Consciousness, Attention and Conscious Attention in Learning

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Abstract: In this study, the connection among consciousness, attention and conscious attention in learning carefully examined. Since attention and awareness appear to have comparable properties, the cognitive mechanism underlying attention has often been compared to the underlying consciousness. On the other hand, it is point out, attention is defined in terms of its functional purpose, while consciousness is often described in terms of its phenomenal nature, even when there is no apparent connection to a functional purpose. By discussing how each function contributes to the connection between consciousness attention and conscious attention, they offer new insights and suggestions to further understanding and investigation of the relationship among consciousness, attention and conscious attention in learning. The general conclusion of this study is that the states of consciousness and attention are generally different. This study is a dissociation spectrum that provides a framework that identifies phases of dissociation between consciousness, attention and conscious attention after rigorous analysis of recent empirical and theoretical work on attention and consciousness. This spectrum of dissociation ranges from identity to complete dissociation. They argue that mindfulness, which can be defined as focusing attention on the content of consciousness, is generated by overlapping but distinct processes involving awareness and attention in learning. The most advanced form of attention, conscious attention, evolved after the most basic forms of attention and increased access to different types of cognitive content to focus on particular contents or points of learning. The objective of this research is to contribute to the consolidation of many academic approaches to the study of consciousness attention and conscious attention. They believe that the ability to make theoretical advances that deepen our understanding of the human mind is possible through a focused analysis of consciousness, attention and conscious attention in learning.

Keyword-Awareness, attention, awareness, attention.

Introduction:The Relationship Between Attention, Consciousness, Mindfulness and Visual Attention: An Overview Many researchers, including ideologues, philosophers, and psychologists, are interested in consciousness, the subjective perception of many things, such as visual objects, events, ideas, and emotions. While in the past it might have seemed ridiculous to

study consciousness experimentally, recent advances in cognitive neuroscience and imaging techniques (MRI, EEG) have made it possible to explore brain circuits directly related to consciousness. The study of visual attention is important to conscious experience, and many scholars have linked specific types of attention to consciousness, this is very interesting topic and will be devoted much of the conversation to it. Although there is some overlap between awareness and visual attention that should apply to attention in other modalities, for the most part awareness and attention can be viewed as independent forms of mental states. Visual attention has been the subject of much research in cognitive psychology and has powerful implications for the *consciousness, attention and conscious attention* learning experience.

Objectives

- According to research, on a personal level, different types of attention occur naturally and without awareness.
- There are some levels of dissociation between consciousness and attention in philosophical views of consciousness.
- A type of conscious attention that is not reducible to attention or awareness.
- Evolutionary factors strongly suggest that consciousness and attention must be separate, which is probably the most compelling empirical argument.
- These goals, which will be discussed in depth in future posts, contribute to a systematic description of the connection between consciousness and attention, which may lead to a clearer understanding of the purpose of consciousness. This study may help clarify interdisciplinary conflicts around consciousness and attention by describing the extent of the dissociation between consciousness and attention.

Psychological Perspectives on Awareness, Attention, and Mindfulness in Learning: Includes psychological theories of learning that have a similar focus to the ideas discussed in detail here. Therefore, it is important to define the needs of the different levels of discussion and to define the intersections between awareness and attention. It is possible to show, through illustration, the levels of intersection between awareness and attention in perception that lead to belief and are preserved as permanent memory in learning.

Here you will find a functional discussion of visual attention and its connection to consciousness, as well as an overview of attention research and relevant theories in the philosophical literature on the teaching and learning process.

Here is the relevant functional functioning of attention, these are studies such as:

- i) Care based on characteristics,
- ii) Spatial attention,
- iii) object-related attention,
- iv) Effortless attention,

These mechanisms that support different types of attention are brain structures and pathways in the teaching and learning process, and the evolution of these mechanisms are pathways to assess learning. Inquiry is imperative because there are functionally distinct forms of care that appear to act independently and have evolved at different times from one another; such functional and evolutionary arguments for consciousness are hard to find.

