

What the Languages of Our Dreams Tell Us About Our Multilinguality

Danuta Gabryś-Barker

Abstract Multilinguality is not an exception but a norm, thus the body of research focusing on multilingual cognition and language use is quite large and extends from cognitive processes to the socio-affective dimensions of this complex phenomenon. Studies on the language choices multilinguals make report on their functioning either in authentic communication contexts or when involved in language learning tasks in the classroom. Apart from the studies of emotions words (Dewaele & Pavlenko in *Language Learning* 52:263–322, 2002) and swear words (Dewaele in *Journal of Multilingual and Multicultural Development* 25:204–222, 2004), relatively little has been said about how language choices are made in unconstrained (and perhaps subconscious) contexts, such as dreaming at night. This study offers some preliminary comments that will hopefully contribute to this area of research. The data used in the subsequent analytical section consists of a set of narratives of 22 multilinguals who were asked to reflect upon whether they dream multilingually and if so, what language choices they make subconsciously when dreaming. The results demonstrate the exposure to a given language to be the main determinant of its subconscious activation. Also the topic and the persons involved, a positive or negative attitude to a language as well as of a level of language competence play a role in language activation and choice when sleeping.

Keywords Multilinguality · Night dreams · Dreaming · Involuntary language activation · Dream theories · Language choice · Dream speech · Dream content

1 Introduction

William Shakespeare's Mercutio in *Romeo and Juliet* says that dreams are “children of an idle brain. Begot of nothing but vain fantasy”. This may indeed be great literature but, dissenting from it, I believe with Sicard and de Bot (2013) that studying dreams

D. Gabryś-Barker (✉)
University of Silesia, Katowice, Poland
e-mail: danuta.gabrys@gmail.com

may contribute to our knowledge on how information is processed in our minds in a subconscious state such as dreaming. Also, in the context of foreign language instruction, the state of sleep is often portrayed as facilitating learning and can even be consciously used for this purpose, as is demonstrated by the SITA method and its success as demonstrated by the accounts of the learners (personal communication).

Research on multilingual cognition and language use is quite extensive and ranges from cognitive processes to the socio-affective dimensions of this complex phenomenon. Studies on the language choices multilinguals make report on their functioning either in authentic communication contexts or when involved in language learning tasks in the classroom. However, very little has been said about multilinguals' involuntary choice of languages in less conscious cases, such as dreaming at night. The exceptions are the studies of Dewaele and Pavlenko (2002) on emotion words, Dewaele's (2004) research on swear words and Sicard and de Bot's (2013) study of multilingual dreaming in the L2 immersion context.

2 Defining and Studying Dreams

Lexicographic definitions of dream describe its primary literal meaning as “a series of thoughts, images, and sensations occurring in a person's mind during sleep”, whereas metaphorically, a dream is a “cherished aspiration, ambition, or ideal” (<http://oxforddictionaries.com/definitions/english/dream>). However, defining a dream consistently is difficult, if not impossible, because of the “wide spectrum of fields engaged in the study of dreaming, and the diversity in currently applied definitions. (...) A dream should not be exclusively defined as a non-conscious electrophysiologic state” (Pagel et al., 2001, p. 195). The state of dreaming is “(...) at least in part, a mental experience that can be described during waking consciousness.” (*ibid.*, p. 195). The cognitive model of dreaming sees a dream as:

(...) the product of the interaction of three components:

- (a) the bottom-up activation of mnemonic elements coming from LTM (long term memory) systems,
- (b) interpretative and elaborative top-down processes, and
- (c) monitoring of phenomenal experience. A feedback circulation is activated among the components, where the top-down interpretative organization and the conscious monitoring of the oneiric scene elicitates other mnemonic contents, according to the requirements of the dream plot. This dream productive activity is submitted to unconscious and conscious processes. (Cicogna & Bosinelli, 2001, p. 26)

Scientific (and less scientific) discussions about the nature of dreams have been (and still are) a topic of concern in religious disputes as well as in philosophical and, more recently, psychological and neurological research. There is even a branch of science called *oneirology* that studies dreams: their connection to our unconscious, their content and interpretation, developing methodologies in studying dreams. Dreams are being studied, among various aspects, in terms of:

- the appearance of visual images in them—places, people and objects;
- the expression of emotions (which are most frequently negative emotions of anxiety, loss or fear, but also joy and happiness);
- their themes (for example sexual);
- colours in dreams (black and white *versus* multi-colour dreams).

