

THE ABHIDHAMMA THEORY OF COGNITIVE PROCESS

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1. 'Cognitive process' means the way we come to know physical and mental objects through our sense-faculties, the eye, ear, nose, tongue, body, and mind. From the Buddhist perspective, all our psychological experience is a continuum of mental phenomena. Therefore, cognition is not the immediate result of the contact between a sense-faculty and its object, as believed by naïve realism. A given cognitive act is the cumulative result of a series of cognitive events. The process begins from a simple sensory contact and proceeds gradually until the object is fully cognized. There is no self or agent behind or besides the cognitive process directing the process. It takes place according to the laws of psychological order (*citta-niyama*), where each preceding stage conditions the immediately succeeding stage.

2. It is not correct to say that the cognitive events arise in the mind. The correct position is that the cognitive events themselves are the mind.

3. According to the theory of cognition sketched in early Buddhist Discourses, the original raw stimulus that impinges, say, on the eye, is not cognized as it is. In the cognitive process that it triggers, the raw stimulus comes to be gradually edited and interpreted until it becomes a fully-fledged concept, dressed with a label. The external world is there, yet it is not cognized as it is. Our familiar world of substantial objects turns out to be a mass of conceptual constructs super-imposed on the raw sense-data. From an epistemological perspective, what this means is that Buddhism sets itself equally aloof from both naïve realism and idealism. What we cognize is not mind-made, but mind-interpreted.

Whether this position is retained in the Abhidhamma, too, will become clear from what follows.

4. The theory of the cognitive process, presented in the Abhidhamma, is based on two new developments:

(a) One is the theory of momentary/instantaneous being. According to this theory, both mind and matter are momentary in the sense that a mental or material element has three moments, appearing one after the other, namely, a moment of arising, a moment of presence, and a moment of dissolution. However, a moment of matter is longer than a moment of mind: the ratio is 1 to 17. That is to say, a moment of matter lasts as long as 17 moments of mind.

(b) The other is the theory of 'bhavanga'-consciousness. 'Bhavanga' is not a consciousness additional to the 89 classes of consciousness, recognized in the Abhidhamma. It is a resultant consciousness of the same type as the rebirth-linking consciousness. It performs a different function, the function of preserving the continuity of the individual existence. Bhavanga-consciousnesses arise and pass away between active cognitive processes. This will become clear if we refer here to the two streams of consciousness, mentioned in the Buddhist commentarial exegesis.

5. One is called “process-consciousness” (vithi-citta). It refers to consciousness when it occurs in a cognitive process. The other is called “process-free consciousness” (vithi-mutta). It refers to consciousness when it is free from cognitive processes.

6. The process-free consciousness performs three different functions. The first is its function as ‘bhavanga’ or life-continuum. In this capacity it ensures the unbroken continuity of individual life through the duration of any single existence. Whenever the process-consciousness is interrupted, it is immediately followed by the process-free consciousness. The second and third functions of the process-free consciousness are its functions as death-consciousness (cuti-citta) and rebirth-consciousness (patisandhi-citta).

7. Whenever the process-free consciousness performs the functions of death, rebirth, and life-continuum (bhavanga), it has its own object. It is identical with the object of the last cognitive process of the individual’s previous existence. This situation conforms to the early Buddhist teaching that there is no uncaused consciousness. Nor is the process-free consciousness an undercurrent persisting as a substratum of the process consciousness. It does not function like a self-conscious soul, or as the source of the process-consciousness.

8. The process-consciousness and the process-free consciousness do not occur at one and the same time. The placid flow of the process-free consciousness must be interrupted if the active process-consciousness is to operate. In the same way, it is only when process consciousness consisting of a cognitive process subsides that the process-free consciousness supervenes. There is thus an alternative flow of the two streams of consciousness.

9. There are six cognitive processes based on the eye, the ear, the nose, the tongue, the body, and the mind. The first five, based on the physical sense-organs, are called “five-door-processes”. The sixth, which is based on the mind, is called the “mind-door process”, i.e. the ideational process.

10. The five-door cognitive processes, though based on different sense-organs, follow a uniform pattern. The objects presented at each sense-door of the cognitive processes could differ on their degrees of intensity (impact): (a) very strong (atimahanta), (b) strong (mahanta), (c) weak (paritta), and (d) very weak (ati-paritta). A ‘very strong’ object/stimulus will give rise to a full cognitive process consisting of 17 mind-moments.

11. A full cognitive process contains nine different stages, but to make it complete another stage called ‘the past bhavanga’ (atita-bhavanga) is added as the initial stage. It is the mind-moment that occurs in the process-free consciousness, immediately before its vibration (bhavanga-calana). Why it is added needs explanation. According to the theory of moments, matter is weak and lethargic at the moment of arising but strong at the moment of existence. Therefore, a material object must pass the moment of arising and arrive at the moment of presence in order to have an impact at the sense-door. The moment called past-bhavanga coincides exactly with the moment when the material object arises. It is in order to recognize this situation that what is called ‘past-bhavanga’ is added to the cognitive process.

