Hartmann's (2011, 50) notion of "cross connections" made in dreams between "very distant items, usually separated by some sort of wall or boundary ... in waking thought", this woman's dream crosses the boundary between the past and the present, thus allowing her to experience positive emotions. But positive feelings resulting from dreams are possible not only due to cross connections.

As I demonstrated in my earlier studies, many of the nursing home residents in Poland and the former Auschwitz prisoners also dreamt about "old good times" and coming back home. In most cases, the adaptive effects of those dreams consisted in the dreamers being simply moved to their past (Owczarski 2014, 2023). Especially the elderly people in nursing homes emphasized that experiencing some happy situations from the past—in exactly the same manner as they once occurred in the real life, without any changes—was extremely helpful in overcoming their sadness and loneliness in a caring institution. In such dreams, hyper-connectivity seemed to be absent. The past was not interconnected with the present or the future. Contrary to Malinowski and Horton's (2015) claim that "time variance" in a dream content is necessary for the dream to be adaptive, the nursing home residents found the only (but very strong) benefit of their dreams in being clung to the past and forgetting the present. The Auschwitz inmates had dreams of this kind as well, but they also dreamt about their homes and loved ones in imagined scenarios, in which the past, the present, and the future were indeed interconnected.

The nature of temporality in dreaming is complex. Freud (2010) insisted that in every dream there were to be found both "day residues" from the day preceding the dream (nowadays located 1-3 or 5-7 days prior to the dream [Nielsen, Kuiken, Alain, Stenstrom, and Powell, 2004]) and early childhood memories. Referring to current sleep and dream research, Katherine Macduffie and George

Mashour (2010, 189) propose that “dreaming is a unique state of consciousness that incorporates 3 temporal dimensions: experience of the present, processing of the past, and preparation for the future.” Moreover, “when we dream, the past, present, and future are no longer perceived as three discrete, easily separable dimensions.” (Macduffie and Mashour 2010, 190). Indeed, the borders between the temporal dimensions are often blurred in dreaming. It does not seem, however, that all three dimensions are always present in dreams.

The Ukrainian refugees’ dreams of return resemble both kinds of dreams about home—those situated in the past only and those with time interconnections. In the following example, the dreaming woman comes back to Ukraine and simply re-experiences the past events:

“Before the war, we used to spend our holidays in the Crimea. I liked it very much. Nowadays, I often dream that we, with my husband and our two sons, are there, on the Crimean beach. The weather is warm and beautiful. We are all very happy. When I wake up, I am in a good mood and I feel a flush of positive energy.”

The woman stays in Poland with her two sons. Her husband is a soldier and he fights in Ukraine. In her dream, there is not a single reference to his today’s condition. He appears in his “civilian” role from the old times. The dreamer’s present situation is by no means interwoven into her happy memories of the Crimean idyll. Reversely, her “positive energy” stems from her being completely submerged in the past and isolated from the here and now. This is what improves her mood when she awakes. The re-experience of past happiness, the good memories which in the dream are not just remembered but felt as if they were really happening—these are the crucial factors that make this dream adaptive.

In another example of the dreams of return, a crossing of time boundaries plays an important role. An academic teacher dreams about being back in Ukraine and talking with her students:

“I often dream about my students—that I conduct a class and we are talking about the war. We assure one another that everything will be all right. These are pleasant dreams, I feel good when I wake up.”

The past (classes with Ukrainian students), the present (the war), and the future (thoughts of what will happen) are interconnected in this dream, and so the dreamer’s trauma can be contextualized in her other life experiences. However, the interconnection does not seem the only—and even the main—factor responsible for the positive emotions felt by the woman on awaking. What calms her is the specific kind of her talks with the students, in which they comfort one another and reinforce their optimistic attitude towards the future of Ukraine. While hyper-connectivity is a phenomenon that can be traced both in dream content and in the functioning of the brain during sleep (Hartmann 2011, 61-71), it would be difficult to find neural correlates of specific dream content elements such as comforting talks (on neural correlates of dreaming and emotional processing see Siclari et al. 2017; Scarpelli, Bartolacci, D’Atri, Gorgoni, and De Gennaro 2019). Therefore, it seems likely that adaptive effects of some dreams depend on their content and not solely on the sleeping brain physiology. To put it another way, it is probable that dreams not only reflect, but also cause adaptive processes in the dreamers’ minds.