Dream corpuses also demonstrate how dreams incorporate external reality. For example, real sounds such as a door bell ringing may enter sleep experience, the phenomenon being called *dream incorporation*. Some dream scientists focus on precognition (anticipation in the dreams of events that will happen in reality) as present in dreams; however, psychology usually explains these precognitions “in terms of memory biases, namely a selective memory for accurate predictions and distorted memory so that dreams are retrospectively fitted into life experiences” (*The Science Behind Dreams and Nightmares* online). Another phenomenon connected with studying dreams focuses on the degree of control over a dream exhibited by a dreaming person: the so-called *lucid dreaming* (Alcock, 1981).

One of the most studied dimensions of dreams is recall of dreams. In fact its frequency is minimal, as only 5 % of dreams are recalled and in the majority of cases the transmission from short term memory (STM) to long term memory (LTM) does not occur during the dream (Alcock, 1981). It is generally believed that two conditions are necessary for a dream to be recalled. One of these relates to a sudden awakening during the dream, whereas the other refers to dreams characterized as unusual, vivid or even bizarre, and so affectively intense. It is also the case, as personality trait measures show, that persons possessing more vivid, aroused and excitable characteristics who have such experiences during their awakened states, will transfer them to their states of dreaming. Various researchers of dreams also point to other reasons involved in the difficulty of dream recall. Freud believed that dreams are not remembered as they express what we want to hide or repress, whereas others have pointed to the vagueness, the frequent lack of intensity and lack of clarity of dreams, factors which contribute to forgetting. As dreams do not have direct associations with what we are exposed to in our waking state, there is no (strong) associative link between these two: the reality and the dream to be remembered.

In addition, dreams have been the focus of interest of psychologists, psychiatrists, philosophers and other scientists working in the area of neural network modeling or neurobiology. It constitutes quite significant research and occupies considerable therapeutic space in clinical medicine.

3 Dream Theories from Freud to Hobson

3.1 *The Old School*

The first notable names in research on dreams and dreaming were those of Freud, Adler, Jung, Perls and Hall (Table 1). Sigmund Freud, the father of psychoanalysis

Table 1 Prominent early dream scientists

Name	Focus
Sigmund Freud (1856–1939)	Dreams as the road to the unconscious mind (psychoanalytic theory of dreams)
Alfred Adler (1870–1937)	Dreams as expression of urge for power
Carl Gustav Jung (1875–1960)	Archetypes and the collective unconscious
Frederick Perls (1893–1970)	Dreams as disowned aspects of self
Calvin, S. Hall, Jr. (1909–1985)	Dream as a cognitive process

and the author of *The Interpretation of Dreams*, believed that studying dreams helps to uncover the hidden urges and instincts of a person expressed in their dreams, the unconscious power of the mind. His classification of the mind into the three related parts of *id* (primal desires and impulses), *ego* (the conscious and rationally and morally-oriented mind) and *superego* (controlling the *id*) has been enormously influential. The dream is such a state in which impulses and urges controlled by the *ego* in reality are uncovered by the unconscious *id* and transferred into some symbolic form. In other words, dreams allow us to find a way to explore and express our subconscious.

Alfred Adler, unlike Freud, sees a dream as a problem-solving tool. He believes that it expresses the problems experienced in reality, thus it is important to interpret dreams as they may help in gaining control of one's life. Adler does not see sexual instincts as the driving forces of human life as it was in the case of Freud's theories, but for him control, power and motivation are primary forces in our behaviour. Dreams compensate for what is missing in reality and demonstrate one's real feelings and emotions. Thus studying one's dreams is significant in developing one's awareness of one's true self.

In studying dreams Jung (1990), on the other hand, sees dreaming as the spiritual activity of communicating with one's unconscious, not only expressing repressed urges and desires, but also uncovering the underdeveloped aspects of one's self. Although he introduced archetypes into his dream theory (for example the Persona, the Shadow or the Anima among others) to represent archetypal dreams that occur at significant points in one's life, he also believed that dreams are very personal and reveal one's situation in waking life and one's relationships with others. Thus, they can only be practically interpreted by the dreamer himself/herself.