12. A process of cognition begins when the flow of the 'bhavanga' vibrates owing to the impact of a sense-object entering a sense-door. This initial stage is called 'the vibration of the bhavanga' (bhavanga-calana). In the second stage the 'bhavanga' gets interrupted. This stage is called 'arrest of bhavanga' (bhavanga-upaccheda). These two stages pave the way for the emergence of the cognitive process. At the third stage there arises what is called the "five-door adverting consciousness" (panca-dvara-avajjana). It is so-called because it adverts attention to the object. The next stage is one of the five types of sense-consciousness that cognizes the object. If, for example, it is a visible object, eye-consciousness will arise. This eye-consciousness is a "mere act of seeing". It does not produce knowledge of any sort. It is a variety of 'anoetic sentience': When it sees 'blue', it does not know 'this is blue'.

13. Next in order of succession are three types of consciousness, performing the functions of "receiving" the object (sampaticchana), "investigating" it (santirana), and "determining" it (votthapana). During these three stages the object comes to be gradually comprehended by the discriminative and selective functions of the mind. After these three stages, there arises the most important cognitive event, which is called 'javana'. It is at this stage that the object comes to be fully cognized. For this purpose it is necessary for 'javana' to have seven swift "runnings" over the object.

14. The final stage of the process is called 'registration' (tadarammana). It takes as its object the object cognized by 'javana'.

15. A full cognitive process takes place within 17 mind-moments:

Stages of the Cognitive Process	Moments Assigned
Past-bhavanga (atita-bhavanga)	1
Bhavanga-vibration (bhavanga-calana)	1
Bhavanga-arrest (bhavanga-upaccheda)	1
Five-door adverting (panca-dvara-avajjana)	1
Sense-consciousness (vinnana)	1
Receiving (sampaticchana)	1
Investigating (santirana)	1
Determining (votthapana)	1
Javana	7
Registration (tadarammana)	2
Total number of mind-moments	17

16. What is called 'javana' has three main aspects: the first is cognitive, the second is affective, and the third is volitional. 'Cognitive' means that it experiences the object. 'Affective' means that it has some kind of feeling-tone on the object. 'Volitional' means that it has some kind of conation or will (cetana). Accordingly, it is at the stage of 'javana', that the distinction between wholesome and unwholesome arises.

17. The 'Mind-Door Process' is a process based on the mind, i.e. 'Ideational Process'. There are four conditions necessary for a mind-door/ideational process: (a) the mind must be intact, (b) mental objects must come within the mind's focus, (c) dependence of the mind on the physical seat of mental activity, and (d) attention. The stimulus at a mind-door process is graded into two as 'clear' and 'obscure'.

18. A mind-door process with a 'clear' object has the following sequence of events:

(a) Vibration of the 'bhavanga', when an object enters the avenue of the mind-door

(b) The arrest of the 'bhavanga'

© Mind-door adverting consciousness

(d) Seven moments of 'javana'

(e) Two moments of 'registration', after which the cognitive process subsides into bhavanga.

19. In a mind-door process occasioned by an 'obscure' object, the two moments of registration do not occur.

20. In the mind-door processes the stages of receiving, investigating, and determining do not occur, because these are mental activities that operate only in relation to a physical object.

21. As to how a mind-door process occurs, two occasions are identified. The first is when the mind-door process arises in response to a cognitive process based on any of the physical sense-organs. Their arising is due to the fact that when a five-door process has just ceased, its past object comes to the mind's focus and gives rise to many mind-door processes. It is these mind-door processes that contribute to the distinct recognition of a sense-object. Such cognitive processes help the individual to grasp its shape, name, etc. They all help to unify and synthesize the separate elements into the perception of a unity.

22. The other occasion when mind-door processes take place is when an object enters the range of the mind-door naturally, that is, without being occasioned by a five-door process.

23. Buddhist exegesis identifies three occasions for the revival of such mind-door processes:

The first is when one revives in memory what one has actually experienced with the five senses of seeing, hearing, smelling, tasting, and touching. This process of reflection is called experience-based (ditthavara).

The second is when one revives in memory what one has reflected upon from information or knowledge gathered from a secondary source different from first-hand experience. This process of reflection is called information-based (sutavara).

The third is when one imaginatively constructs an object on the basis of what one has actually experienced and also from information gathered from a secondary source. This process of reflection is called 'process based on both' (ubhayavara).

24. The Burmese Abhidhamma tradition has an additional process of reflection. It is called "vinnata" or "cogitated". This category is not found in the Sri Lanka's Theravada Buddhist exegesis. This shows that according to the Theravada Buddhist exegesis, what is ideally revived should be based on past experience. Accordingly, only what has been experienced through the five physical sense-organs of seeing, hearing, smelling, tasting and touching can be revived as an image in the mind.

25. Why the cognitive process is calculated in this manner can be understood in the light of the Vaibhasika-Sautrantika controversy on the causality of cognition. Any act of cognition requires the participation of at least three things: sense-object, sense-organ, and sense-consciousness. According to the theory of moments, these three items are equally momentary. (With regard to their life-spans the Vaibhasikas and Sautrantikas do not make a distinction). Since causality demands a temporal sequence between the cause and the effect, how can a causal relationship be established between the three equally momentary things?

