

Comment on “Exploring and developing the concept of the dream as a threat monitoring-alerting mechanism” by Rupert Harwood (this issue)

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Summary. In his citation, Harwood drew his conclusions from an analysis of 61 dreams logged during the start of an, unfortunate, chronic autoimmune condition. Such data, logged during the initial stages of an illness, could or could not necessarily have an immediate impact on the deep sleep conditions, depending on the nature of the illness: for instance, a simple cold virus could have a more direct effect on the deep sleep, than a more serious illness, like cancer at its initial stages: albeit, the latter could usually generate emotional conditions, that would be more susceptible to the deep sleep eventually. Harwood also introduced seven new hypotheses, in a few which the author’s theory was addressed. The author will only elaborate on Harwood’s relevant hypotheses, with the aim to further consolidate, and create a clear rationale for the author’s theory as the main function of dreams, and any content-interpretation is a by-product, related to wishes, desires, environmental effects and emotions that dreams draw their substance from. Harwood (2018, P.8) states...” [H]owever, during deep sleep, cerebral blood flows are at their lowest during REM sleep (e.g., Madson and Vorstrup, 1991). Further, Jurysta et al. (2003, P2146) note that...”[i]n healthy subjects, heart rate decreases during non-rapid-eye movement (NREM) sleep and increases during rapid-eye-movement (REM) sleep...”. In the author’s theory, it states that during the deep sleep, the body functions are lowered to their respective permissible levels of operation, and if therefore the cerebral blood flow (CBF) is to be at a specific required level, then the author’s theory referred to that specific level as the permissible level, and the deep sleep monitoring mechanism maintains a close surveillance over this flow; among other tasks, to ensure that blood supplies to the body organs like brain, which is automatically controlled by the Cerebral Pressure Autoregulation Process, to meet the metabolic demand. On the other hand, it is the Cerebral Perfusion Pressure (CPP) that could change. Moreover, the nocturnal blood pressure which dips during sleep by about 10% -20%, is also, under surveillance of the monitoring mechanism; in addition to any other abnormalities and discomforts experienced during the sleep. It is of interest to perceive the intricate and complex operations performed by the human organs when in deep sleep, specifically the heart must reduce its workload to minimum permissible level, yet simultaneously maintaining the (CBF) rate, and (CPP) that intends to drop with the body operations slowing down during the sleep.

Keywords: Deep-sleep monitoring mechanism, highly charged dreams, low charged dreams

1. Introduction

In his citation, Harwood exploited the content of 61 dreams, logged during the onset of a chronic autoimmune condition, to explore and investigate, among other things, the author’s theory, “The True Meaning of Dreams”, and find any correlation justifying the theory. In addition, Harwood’s study included, inter alia, many other thematic, dream-related concepts, Like Lucid dreams etc., that here, the author will only elaborate on the Harwood’s 61 dreams if related to the author’s theory. Moreover, the author will clarify some misconceptions generated by the Harwood’s citation, that the author may also share part of the burden, for not having initially, explicitly elaborated on every minute content of the

theory. With this, the author hopes to build a consensual platform for further study or research of the author’s theory, The True Meaning of Dreams. In Harwood’s rewritten Citation of the author’s theory, Harwood wrote under the first page, “...There are ,however, a number of possible problems with it. In particular, the published literature is not used to substantiate the empirical claims upon which the theory is built..” And, the author feels that the theory is still in its infancy, and like many other theories, time and practical applications will take care of substantiating the empirical validity and claims. Moreover, Harwood goes on to state, “... some of these claims seem to be at variance with current scientific knowledge and/or to have limited face validity” . And, the author agrees that the author’s theory would have variances with the current scientific knowledge, relevant to the dream-functions. On many occasions Harwood has made reference to the two main streams-of-life: the oxygen-stream, and the blood-stream, as the two sole functions of the theory. Matter of fact, the theory referred to these two,life-threatening, as the ultimate problems that a body of any viviparous mammals and birds could undergo when in very deep unconsciousness. Other problems have been mentioned in the theory on every page. Like, under the title: What happens during Sleep,in the middle of the column, the

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theory states: ...any irregularity or abnormality, even a trivial one, triggered by any emotional and/or physical stimuli, may have some dire consequences on the survival of the body when at such a low level,... and the theory continues to state...such irregularities are abundant and unavoidable, and their risk could have been of drastic proportionality had it not been for the part of the autonomic nervous system,...”.