Frederick Perls, who is usually associated with gestalt therapy, believed that dreams should be reenacted (retold) in reality/life. In this way, the rejected and disowned parts of the self they express through the animate and inanimate objects that appear in dreams—the essence of every dream according to Perls—may fill the emotional void one feels in one's waking life, and as a consequence help one to become a unified whole.

Hall (1953) represents a cognitive approach to dreams. Dreams are seen in his theory as one's hidden thoughts expressed by the cognitive system of the *ego*, which in reality are unavailable to cognitive processes. In interpreting dreams, Hall

analyzes their content in terms of the concepts of the self, of other people, of the world and of the driving forces in one's life (e.g. impulses, problems and conflicts), expressed by actions of the dreamer, the objects that appear in a dream, the interactions that the dreamer gets involved with and the setting of a dream.

3.2 *Dreams and Neurosciences*

Mostly dreams are studied these days from the perspective of cognitive and neurosciences, which thanks to sophisticated equipment can observe brain processes as they occur when a person is asleep and dreaming, something indicated by rapid eye movements (REM sleep). There are five stages of sleeping differing in terms of depth of sleep (from light sleep in stage one to deeper sleep in stages three and four, and the deepest in stage 5) and different degrees of activation of brain waves (from the slowest delta and theta to the quickest alpha and beta waves). It is in the fifth stage of sleep, REM sleep, that most dreams are generated and in which significant physiological changes are also observed, such as a quicker heart beat and faster breathing and higher blood pressure.

William Domhoff, a contemporary of Calvin Hall, Jr. and a renowned scholar studying dreams, believed that they reflected one's waking life in that they expressed one's real thoughts and desires pursued in one's waking life. For him, dreaming is a neurological process. Also, the Activation-Synthesis Model of Dreaming proposed by Hobson and McCarley (1977) is based on the neurological evidence of brain functioning during sleep. It assumes that dreams occur during the REM stage of sleep, when some parts (circuits) of the brain become active. They are the limbic system (amygdale and hippocampus) responsible for affective processing and memories, and only later on the cognitive processing occurs, which interprets the internal stimulus received and eventually results in dreaming. Hobson believes that dreams make sense and seemingly nonsensical meanings are novel combinations of ideas and thoughts significant to the dreamer.

4 **Language in Dreams: An Overview of Studies of Multilinguals' Dreams**

Linguistic aspects of dreams find their way into scholarly studies of *dream speech*, which is the term used to describe the language that appears in dreams, focusing on incorrect or novel forms found in the dream corpuses collected. This area of research was initiated by Kraepelin in 1906 (*On language disturbances in dreams*) when he compared the distorted linguistic forms of dream speech to his schizophrenic patients' language performances, pointing to similarities between the two in terms of the same forms of incorrect language, for example *paraphasias*—wrong

word selection or *agrammatisms*. These findings were also confirmed more recently in research on dream speech carried out by Prof. Barrett at Harvard University, who observed in her students' dream speech forms characteristic of Wernicke's aphasia patients with intact Broca area.

When meeting a multilingual person, the questions that such a person is often exposed to concern the interlocutor's possible non-multilinguality, and what languages he/she activates consciously or subconsciously when thinking. In an online interview a scholar and a true multilingual, Aneta Pavlenko, when asked about language choices in her dreams responded in the following way:

Over the years, I remember having all of my languages, from Polish, to French, to Spanish, to Russian, visiting my dreams. Yet the dreamspace, like all other areas of my life, is dominated by English.

