



In the Seen Just the Seen: Mindfulness and the Construction of Experience

Bhikkhu Anālayo¹

Published online: 22 October 2018
© Springer Science+Business Media, LLC, part of Springer Nature 2018

Abstract

In this article, I relate findings in cognitive psychology on the constructed nature of experience to related notions in early Buddhist thought, which recognize the degree to which the mind influences sensory perception. In particular, I take up the doctrinal teaching of dependent arising in its bearing on the reciprocal relationship between consciousness and name-and-form. I complement this by turning to the role of the mind as a forerunner of all things and to the impact of affect, in the form of “feeling,” on the arising of craving (another aspect of the doctrine of dependent arising). Based on these explorations, I examine the notion of “bare awareness” as a mode of practice already recognized in early Buddhist thought. From an early Buddhist viewpoint, the cultivation of mindfulness can help to become aware of, and avoid being carried away by, the influence of mental construction on experience, resulting in the ability to remain just with what is seen in the seen.

Keywords Bare awareness · Construction of experience · Dependent arising · Mindfulness · Name-and-form · Perceptual prediction

Basic sensory experience is, to a considerable degree, a construct of the mind. Barret (2017, p. 83) stated: “*you construct the environment in which you live. You might think about your environment as existing in the outside world, separate from yourself, but that’s a myth.*” This might seem at first counterintuitive, as “your perceptions are so vivid and immediate that they compel you to believe that you experience the world *as it is*, when you actually experience a world *of your own construction*” (p. 86). In sum, “we humans are architects of our own experiences. We do not passively detect physical changes in the world. We actively participate in constructing our experiences even though we are mostly unaware of that fact” (p. 130).

An informative experiment in the case of vision has been reported by Clark (2013, p. 184), where

using a special experimental set-up, each eye is presented (simultaneously) with a different visual stimulus. Thus, the right eye might be presented with an image of a house, while the left receives an image of a face ... Instead of seeing (visually experiencing) a confusing all-points merger of house and face information, subjects report a kind of perceptual alternation between seeing the house and seeing the face ... Why, under such circumstances, do we not simply experience a combined or interwoven image: a kind of house/face mash-up for example? Although such partially combined percepts do apparently occur, for brief periods of time, they are not sufficiently stable, as they do not constitute a viable hypothesis given our more general knowledge about the visual world. For it is part of that general knowledge that, for example, houses and faces are not present in the same place, at the same scale, at the same time. This kind of general knowledge may itself be treated as a systemic prior ... in the case at hand, what is captured is the fact that ‘the prior probability of both a house and face being co-localized in time and space is extremely small.’

✉ Bhikkhu Anālayo

¹ Barre Center for Buddhist Studies, 149 Lockwood Road, Barre, MA 01005, USA

In other words, rather than visual perception being just a reflection of what impinges on the eyes, our general knowledge determines what we see. A driving force here is prediction, an attempt of the mind to assess in advance what will be encountered in order to act quickly rather than waiting until all perceptual information has become available. “The only point of all that probabilistic betting is to drive action and decision, and action and decision lack the luxury of being able to keep all options indefinitely alive. It would do the evolved creature no good at all to keep experiencing the scene as to some degree uncertain if the current task requires a firm decision” (Clark 2013, p. 196).

Imagine being out in the wild and suddenly seeing something large approaching. The need to take quick action leaves little room for making absolutely sure that what one sees is indeed a dangerous animal about to attack. Instead, as soon as this seems a probable prediction of what is occurring, immediate action needs to be taken.

Although at earlier stages of human evolution the predictive ability of the mind would have been crucial for survival, the net result is that “our expectations are in some important sense the primary source of all the contents of our perceptions, even though such contents are constantly being checked, nuanced, and selected by the prediction error signals consequent upon the driving sensory input” (Clark 2013, p. 199).

The impact of such predictive patterns on the mind has considerable ramifications, and not only from an epistemological perspective. In particular, issues like racial and gender prejudices can have a rather substantial impact on how we perceive others and how we expect or predict them to behave (Westra 2017).