Philosophical Perspectives on Consciousness, Attention and Mindfulness in Learning: This study focuses on philosophical theories of consciousness and their relationship to understanding visual attention. When many theoretical aspects are examined, a kind of robust separation between consciousness and attention becomes evident. This method clarifies the terminologies that need to be reconciled to improve communication between theorists and systematically brings together discussions that have hitherto been mostly conducted in isolation. This theme leads to an investigation of the theoretical feasibility of systematic forms of overlapping consciousness and attention, termed "mindful attention." These are possibilities that are not only compatible with detached theories of consciousness and attention, but also allow for regular overlap. Identity theories and complete dissociation theories are two views that argue against such an overlap. All forms of consciousness are accepted in these theories as forms of attention. Complete dissociation theories, on the other hand, assert that there is no systematic overlap between consciousness and attention, although they appear to exist simultaneously. Mindfulness can take many forms, including those associated with phenomenal experiences, dreams, self-knowledge, autobiographical memories, reflective thoughts, and effortless attention. That said, mindfulness is an important form of attention that deserves further study and will ultimately contribute to a better understanding of the role of mindfulness in the teaching-learning process.

Scientific Perspectives on Awareness, Attention and Mindful Attention in Learning: Regardless of the definition of these terms used, the scientific evidence on attention and fundamental thinking about the development of different forms of attention suggest that awareness and attention they should be separate. Due to these properties, a neutral and principled way of arguing about these interactions can be offered without entering into debates about the definition of consciousness or attention. The main conclusion of the approach is that awareness and attention are not the same thing. By detailing the scientific growth of mindfulness and the various functional roles that can serve as practical work in the teaching and learning process, a deeper understanding of consciousness in general can be gained. Examples of such roles include facilitating empathic interactions, enhancing language skills, cross-modal sensory integration, and limiting the content of consciousness. These are scientific ideas about the purpose of consciousness and why it arose, and may even advance our knowledge of similar experiences in animals rather than humans. This research should be of interest to psychologists working on attention or consciousness, as well as philosophers working on the theoretical side of these problems and teacher educators. Attention and awareness in the teaching-learning process: Even among academics, attention and awareness are two closely related and sometimes confusing psychological terms. Top-down selective attention and perceptual awareness can now be independently manipulated by modern psychology and neurophysiology researchers and teacher educators. This allows them to distinguish between the different contributions that these two elements make to mental processing and the neural mechanisms that underlie them in the pedagogical learning process.

The relationship between attention and consciousness: When attention is focused on an object, the object's many attributes are naturally learned; when attention is diverted, the object disappears from awareness. Many people think that these two processes are closely related, if not identical. However, others believe that attention and consciousness are distinct phenomena with unique neural mechanisms and functions.

Interaction, attention and awareness: If the interaction is attention and awareness in the teaching and learning process, then the degree of their causal relationship is important for the learning outcome. A higher level of concentration and awareness is required for a higher level of learning. Outside of the spotlight, there can be awareness. This assumes that awareness and attention are synonymous, although they are not. In fact, on a philosophical, ontological and psychological basis, attention has been divided into functions of orientation, filtering and investigation, anterior and posterior brain circuits, exogenous ascending and descending endogenous triggers etc. Recent psychophysical and neurophysiological data support the separation of selective attention and consciousness with functional explanations.

Supporting evidence is grouped into the following three categories:Top-down attention and awareness can have opposite effects on the teaching and learning process. The attention in this element always refers to selective attention and not to the processes that regulate the body's general level of arousal and alertness. Since visual perception and the neurophysiology of vision are significantly easier to manipulate and understand than the corresponding phenomena and their supporting brain mechanisms in other modalities, this section also focuses on attention and visual awareness.

Functional role of attention in learning:Information overload affects complex perceptual organisms, particularly those with brains. Around a million fibers emerge from each eye in primates, carrying on the order of a megabyte of raw information per second. One technique to handle this flood of data is to select a small amount and process it in real time while the unselected component is processed with less bandwidth. According to this point of view, attention is a system that absorbs information of real importance to the organism, neglecting unselected and therefore unattended data. Bottom-up/exogenous attentional selection is recognized. Bottom-up or top-down/endogenous factors. However, subjects may ignore important bottom-up cues when searching for specific objects in a scene in many situations using activity-dependent top-down attention management. It takes time to draw attention from the top

down to an object or event in a scene. Attention from above chooses input based on a limited area in space, a particular featurefeature-based attention, or an object object-based attention. It is the link between these voluntary and endogenous forms of selective attention and cognition.