Table 2 Sample studies of multilingual dreaming

Name	Focus	Observations/findings
Vildomec (in Grosjean, 2011)	Language proficiency in multilingual dreams	Perceived, unreal perception of the level and language choice (which language was really activated)
Leischner (1965)	Variables affecting polyglot dreams, comparison between aphasic polyglots and normal polyglots in language choices	Analogies in language choices in aphasic subjects and polyglot dreams Factors determining multilingual dreaming: environment of the dream, feelings towards the language immediately before the dream, emotional attitude to the given, foreign language community
De Koninck Christ, Rinfret, & Proulx (1988)	Relation between language choice in dreams and learning experiences of that language before sleep	Activation of the language learnt in a dream after the time the learning occurred in reality Dreams seen as reflections of cognitive processes of learning in reality
Foulkes et al. (1993)	A study of pre-sleep thought samples and the REM dream reports in the waking state on the dream speech	The influence of pre-sleep language environment (the waking state) on language choice in sleep
Grosjean (2010a)	Involuntary language choice when dreaming	Factors determining the choice: the situation and the person one dreams about (the <i>complementarity principle</i>)
Sicard & de Bot (2013)	Relations between L2 proficiency, environment duration, context—home versus abroad—and L2 dreams occurrences	L2 dreams occur more often in high proficiency multilinguals L2 environment promotes L2 dreaming

Grosjean (2010b) has proposed the so-called *complementarity principle* in which he emphasizes that: “Bilinguals usually acquire and use their languages for different purposes, in different domains of life, with different people. Different aspects of life often require different languages. I have called this complementarity principle” (p. 1).

Despite the fact that dreams have been studied for a long time from various perspectives and for various purposes, serious studies of dream speech are scarce and those on bi- and multilingual dreaming are even less numerous (Table 2).

5 The Study

The present study is a part of a larger project concerning language processing and activation in involuntary contexts such as the thinking (Gabryś-Barker, 2013) and dreaming of multilingually competent language users. It is a mixed method study with both quantitative and qualitative data derived from the subjects' narrative comments on language activation when dreaming in their night sleep.

5.1 Description of the Study

The research questions posed in this pilot study on multilingual dreaming are the following:

- Do multilinguals dream in different languages and what affects their sub-conscious language choice?
- What are the contexts in which different languages are being activated when dreaming?

In this piloting stage of the project the subjects were 22 Polish multilingual university students at the Institute of English, University of Silesia, teaching profile, with C1 level English (L2) and A2/B1 level of German or French (L3). The proportions of different language exposure to and use can be established at the level of 70 % for Polish (daily functioning, contacts with family and friends, exposure to media) and approximately 30 % for both L2 (lectures and classes, a teaching job, interactions with peers, exposure to media) and L3 (solely classes).

The study is mainly qualitative in nature, so a narrative text was used as the data collection tool. The subjects were asked to write a short reflective text: *Language(s) of your dreams* (300 words). The subjects were provided with guiding questions, which helped to constitute the deductive categories of analysis:

- Do you dream multilingually?
- Which languages appear in your dreams?
- What is the level of your proficiency in each of them (in your dreams)?
- In which contexts (events) does a specific language appear?

5.2 Sample Narratives (Data)

5.2.1 Quantitative Data

Does the state of dreaming make multilinguals react similarly in terms of the language choices they make, as it does in the thinking process, or do these study findings diverge? After all, dreams are clearly uncontrollable, which is not always the case with thinking. Even if we want to influence our dreams, be this on the level of content or language, we clearly do not have the power. Table 3 demonstrates the quantitative data based on the collected narratives.

The above quantitative data confirms the results of previous studies. It demonstrates that multilinguals indeed dream in their different languages, with L1 being the dominant language in their dreams (100 %). They also show the influence of level of proficiency on the amount of dreaming in a given language; more precisely, the higher the level, the more often the language is chosen in dream speech (also observed by Sicard & de Bot, 2013). The level of language in their dreams also appears to the subjects to be higher than it is in reality (except for L1, where the level appears to be the same and for one subject it is even lower). Only one subject mentions that L2 and L3 levels are the same as in their conscious waking state.

Table 3 Multilingual dreaming data in numbers (n/a—not applicable)

Focus	Yes/No	L1	L2	L3	Ln
1. Do you dream multilingually?	95/5 % (21/1)	n/a	n/a	n/a	n/a
2. In which languages do you dream?	n/a	100 % (22)	95 % (21)	32 % (7)	9 % (2)
3. What is your level of proficiency in each language?	n/a	Same: 95 % (21) lower: 5 % (1)	Higher: 95 % (21) same: 5 % (1)	Higher: 95 % (6) same: 5 % (1)	n/a

5.2.2 Qualitative Data

As to inductive categories identified on the basis of the narratives collected, they can be classified as those relating to:

- dream recall ability;
- the context and its role in dream speech;
- the dominance of L1 in dream states;
- affectivity;
- language proficiency in each of languages.