The dream about the talks with students resembles many adaptive dreams of the Auschwitz prisoners in which a character—a family member or a supernatural figure (e.g. the Virgin Mary)—assured the dreamer that everything would be all right. I called them caring dreams and suggested that the caring figures and their encouraging words represented the dreamers’ own inner power and unconscious thoughts (Owczarski 2023). Difficult to be believed during the traumatic times, these optimistic thoughts had to be projected onto external figures of authority. Only in such a form could they be accepted by the dreamers. Similarly, the Ukrainian refugees’ dreams sometimes confront the traumatized women with their own power by reattributing it to the figures of important others. This process is visible in the following report:

“Three days after my arrival in Poland I dreamt about my grandpa who died three months before the war. In my dream, he was young, handsome and happy. He didn’t say a word, but just hugged me and smiled. I felt a deep calm. When I awoke, I was in a very good, peaceful and optimistic mood.”

Hyper-connectivity undoubtedly occurs in this dream. The deceased grandfather is not only alive, but he comes from the time of his youth, in a condition that could not be remembered by the dreaming woman. But again, the cross-connections do not seem most important for the adaptive mechanism of this dream. What matters here is the caring figure’s friendly behavior. Even without words is he able to console and calm his granddaughter. One can look in vain for neural correlates of such a dream content feature. Rather, the grandfather’s friendliness is a manifestation of physiologically unmeasurable states of the dreamer’s mind, such as inner strength, optimism, and self-confidence. At the beginning of the war, the woman might have lost her positive attitude to life, so the dream helped her regain it. Her hidden optimism was projected onto her close relative and revived in that way in her waking life.

It must be noted that not all dreams about coming back home or meeting the loved ones have positive effects. Quite often such dreams cause sadness, longing, and nostalgia. 17 Ukrainian women reported 19 dreams of return that turned out to be harmful, like in the following example:

“Sometimes I dream that I am at home in Ukraine together with my husband (who stayed there in fact). We are working in the garden. Everything is as it was before the war. These are pleasant dreams, I feel happy and calm. But when I wake up, I am sad because I know that I can’t live there any longer.”

It is difficult to understand why dreams of return cause distinct waking reactions in different people. Based on my observation (Owczarski 2014) that the nursing home residents never reacted negatively to such dreams while in the Auschwitz inmates dreams of returning home from the camp often triggered longing and despair, I proposed that people who still hope for a better future are more prone to feel sadness in reaction to dreams of return than those who are deprived of hope (Owczarski 2023). This would mean that dreams of return are most beneficial for those who need help the most. It is unlikely, however, that this rule is also valid in the case of the Ukrainian female refugees, because seven of them reported having both helpful and harmful dreams of return. There must be also other factors behind

their different reactions to such dreams. My data are insufficient to find them, so more research is needed in this matter.

Among the 19 harmful dreams about coming back home in Ukraine there are five in which the return is impossible and the dreamer fails in her attempts. The following report illustrates it clearly:

"I'm on the path that leads from my childhood home to the place where I lived with my husband before the war. (He still lives there). But there is a wall on the road and I can't bypass it. I can't reach our house. There is a gate in the wall and finally I go through this gate, but still cannot come to the house. I see my husband and a female neighbor. I talk with them. I see that the neighbor's goats came into my garden. I shout: 'Take them out!' I'm sad because I can't change or improve anything. My husband is sad too. After waking up I'm still sad and worried about my family in Ukraine."

The obstacles on the way home (sometimes physical and objective, sometimes imagined and unidentified) seem to represent the women's pessimistic moods and thoughts. Despite the cross-connections (most often in the realm of time and space), such dreams are not adaptive. They simply illustrate the dreamers' actual concepts of their life situation.

3.2.2 Pleasant dreams

The second biggest category of adaptive dreams is formed by dreams described as just pleasant and triggering optimism or good energy in the dreaming women. Eight women reported 10 such dreams. These dreams have a sensory character. They depict swimming in the sea (four dreams), feeling powerful (three dreams) or overwhelmed with joy (one dream), and enjoying beautiful landscapes or animals (two dreams). Their mode of operation can be grasped through the following report:

"I often dream about swimming in the sea. The water is clear and I think: 'That's good'. This is a great pleasure. I feel lightness. After waking up I'm filled with hope."

Obviously, not all dreams described by the dreamers as pleasant have adaptive effects. I included in this category only those dreams that turned out to affect positively the women's waking lives.