Harwood's Hypothesis No. 1

In the first of the seven new hypotheses (Harwood, P.9), states...” [R]EM and other dreams communicate a range of potential problems with the sleeping body, and not just, as Gewargis seems to suggest (2016), inadequate blood flow to the brain or oxygen to lungs, and dreams facilitate ameliorative action in relation to this range of potential problems...”, and the author's theory states, that the prime task the dreams serve, is alerting the central brain, now at slumber during the unconsciousness period of deep sleep, to respond to any abnormality, discomfort, irregularity created by any physical or emotional condition, of any nature. The central brain's response will depend directly on the dreams' intensity, and the latter's intensity varies with the nature of the confronting situation, arising during the sensitive low level of body functions at deep sleep.

Harwood's Hypothesis No.2

(Harwood, P.10) states...” [D]uring the onset of chronic illness, new symptoms will present as something dangerous or troublesome in dreams, even when the symptoms are relatively benign. However, even serious symptoms will not be manifested in dreams after a short period of habituation to them...”, and the author's theory states that, whether at the onset of an illness (chronic, or otherwise), and after a (short or long period) of habituation, the dreams will only activate the alert monitoring mechanism, if these illnesses interfere with the deep-sleep normal processes. For instance, a stuffy nose during deep sleep could interfere with the sleep (by blocking the air intake as the mouth is closed) more than a serious illness, if the latter does not, at least at the initial stages, interfere with the sleep's normal operations.

Harwood's Hypothesis No.3

In his third hypothesis, Harwood notes...” [D]reams communicate, and facilitate ameliorative action in relation to a range of internal and external potential problems. Both Gewargis' (2016) theory and hypothesis 1 (concerning the body), and hypothesis 3 (concerning the external environment), would seem to require that what happens outside the dream during the dream can be manifested in the dream and in such a way that it alerts the brain to potential threats. There is some evidence that changes in the external environment during dreaming can affect dream content, of particular note, Schredl et al. (2009, P.288) found that “olfactory stimuli affected significantly the emotional content of dreams ...”. In addition, Schredl et al. (2016a, p.86) found that “fewer dreams were more bizarre, more emotionally intense, and often negatively toned...”; and, Schredl et al. (2016b, P.82) note, citing, for example, DeCicco et al. (2010),” ...[C]ontent analytic studies...” indicate that dreams of a person with illness include more references to medical themes, injury etc. “However, it does not appear to be suggested that reflections of negative olfactory stimuli, fever,

or illnesses in dreams, served as a mechanism to alert the brain to potential current dangers and bring the dreamer to less deep sleep. Or to wakefulness.” In the author's theory, it states that only internal potential problems are dealt with by the dreams in deep sleep, and the dreams' intensity is dependent on the physical and/or emotional problems the dreamer is undergoing while in deep sleep; and the prime function of the dream here is to return the dreamer into consciousness, where the body functions are in a better phase, thus avoiding any Confrontation. With reference to Harwood et al. (Harwood, p.11), the author's theory states that external stimuli will only relate to dreams if they interfere with the dreamer's deep-sleep conditions. In Schredl et al. (2009, P.285) finding that olfactory stimuli affected significantly the emotional content of dreams...”, is undoubtedly true, as the respiratory process...the intake of oxygen and release of carbon dioxide, from the oxidation of complex organic substances, is a continuous process, in both wakefulness and in deep sleep, though in the latter, it is more relaxed. Also, the effects of an odour on the olfactory organs will depend on the intensity of the odour. In the case of a mild odour, its effects will have no bearings on the deep sleep normal conditions, and the dreamer will not be alerted; whereas, if a more irritable odour that could immediately be felt by the first pair of the cranial nerves, the situation would be different; albeit, even with such irritable stimuli the response could not necessarily be via the dream reflection. On the other hand, if an odour, for instance, causes swell in the opening of the nasal cavity in vertebrates that admit air to the lungs, and reduces the inflow of oxygen, then the alert monitoring device will exploit dreams to alert the dreamer into wakefulness.