The subjects also commented on their ability to recall their dreams in waking states and gave examples of their multilingual dreams. The state of sleep (and thus of dreaming) is perceived by one of the subjects as a time to relax so it is devoid of other languages. “I read, watch films and think in English without any problems but when I sleep, I believe my dreams are in Polish. It is possible that my mind wants to relax and therefore it chooses the easiest way to do it” (subject 49). Another subject who does not dream multilingually at all says “(...) being so immersed in English language and culture I have been for the last years, speaking, thinking and feeling in English, the lack of English dreams makes me sad” (S10). Additionally, two of the subjects had a dream in a language unknown to them. The origin of the first dream was unexplained, however the subject was able to comment on its linguistic characteristics: “It was a certain language which seemed to belong to an Asian groups of languages as there were many high-pitched sounds” (S11). The other dream aroused curiosity in the student as she said:

The weirdest dream I have ever had was about meeting people from another country (which I actually never identified) and talking with them in a strange, unknown language. I tried to check which language it might have been when I woke up but I never found out. (S21)

Dream Recall

Some of the subjects found the topic difficult to reflect upon for the simple reason that “most of my dreams involve silent images, dialogues, discussions and conversation appear rarely” (S5):

Dreaming is a subconscious process. In fact, I often do not remember my dreams. It is usually a vague feeling that there was something in my dream but I cannot recall what it was. I am 23 years old and I can remember only four whole dreams. (S4)

Well, in fact, the dreams I remember after having woken up are a rarity. I always have certain specific dreams when there are some special events forthcoming. These include the events that I am stressed about as well as the ones which are particularly important for me personally. (S14)

Frankly speaking, I simply do not remember most of my dreams when I wake up. I only remember the images from my dreams if I happen to have them. The images are usually black and white pictures. I usually remember what or how I felt in a particular dream. (S18)

The Context and Its Role in Dream Speech

The narrative data brought a fairly homogenous picture of contexts in which involuntary language activation tends to occur, according to a pattern in which L1 is activated for daily, family and friend contexts and themes of a dream. As the subjects' main focus of study, L2 appears in the dreams evoking the situations of exams, work at school, travelling to English-speaking countries and also in some daily activities, whereas L3, which was rarely evoked, seems to be associated with vacations and exposure to L3 in German-speaking countries. The following samples illustrate the pattern:

(...) when people are exposed to one language more frequently, they start to identify with this language. (...) it was during my two months' stay in Austria that I experienced multilingual dreaming. I dreamed in German. The reason for that was my contact and interaction with the native speakers of German. The new environment and new people influenced my dreams. It was a nice experience because it improved my self-esteem and gave hope to improve my language skills in German. (S2)

When I was in Ireland living with the Irish family, most of the time I was minding the children. (...) The experience of taking care of triplets was so intensive that it haunted me in my dreams. The moment I came back home I left my dreams in English in Ireland. (...) The fact of having an interview in English had a great impact on my dreams. Even at night I could not clam down and I was dreaming about the interview two nights in a row. Such a situation always happens when there is a difficult English exam ahead of me. The emotions are so strong that it affects my dreams. (...) it also happened to me to dream in L3 – Spanish. After studying really hard, newly acquired vocabulary appeared in my dreams, these were however only some new expressions or collocations. (S5)

There were a few cases of dreams in which I spoke or I was spoken to in English. It happened when I was abroad for a longer period of time and I started having dreams about people I have met and the places I was in. (S6)

(...) scenes in which I have some contact with objects (or people) connected with a foreign culture. For instance, reading an English book, listening to music. (...) it seems to me that English language appears in my mind as part of my life and so does it in my dreams. (S8)

English is present in my dreams either in the context of visiting foreign countries or meeting foreign people. Sometimes it is also set in the context of education when I am dreaming about teaching other people by means of English. Germans appears only in the situations which involve the presence of my German-speaking family. (S11)