Pleasant dreams can be discussed in relation to Don Kuiken's (2015; Kuiken and Sikora 1993; Kuiken and Smith 1991; Kuiken, Lee, Eng, and Singh 2006; Kuiken et al. 2018) idea of "transcendent dreams" that, together with "existential dreams" and nightmares, form the category of "impactful dreams". In transcendent dreams there appear "vivid tactile-kinesthetic imagery, spreading warmth, unusual sources of light, felt vitality, flying and floating, magical accomplishment, perspective shifts, and awe and ecstasy" (Kuiken et al. 2018, 62). Those dreams are "followed by sublime enthrallment" (Kuiken et al. 2018, 63.) and often lead to spiritual transformation (Kuiken et al. 2006). They imprint for good in the dreamer's memory.

It would be difficult to assess whether the pleasant dreams of my interviewees caused their spiritual transformation, but those dreams were undoubtedly impactful as they brought feelings close to ecstasy. One of the women said:

"I dreamt I was an animal—a panther or a tiger. I ran with such a specific animal step. It was wonderful, I felt

strength, power and lightness. After waking up, I felt a surge of energy and great joy."

The waking energy comes from an abstract and totally unrealistic dream experience of being a wild animal. This dream is really "transcendent" as its manifest content (Freud 2010) has nothing to do with the dreamer's life (although the identification with a freely running animal is probably connected with her psychological situation in a symbolic way). The positive emotions on awaking are simply continuous with the dreaming emotions and they are caused by the kinesesthetic joy of a run rather than any kind of hyper-connectivity between the trauma and other life memories. It does not mean—let me emphasize it again—that hyper-connectivity is not an important factor of emotion regulation in dreaming. It only suggests that dreams can improve the mood of traumatized people also in other ways.

3.2.3 Metaphorical dreams

Adaptive mechanisms of dreaming are often based on a metaphor. Hartmann's (2011) conceptions of an "explanatory metaphor" and a "central image" that picture the dreamers' underlying emotions show that the process of metaphorization is crucial for our dreaming mind to come to terms with traumatic memories. Hartmann demonstrated in several studies that the "central image intensity" was much higher in traumatized people than in controls (which was later confirmed by Davidson and Lynch [2012]). There are also plenty of general findings on the metaphorical processes occurring in dreams (Ullman 1969; Lakoff 1993; Sates 1988, 2011; Kuiken 1999; Kuiken and Smith 1991; Kuiken et al. 2018; Malinowski and Horton 2015; Sparrow 2020). In regard to adaptive dream effects, I found (Owczarski 2023) a narrow category of metaphorical dreams that depict, with the help of a metaphor, a positive ending of the dreamer's difficult situation. Four such dreams were also reported by three Ukrainian female refugees. Dreams of this kind are often unpleasant, but they trigger optimism as can be seen in the following examples:

"I was in a burnt city. Bombs were floating around and ashes were everywhere. When I was going through this hell, small flowers started to grow from the ashes. I was scared, but the flowers made me calm. I knew that they meant life. After waking up I thought that life wouldn't disappear and Ukraine would revive."

"I dreamt that together with my grown-up daughter we were in a forest, in the evening, and were crossing a very dark river. I wasn't scared. I was glad that we managed to cross it. I woke up in a bad mood as this dream was unpleasant, but at the same time I was happy because I understood from this dream that everything would be all right and we would cope with our problems".

Importantly, such dreams are understood by the dreamers from the very beginning and the fact that the dreamers grasp immediately the meaning of the dreams makes them important and helpful. In this aspect, metaphorical dreams have much in common with what anthropologist Erica Bourguignon called "self-evident" or "preinterpreted" dreams. "The meaning of some dreams", Bourguignon explains, "in some contexts, appears to be self-evident. Other dreams appear to be experienced as already interpreted in the original narrative" (Bourguignon 2003, 137). In such cases the

interpretation is “part of the experience, and not a secondary elaboration” (Bourguignon 2003, 145).

Similarly, Kuiken attributes self-evidence to all types of impactful dreams, in which “rather than through retrospective interpretation, the dreamer senses immediately what the dream means, and a vague but compelling sense of the dream’s meaning lingers—sometimes for weeks, months, or years” (Kuiken et al. 2018, 60). Kuiken and his colleagues study the similarities between metaphors in dreams and in literature. They emphasize the aesthetic, as well as epistemic, values of metaphors in impactful dreams (Kuiken and Lee 2024). Such attitude enables realizing that dream metaphors—similar to Paul Ricoeur’s (2003) “living metaphor”—work when they are experienced, and not just understood, by the dreamers.