Functional role of consciousness in learning:The functions of consciousness and attention are believed to be fundamentally separate. This includes the detection of anomalies and errors, decision making, language, the deduction of the internal state of other animals, the definition of long-term goals, the creation of recursive and rational thought patterns and the synthesis of all the information relevant to the current state. state of the organism and its environment and feeds this compact summary of the planning steps of the brain. While it is recognized that attention and awareness serve different purposes, it must also be recognized that they are not the same process. Consider the four possible classifications for a perception or activity based on whether or not it requires top-down attention and whether or not it necessarily leads to awareness.

The fourfold way of processing visual events and behaviors: Although many researchers believe that attention and consciousness are separate, they argue that the former is necessary for the latter and that untracked events are sub rosa in terms of consciousness. Dehaene and colleagues propose that without top-down attention, an event cannot be consciously observed and remains preconscious. Other possible examples are visuomotor reflexes, such as accommodation and papilla reflexes, and so-called zombie behavior These highly trained, automatic, and stereotyped sensorimotor actions, such as rapid eye movements, grasping and holding, adjusting posture, walking, and action sequences such as tying shoelaces, playing piano, tennis, or soccer, driving a car, rock climbing, trail running and etc. they are likely to escape attention. A combination of masking and dual task paradigms could be used to explore this theory. In dualtask paradigms, paying attention to elements of trained action sequences is known to compromise their rapid execution, whereas execution of an automatic behavior sequence has little or no negative effect on execution of non-automatic behaviors. provided that it verifies that the input and output modes do not interfere Without attention or awareness rapid visual categorization is another candidate for a mechanism that does not involve top-down attention or awareness processing.

Attention without awareness / awareness without attention

- They demonstrated psychological experiments and fMRI experiments.
- Processing invisible stimuli that require attention from the top down
- Invisible stimuli that attract spatial attention
- Trait-based care extends to an invisible target

This discussion convincingly demonstrates that people can pay attention to something without consciously experiencing any of its features. This evidence supports the idea that attention is a decision-making process, the outcome of which may or may not lead to perceptual sensations.

When you focus intensely on one element, the world does not turn into a tunnel, everything that was not your center of concentration disappears. Much of the environment around them is something that subjects are always aware of. In fact, essentials are immune to intentional blinding (Mack and Rock, 1998): respondents could accurately describe a summary of what it contained when a photograph spanning the entire background was suddenly projected onto a screen in totally unexpected ways. Attention from above may not play a significant role in the 30 ms needed to capture the essence of a scene (Biederman, 1972; Fei-Fei et al., 2007). (Since the gist is a property associated with the whole image, any process that locally enhances functionality is of limited use.) Consider the perception of a single object (such as a bar) on a blank screen, a non-ecological setup but common in many studies. Without competing elements in or around the fixation, what function should top-down selective attention perform? In fact, distorted competition (Desimone & Duncan, 1995), the most widely used neural model of attention, predicts little or no improvement in unrivaled attention.

Attention and awareness can oppose:Pulling attention up and down from a stimulus and toning it down can have surprising results. Attentional blinking occurs when viewers attempt to discern two targets embedded in a rapidly blinking stimulus stream. According to Olivers and Nieuwenhuis Attention generally speeds up processing, lowers the recognition threshold, and improves response accuracy. Stimuli of low spatial frequency can be distinguished better without spatial attention than with it Trying to find the complex rule underlying implicit learning impedes learning and compromises subsequent recognition (Reber, 1976). Recent research on afterimages, biting character stability, and complicated decision making suggests that attention from above and the opposing effects of consciousness are a long way off. Such results are difficult to understand in the context of a worldview that strongly links top-down attention with consciousness.

Conclusion: The bottom line is that much of the current debate demonstrates the need for a more holistic understanding of the connection between consciousness and attention, and that the dissociation between the two is a key aspect of that theory. Current data suggests that overhead attention and perceptual awareness are two separate processes but are often associated with separate neurological processes, but this is far from conclusive. Therefore, it will be critical to distinguish the neural correlates of consciousness from the neural correlates of selective attention.

References:

- [1]. Baars BJ (2005) Global Workspace Theory of Consciousness: Towards a Cognitive Neuroscience of Human Experience. Prog Brain Res 150: 45-53.
- [2]. Bahrami B, Lavie N, Rees G (2007) Attentional load modulates responses of the human primary visual cortex to unseen stimuli. Current Biol 17: 509-513.