From my early childhood I have wanted to become an English teacher. It was my dream. Today when I have multilingual dreams they are all connected with English. In such dreams I am a perfect teacher who speaks as a native speaker of English. (S15)

It is typical of me to have dreams in English before some important exam in English or the final English test. (S17)

My dreaming in English takes place at night or a week before the important events at the university. These events can concern my English tests and exams. For example, if I have an oral exam, I prepare for it in my dreams. While dreaming, I can practice my English all the night. (...) My English dreaming activates my motivation to learn and emotional states. For instance, my dreams are reflections of my wish to become the native speaker, pass the exam or meet new people. (S8)

I am of the opinion that the language with which we go to bed is the language we dream with. (S5)

Dominance of L1 in Dream States

The role of the mother tongue in dream speech not surprisingly brings the immediate reaction of the subjects that it is the main language of their dreams:

The native language is present in my dreams due to several reasons. First, the dream is a form of my subconscious thinking. Before going to sleep I always think about bad things which happened during the day. (...) another reason of using the native language in dreams is the context of situations. My daily routine tasks happen in most cases while thinking or speaking in Polish. (S9)

My native language appears in my dreams almost always. It is due to the fact that I usually dream about people who are Polish as well and the dreams are set in Polish reality. (S6)

The Affective Dimension of Multilingual Dreams

The subjects emphasize the affectively marked character of their night dreams, also relating this to the language which is activated:

Both dreams (in English and German) were neutral dreams. They were not nightmares and they also were not good or happy dreams. (...) most of my dreams are of course in Polish. When I dream of something emotional, when I am scared, happy, when I feel anxiety or stress, I always dream in Polish. (S7)

These dreams (in L2 English) were connected only with positive emotions and feelings but occurred rather rarely. (...) When it comes to German, it is not possible to write anything at all. I have been a student of German for several years but I do not have a positive and optimistic attitude towards the language and studying it as in the case of English. Maybe it is the reason I cannot recall anything. (S13)

I have never been to England or any other English speaking countries and that I do not keep in touch with native speakers. Perhaps after such experiences I could have dreams in English connected with the visited places and the people met there. It is however, just my personal explanation used to feel a little better about myself as a language learner but sometimes it seems that there is something missing in my multilingual picture. (S10)

Language proficiency in each of the languages

It can be generally observed (as it was in the studies overviewed earlier) that the subjects perceive their language competence in their dreams in the majority of case as higher than in reality, in this way articulating their desire to be more fluent (see Table 3):

I dream in English at a high level of proficiency. I must admit that when I speak English in my dreams, my speaking abilities are better than in reality. The explanation of that can be my wish to become as proficient in English as a native speaker. Therefore my dreams may reflect my desire to speak English at the same level as I speak Polish. (S8)

I was communicating in English. I must admit that my level of proficiency was definitely higher than in reality. In that dream I was speaking fluently with an American accent. The whole situation took place in the USA. (S9)

I perceive myself as a quite good speaker of both English and German and in my dreams I was speaking quite fluently. There were also dreams in which I was speaking even better. (...) I dream about something I would like to gain (S19)

Full Descriptions of Multilingual Dreams

There were not many but a few subjects remembered their dreams in their entirety. Each of these dreams demonstrates a strong connection to learning experiences and especially to stress-related educational challenges, such as tests and exams:

English in my dreams has happened before some stressful situations that were going to happen to me. I remember one of such dreams very clearly. It was just before I started working at school. The night before the first day I could not fall asleep and when I finally did, I dreamt that when I entered the classroom, the children were sitting straight, smiling and waving at me. I waved back at them and just when I wanted to say hello, pupils started to ask me questions like "What's your name? Where are you from? What's your favourite animal? all at once. I thought it was funny because these were the questions that I wanted to ask them during the first lesson. I told them to hush, stop asking questions, but they became more naughty and were shouting these questions at me. I tried to calm them down but the more I tried the more they were screaming. Finally, I woke up from this nightmare with a headache. (S20)

It happened when I was overwhelmed by English vocabulary because I was learning for two vocabulary tests (the junior high school and language school). In that dream I believe I was in New York (although I am not sure) and English words (from a word list) appeared on the building around me. When I said a Polish equivalent or an English definition of the word, it disappeared. It was kind of repetition before the tests. In that dream I did not remember one word "haphazard" and that word did not disappear but was appearing everywhere. The first thing in the morning was to check the meaning of that word... (S4)