The importance of experience was also pointed out by Bert States in his theory of dreams as “proto-rhetoric”. According to this literary and dream researcher, the essence of a dream metaphor is its effect rather than its meaning. Meaning “might be found by an analyst or an interpreter, but that has nothing to do with the mode in which the image is experienced” (States 1988, 134). In the metaphorical dreams of the Ukrainian women (as well as in those of Auschwitz inmates), the meaning is evident and it has much to do with the mode of experiencing the metaphor. Finding flowers among ashes or effectively crossing a dark river become images filled with such intense emotional load exactly because of their positive meaning. One can say that in those dreams the meaning equals the experience.

According to many researchers, dream metaphors play a very important role in the emotion-regulation processes of dreaming, because it is in metaphors where hyper-connectivity (Hartmann 2011) or hyperassociativity (Malinowski and Horton 2015) take place and can be best observed. The dreams discussed in this section show, however, that dream metaphors can serve adaptive functions not only due to cross-connections. Sometimes more important is the metaphor’s evident, positive and vividly experienced meaning.

3.2.4 Good omen dreams

The simplest kind of helpful effects of dreaming stems from the dreamer’s belief in the future-oriented meaning of particular dream symbols. At first sight, such cases could be confused with the metaphorical dreams discussed above. The difference is that while in metaphorical dreams the meaning is profoundly and emotionally experienced by the dreamer and is felt as coming from within the dream, in good omen dreams the meaning originates from external knowledge or prior experiences and does not have to cause emotional reactions.

Three of my informants reported four dreams understood as good omens. Two women explained their dreams with the help of common beliefs which could be found in popular dream-books. “I dreamt that a dog jumped on my arms”, one of them told me. “When I woke up, I realized that a dog in dreams means a friend. It was a helpful dream.” Maybe more interesting is a report of a woman who evoked her individual dream symbols:

“I dreamt about two big, beautiful and colorful parrots. In the morning I thought that this was a promise of peace in Ukraine, because whenever I dream in colors, it always means something good.”

Although the parrots could be regarded as a metaphor, it does not matter in the case of this dream. What counts for the dreaming woman is solely the fact that the birds are colorful and she associates colors with good dreams. One could say, then, that helpful effects of finding good omens in dreams have nothing in common with the dreams themselves but only with the dreamers’ beliefs. It happens, however, that dream beliefs influence—or are influenced by—dream content (King and DeCicco 2009). If this woman believes that colors are good omens in her dreams, it is possible that she will start to dream in colors more often. And vice versa—if she often dreams in colors, it is likely that she will consider colors to be good omens. Hence, even such a simple process as benefiting from good omens can be regarded as a helpful mechanism of dreaming.

3.2.5 Problem-solving dreams

The phenomenon of problem-solving dreams has been described by dream researchers from several points of view (Pagel and Vann 1992; Kuiken and Sikora 1993; Barrett 1993, 2001; Schredl 2000; Cartwright and Lamberg 2000; Olsen, Schredl, and Carlsson 2016; 2020). These dreams help the dreamers find solutions to problems that they face in their waking lives. Quite often the help is in the form of a creative inspiration, especially useful for artists and scientists (Barrett 2001), but sometimes dreams help the dreamers make an important decision concerning, for instance, their intimate relationships, job-related issues or changes in the place of residence. In a study by Olsen et al. (2020), as many as 62,1% of 667 participants admitted that some of their dreams were helpful in a way. Among them, 8,9% indicated that dreams influenced their important decisions.

Two of my Ukrainian reviewees reported five problem-solving dreams. Here is an example:

“After some time in Poland I had to settle a dilemma: should we stay here for good or prepare for coming back to Ukraine when it is possible. It was a difficult choice. One night I dreamt of my deceased father. He was stroking my son’s head. I said: ‘Oh, daddy, I’d like to ask you a question.’ I meant his advice on my dilemma, but I didn’t ask him about it. He gave my son a smile and my son said to me: ‘Grandpa says we should stay here.’ Next day I decided to stay in Poland for good.”

Indeed, this woman settled in Poland, opened a restaurant, integrated with the local community, left the idea of returning to Ukraine and she is happy with her decision.