- [3]. Biederman I (1972) Perceiving scenes from the real world. Science 177: 77-80.
- [4]. Block N (2005) Two Neural Correlates of Consciousness. Conn Ski Trends 9: 46-52.
- [5]. Braun J, Julesz B (1998) Withdrawal at little or no cost: detection and discrimination tasks. Psychophysis Perception 60: 1-23.
- [6]. Chalmers DJ (1996) Consciousness: In Search of a Foundational Theory, New York: Oxford University Press
- [7]. Chun MM, Potter MC (1995) A two-stage model for detecting multiple targets in a fast serial display. J Exp Psychol Hum Percept Run 21: 109-127.
- [8]. Desimone R, Duncan J (1995) Neural mechanisms of selective visual attention. Annu Rev. Neurosci 18: 193-222.
- [9]. Duncan J (1998) Converging levels of analysis in the cognitive neuroscience of visual attention. Philos Trans R Soc Lond B Biol Sci 353: 1307-1317.
- [10]. Gilroy LA, Blake R (2005) Interaction between binocular rivalry and negative secondary images. Current Biol 15: 1740-1744.
- [11]. Henderson JM, Brockmole JR, Castelhano MS, Mack M (2006) Visual highlighting does not take into account eye movements during sight search in real world scenes. In: Eye Movement Research: Insights into Mind and Brain (R Van Gompel, M Fischer, W Murray, R Hill, ed.): Elsevier.
- [12]. Hofstoetter C, Koch C, Kiper DC (2004) motion-related blindness it does not affect the formation of negative secondary images. Consciousness and Cognition 13: 691-708.
- [13]. James W (1890) Principles of psychology. London: Mac Millan.
- [14]. Kentridge RW, Heywood CA, Weiskrantz L (2004) Spatial awareness accelerates conscious discrimination in blindsight. Neuropsychology 42: 831-835.
- [15]. Mack A, Rock I (1998) Accidental blindness. Cambridge, Mass.: MIT Press.
- [16]. Olivers CN, Nieuwenhuis S (2005) The positive effect of simultaneous mental activity without tasks on temporal attention. Psychol Sci 16: 265-269.
- [17]. Posner MI, Petersen SE (1990) The attentional system of the human brain. Annu Rev. Neurosci 13: 25-42.

- [18]. Raymond JE, Shapiro KL, Arnell KM (1992) Transient suppression of visual processing in an RSVP task: a blink of an eye? J Exp Psychol Hum Percept Run 18: 849-860.
- [19]. Reber (1976) Implicit learning of synthetic languages: the role of the instruction set Journal of Exp Psych: Human Leaning and Memory 2: 88-94.
- [20]. Schneider W, Dumais ST, Shiffrin RM (1984) Automatic processing, control, and attention. In R Parasuramin and DR Davies (eds) Variety of attention (pp. 1-27). Orlando: Academic Press.
- [21]. Tulving E (1993) Variations and levels of consciousness in memory. Attention: choice, awareness and control. A Tribute to Donald Broadbent, edited by A. Baddeley and L. Weiskrantz (Oxford: Oxford University Press) pp. 283-299
- [22]. Tse PU, Martinez-Conde S, Schlegel AA, Macknik SL (2005) Visibility, visual awareness and visual masking Simple neglected targets are limited to areas of the occipital cortex beyond the human V1/V2. Proc Natl Acad Sci US A 102: 17178-17183.
- [23]. Tsushima Y, Sasaki Y, Watanabe T (2006) Severe disorder due to failure of inhibitory control over an ambiguous distractor. Science 314: 1786-1788.
- [24]. Tsuchiya N, Koch C (2005) Continuous flash suppression reduces negative afterimages. Nat Neurosci 8: 1096-1101.
- [25]. Wong E, Weisstein N (1982) A new contextual perceptual superiority effect: line segments are more visible in a figure than in a background. Science 218: 587-589.
- [26]. Wong E, Weisstein N (1983) Sharp targets are better recognized on a character and blurred targets are better recognized against a background. J Exp Psychol Hum Percept Run 9: 194-201.
- [27]. Woodman GF, Luck SJ (2003) Dissociations between attention, perception, and consciousness in object substitution masking. Psychol Sci 14: 605-611.
- [28]. Wundt W (1874) Foundations of physiological psychology. Leipzig: Engelmann.
- [29]. Yeshurun Y, Carrasco M (1998) Attention improves or impairs visual performance by improving spatial resolution. Nature 396: 72-75.