26. The Vaibhasikas seek to solve this problem by their theory of simultaneous causation (sahabhu-hetu). According to this theory, the cause need not precede the effect. Both cause and effect are co-existent. Accordingly, causality can be defined as the invariable concomitance of two or more things. The object, the organ, and the cognition arise simultaneously and operate as cause and effect. In this way, the Vaibhasikas establish the theory of direct perception.

27. The Sautrantikas reject the Vaibhasika theory. They maintain that the cause must necessarily precede the effect: to speak of causality, when the cause and the effect are co-existent, is meaningless.

28. This situation is clearly brought into focus by the following objection of the Darstantikas:

"The organs and the objects of the sense consciousness, as causes of sense consciousness, belong to a past moment. When (for example) a visible object and the eye exist, the visual consciousness does not exist. When the visual consciousness exists, the eye and the visible object do not exist. In their absence during the moment of (visual) consciousness, there is no possibility of the cognition of the object. Therefore all sense perceptions are indirect.": Professor P.S. Jaini, 'Origin and Development of the Theory of Viprayuktasamskaras', Bulletin of the School of Oriental and African Studies, 22, 1959).

29. It is this situation that led the Sautrantikas to establish their theory that the external object is inferred (bahyarthanumeyavada). What is directly known is not the object, but its representation. The presence of the object is inferred from its correspondence to the impression perceived. This is also known as the Representative Theory of Perception (sakara-nana-vada).

30. The Theravadins' solution to the problem takes a different form. What enabled them to retain the theory of direct perception is their view that a moment of matter is longer than a moment of mind. Since a material object lasts as long as 17 mind-moments, it allows itself to be fully cognized by a series of 17 cognitive events. In this way the Theravadins were able to establish the theory of direct perception of the external world.

31. Although the Theravadins retain the theory of direct perception, this does not mean that conceptual activity does not contribute to the original bare sensation. As far as one cognitive process is concerned, the mind does not edit the raw data of perception. The mind only performs the functions of selective discrimination so that the external object is more clearly seen as the result of mental activity. However each single cognitive process is not only repeated several times, but is also followed by several sequels of mind-door or ideational processes. They exercise a synthesizing function on what is cognized. It is only then that a distinct recognition of the object occurs.

32. Another issue that divided Buddhist schools concerned the agent or instrument of perception. In this connection there are four different views. The Vaibhasikas maintain that it is the eye, the visual organ that sees. But it can do so only when it is associated with visual consciousness. While the eye sees the object, visual consciousness is aware of it. Here a distinction is made between seeing (*pasyati*) and discerning or cognizing (*vijanati*). The second view is the one held by Acarya Dharmatrata: it is the visual consciousness that sees the object. The third view is held by Acarya Ghosaka: it is the understanding (*prajna*) conjoined with consciousness that really sees the object. The fourth view is held by the Darstantikas: it is the confluence (*samagri*) of consciousness and its concomitants that acts as the agent of seeing. (For details, see Venerable Professor K. L. Dhammajoti, *Sarvastivada Abhidharma*, Hong Kong, 2009; *Abhidharma Doctrine and Controversy on Perception*, Hong Kong, 2007).

33. The Theravada view is similar to the one held by Acarya Dharmatrata. It is the visual consciousness, the consciousness dependent on the eye that sees the visual object. "On seeing a visible object with the eye" is said to be an idiomatic expression like "He shot him with the bow". It is a case of metaphorically attributing the action of that which is supported (visual consciousness) to that which is the support (visual organ). It is like saying, "the cots cry", when one wants to say that the children in the cots cry. So the sentence has to be rephrased: "On seeing a visible object with visual consciousness" (*cakkhu-vinnanena rupam disva*).

34. This whole controversy, according to the Sautrantikas, is a case of devouring the empty space. Depending on the eye and a visible object arises eye-consciousness. Therefore the question as to what it is that sees and what it is that is seen, does not arise. There is no agent or action here. What we really see here is the play of impersonal events appearing as causes and effects. It is merely to conform to worldly expressions, that it is said "the eye sees", "the consciousness cognizes".

35. Another question that divided the Buddhist Schools of Thought concerned the object of perception. In the context of the theory of atoms (*paramanu*)/material clusters (*rupa-kalapa*), what exactly is the object of perception? The Vaibhasikas maintain that an agglomeration of atoms assembled in a particular manner becomes the object of perception. It is the succeeding mental consciousness that

synthesizes the raw data of perception into a synthetic unity that determines whether the object is a jug or a pot. This theory ensures that the object of perception is not an object of mental interpretation, but something that is ultimately real.

36. The Sautrantikas object to this view on the ground that if a single atom is not visible, a collection of atoms, too, is not visible. In their view, it is the unified complex or, the synthetic unity of the atoms that becomes an object of perception. The Vaibhasikas argue that the synthetic unity of the atoms is not something real but a product of mental interpretation. This makes the object of perception something conceptual (prajnapti-sat) and not, something real (paramartha-sat).

37. The Theravada position is similar to that of the Vaibhasikas. The object of sensory consciousness is not a mere collection of atoms, but a conglomeration of atoms assembled in a certain manner.