Deirdre Barrett (1993, 120) states that problem-solving dreams “help when dreamers are stuck in their waking decisions but do not represent dramatically different intellectual faculties.” It seems very probable that the Ukrainian woman gravitated to the decision of staying in Poland before having this dream. The dream, however, helped her realize what she really thought and emotionally accept the decision.

The same woman had the following dream:

“My daughter who stayed in Ukraine phones me and says that my mother was taken to the hospital and was very angry because I wasn’t with her. After this dream I decided to bring my mother to Poland for I realized how guilty I felt because of leaving her in Ukraine. Paradoxically, the feeling of guilt lessened at once.”

Again, the dream does not offer the dreamer a solution that she would not think about in waking. What the dream does is highlighting her feeling of guilt and thus affecting her decision. Therefore, it can be said that the problem-solving dreams of the Ukrainian refugees have adaptive effects in terms of emotion-regulation processes. Not only do they influence the dreamers' decisions, but also calm their emotional tensions.

3.2.6 Mixed mechanisms

It is worth mentioning that among the adaptive dreams of the Ukrainian refugees I found one in which three mechanisms—that of dreams of return, pleasant dreams, and good omen dreams—seemed to work together:

"I am in Mariupol. The war has ended. The city isn't destroyed. The building of my school is undamaged as if it has never been bombarded. It is summer, the grass in my school playground is so beautiful and green. I'm walking with my schoolmate, it's very nice. We see a horse that becomes aggressive so we go away. After waking up I felt happy. I thought that the horse meant a fiancé—my grandma told me so some time ago."

The dreamer comes back to Ukraine where she meets a friend, enjoys beautiful grass, and sees a horse that she later understands as a good omen (a fiancé). This example shows that different adaptive mechanisms may work in the same dream, but it happens rarely—I found only one such case among 49 adaptive dreams of the Ukrainian women.

4. Conclusions

This study confirms the hypothesis—often expressed by researchers—that dreams can have adaptive effects and help people cope with their traumas. As many as 60% of the Ukrainian female refugees to Poland in my 50-person sample reported at least one adaptive dream. The occurrence of such dreams is positively correlated with a person's level of traumatization: more traumatized people have adaptive dreams more often than less traumatized ones. Therefore, it seems possible that adaptive dreams appear on purpose, not randomly, most often in the helpless and most vulnerable trauma survivors.

Adaptive dreams work by triggering optimism and good mood in the dreamers, so it is reasonable to explain them with reference to emotion-regulation theories of dreaming. My findings support the conviction—shared by many authors of such theories—that in the emotion-regulation processes of dreaming an important role is played by hyper-connectivity (Hartmann 2011) or hyperassociativity (Malinowski and Horton 2015) between the traumatic and non-traumatic experiences of the dreamer. However, my informants' reports show that hyper-connectivity is not the only emotion-regulation mechanism occurring in dreams. In many adaptive dreams of the Ukrainian women hyper-connectivity is either absent or it does not seem to be the crucial factor responsible for the dream effects. I found five categories of dreams with respect to the adaptive mechanisms being at work in them. These are: 1) dreams of return in which the dreamer comes back to Ukraine and/or meets her loved ones; 2) pleasant dreams that cause the feelings of joy, powerfulness, and delight; 3) metaphorical dreams experienced as self-evident and depicting a positive ending of the dreamer's difficult life situation; 4) dreams that are

simply understood as good omens, and 5) problem-solving dreams that help the dreamer make an important decision in her waking life.

All the adaptive and emotion-regulation effects of the Ukrainian refugees' dreams seem closely connected with the dream content. It would be difficult to explain their mechanisms solely in the realm of sleep physiology. However, laboratory research is needed in order to investigate the relationships between sleep and dreaming. Therefore, I do not propose a theory of a dream function. I simply suggest that some kinds of adaptive dreams improving the dreamers' mood can be studied beyond the light of the existing emotion-regulation theories of dreaming.

5. Limitations

Research on adaptive dreams should be continued. The present study concerns female subjects only. It would be interesting to also investigate the dreams of male refugees, not to mention the Ukrainians (both male and female) who fight on the battlefields or just stay in the country under the constant threat of bombings and Russian war crimes.

One-time interviews with the subjects are a limitation of my study as well. It was impossible for most of them to devote more than 30-40 minutes to our talks, so I could not ask them to describe in detail their life histories and their dreams from before the war. A comparison of their pre-war and migrant dreams would shed an additional light on the mechanisms of adaptive dreaming after trauma.

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