Other Comments

There was one example of a so-called reality-integrated dream:

I don't remember the plot of my English dream. (...) during the dream I was woken up by the phone. I picked up the phone and instead of saying "halo" or "Slucham", I simply said "yes", the person calling must have been confused. (S7)

6 Discussion

In the first part of the project on involuntary language activation, I focused on the thinking processes of multilinguals. The observations were made on the basis of narrative texts produced by a sample of multilinguals, more or less homogenous

with the present informants. They demonstrated that exposure to a given language is the main determinant of its not only conscious but also subconscious use in one's thinking processes, irrespective of the context, whether that be immersion in an L2 context or a formal instructional setting. In the former context, this exposure leads to multilingual thinking, which in turn leads to the integrative process (with L2 culture and people), whereas in the latter context, multilingual thinking becomes a facilitative dimension of expressing culture-grounded or related thoughts. Multilingual thinking is also facilitated by the choice of the topic of one's thoughts as some topics will be more typical of and encourage the use of a given language, for example, when philology students discuss study topics. Multilingual thinking can thus be a form of rehearsing for performance in a given language. A very positive or negative attitude to a language either facilitates or inhibits language choice in thinking. The former attitude stimulates language activation and leads to more self-confidence, positive perception of oneself and the ability to perform better in a given language. The latter attitude results in withdrawal and less multilingual activation when thinking and thus less confidence in speaking. The subjects see the value of multilingual thinking as an effective learning strategy, increasing both exposure to a learnt language but also its active use in dialogue with oneself, which goes beyond the learning experience as it is transferred to daily life. Thinking multilingually is seen not only as a learning strategy but also as evidence of a high level of language competence which itself leads to language success. This language success is multidimensional. It not only offers rehearsal for performance in a foreign language but also has an impact on L1 awareness and on performance in L2/L3.

The following findings and observations can be made with respect to multilingual dreaming. In relation to dream theories: the subjects offered dream narrations as expressing the unconscious mind, the deeply hidden and those overtly present fears and desires, aspects of their professional selves, such as the desire to be professionally competent (as teachers) and native-like language users. The narratives on dreams demonstrated how they reflect (or reflect on) a cognitive process of FL learning, often picturing situations like preparing for an exam and being examined, also interacting with real or imagined NSs. Their recall, as has been emphasized, brought out the emotions that accompanied the verbal aspects of dreaming.

In relation to other dream studies: as was observed in these other studies, perception of language competence being higher than in reality was generally observed by the subjects—as if reflecting the desire for this competence. The environment prior to sleeping was pointed out as a significant factor in language choice in a dream, as were their feelings towards a given language. The pre-sleep experience of a language was seen as determining dream speech, whereas learning experiences of a language made this language more present in one's dreams. The subjects also reported on precognition dreams, in which anticipated events relating to their studies (mostly stressful situations of exams) and their professional lives (e.g. an interview for a job) were pictured.

In reference to thinking: pre-sleep exposure to a given language appeared to be the main determinant of its subconscious activation, along with the topic and the

persons involved in a dream—as was also observed in multilingual thinking. A positive (facilitative) or negative (inhibiting) attitude to a language makes the subconscious mind involuntarily chose it, or otherwise. It also is seen as a form of rehearsal for learning, an exam or a job. The subjects also strongly believe that multilingual dreaming is evidence of a certain level of language competence.

7 Conclusions

There are some analogies between language activation in the thinking and dreaming of multilingual language users. Both are strongly influenced by the context of language functioning, immersion in the language, but also affective aspects of functioning in these languages in life and interactions with other people. Reflecting on language use in its involuntary activation, such as occurs in thinking and dreaming, tells us something significant about our multilinguality. Some believe that you are only truly a proficient language user if you think, dream and count in this language. As the subject in my study who never dreams multilingually notes rather plaintively: “There is something missing in my multilingual picture” (S10). If we only activate a given language consciously, are we not just learners of this language for whom it has not penetrated deeply enough to become part of our subconscious? The question still remains how to define a true multilingual.

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