Harwood's Hypothesis No. 5

(Harwood, P.10) states...” [D]reams have other functions indicated in research, such as memory processing (e.g., Perogamvros et al. 2013), and accommodating these different functions along with a monitoring alerting one, could entail some degree of compromise...” In the author's theory, it states that the main function of dreams is to monitor over the deep sleep for any risky occurrences, while the subject is entertaining deep sleep's benefits of stimulating the biological systems, including the memory and cognition; and, it is not the dreams that carry out such tasks, but it is the deep sleep that contributes to this cause.

Harwood's Hypothesis No.6

What came in both (Sheaves et al. 2015) and (Nadorff et al. 2016) suggests that, “the Threat Activated Vigilance System can be activated during REM dreaming”, is in line with what came in the author's theory that states...” during the very deep sleep, where the body functions are at the lowest permissible operating rates; the dreamer has protective innate devices activated to encounter any malfunction during the deep sleep period. A dreamer undergoing traumatic and emotional problems, could experience more abrupt fluctuation in both blood-flow and oxygen flow during sleep, a dangerous situation that instigates the dreams monitoring device to kick-in and interferes with the deep sleep. Referring to (Harwood 2018, P.31) ...”[W]hereas Gewargis seems to perhaps imply (2016, P.198) that nightmarish happenings are needed to wake a subject quickly from sleep; Harwood found that same uncomfortable, non-frightening dreams

appeared to wake him up as at least as fast...". In the author's theory, the only contrast to what (Harwood, P.31) had experienced is that in being awakened by a nightmarish dream, will make the dreamer jerk into a sitting position, with probably throbbing heartbeat, and a sense of relief, realizing it was a dream. Such highly intense Dreams of this nature are exploited by the body when the sleeper suddenly undergoes a major physical problem that could be life threatening during deep sleep, like complete oxygen block for any reason; or, drop in the heartbeats. With less serious problems, the dreamer will still be woken up but in a more relaxed status.

2. Conclusion

As the dreams' substance is drawn from images, events and occurrences of our everyday life, their function has been the subject of different theories and speculations. Unfortunately, most of these theories have dealt with the dreams' content, and have ignored the importance of their physiological aspect. The aspect that they serve the sleeper, regenerating, rejuvenating and revitalizing, during the period of deep sleep. They serve the sleeping body as an alarm system to interfere and move the sleeper into a shallower or even awakening state, whenever any abnormality interferes with the relaxed functional sleeping conditions. These abnormalities could range from simple discomforts to major life-threatening occurrences, like blocking air passage to the body or interfering with the blood free circulation. Dreams, when in their highly charged nature, serve as an alarm system to abruptly put an end to the deep-sleep and avoid any undesirable confrontation. On the other hand, as dreams' substance is pulled from Life events linked to wishes, desires, emotions etc., then it is obvious that there will be a correlation between these wishes, desires and dreams. It is this relation that many theories have built their concept on. These are valid relationships, as dreams, utilized in threat monitoring-alerting mechanism, come from these wishes, desires, emotions etc., and this interdependence has reasonably been seen as a factor in accepting the already existing concepts of the dreams' function.

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The author wishes R. Harwood good health and conveys his appreciation for the unique and highly esteemed work done in the citation of the author's theory, "The True Meaning of Dreams", in his Technical Report, *Dreaming and the Onset of Chronic Illness: Exploring and Developing the Concept of the Dream as a Threat Monitoring Mechanism*. June 2017, DOI: 10.13140/RG.2.2.35629.28641, Affiliation Public Interest Research Unit, Project, The diagnosis

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