Of significant influence on such predictive patterns is the affective dimension of experience. Chetverikov and Kristjánsson (2016, p. 1) reported that “affect serves as feedback on our predictions, reflecting their accuracy and regulating them so that confirmed predictions are more likely to be used again.” In fact, “a wealth of evidence shows how affect can play a key role in shaping interpretations of the perceptual environment. Humans need to make predictions about the environment, and depending on how accurate these predictions are, they receive affective feedback” (p. 6). In this way, not only is experience largely the result of prediction, but such prediction in turn is influenced by affect, by what is pleasing and displeasing, and thereby, in the final count, by our likes and dislikes.

This makes meditation practice in general and mindfulness in particular a potential option for becoming aware of, and eventually countering, such tendencies. Regarding the type of binocular rivalry described above by Clark (2013, p. 184), a study of Tibetan Buddhist monks with long-standing meditation practice indeed showed a distinct effect of meditation practice on such perceptual switching. The research led to the conclusion that “individuals trained in

meditation can measurably alter the normal fluctuations in conscious state induced by binocular rivalry and motion-induced blindness” (Carter et al. 2005).

Although these findings were specifically related to the cultivation of one-pointedness of the mind (Lutz et al. 2008), a survey of relevant research suggests that, in addition to attentional focus, training in mindfulness can potentially improve cognitive functions (Chiesa et al. 2011; Lao et al. 2016). One study of the impact of mindfulness on ambiguous percepts has led to the intriguing suggestion that “the subjective now can be longer for meditators than for non-meditators” (Sauer et al. 2012, p. 750). Based on other studies, one of them concerning in particular the impact of mindfulness practice on attention tasks (Jensen et al. 2012), Verhaegen (2016, p. 134) reasoned that apparently such “practice can help lower the threshold of perception, literally letting more of the outside world enter the realm of awareness.”

In what follows, I relate these intriguing perspectives, briefly sketched here by way of introduction, to early Buddhist teachings. First, I take up the construction of experience and the predominant role of the mind. Next, I turn to the impact of affect and its mindful observation. In the final part of my exploration, I examine the notion of bare awareness as a mode of attending to experience that can help rein in the constructing tendency of the mind.

Name-and-form in the Early Buddhist Analysis of Experience

The impact of mental processing on how sensory information is received has already been recognized in the analysis of experience in early Buddhism, a term that stands for Buddhist thought from a time period perhaps between the fifth and third century BCE (Anālayo 2012). A central teaching relevant to the present topic is the doctrine of dependent arising (Pāli *paṭicca-samuppāda*, Sanskrit *pratītya-samutpāda*, Chinese 因緣, Tibetan *rten cing 'brel bar 'byung ba*). A recurrent formulation of this doctrine takes the form of 12 links, which lead from ignorance (*avijjā*, *avidyā*, 無明, *ma rig pa*) all the way up to the manifestation of distress and affliction (*dukkha*, *duḥkha*, 苦, *sdug bsngal*). A full study of this formulation by way of 12 links would go beyond the confines of the present article. For my present concerns, it suffices to take up specific aspects of its presentation.

Of particular interest to my present purposes is a presentation, found in all versions of the Great Discourse on Causation (DN 15, DĀ 13, MĀ 97, T 14, and T 52), of a reciprocal conditioning between the third and the fourth link of dependent arising. These two links are consciousness (*viññāṇa*, *vijñāna*, 識, *rnam par shes pa*), and name-and-form (*nāma-rūpa*, *nāma-rūpa*, 名色, *ming dang gzugs*).

Here, “consciousness” refers to the mind’s receptive ability to be aware of something. What consciousness is aware is referred to as “name-and-form.” In this context, “form” corresponds to the material dimension of experience and “name” to the functions of the mind apart from consciousness (Anālayo 2017). Thus “form” covers the experience of solidity, cohesion, temperature, and motion (expressed in terms of four “elements,” which are earth, water, fire, and wind). “Name” in turn comprises the following mental factors (SN 12.2 and EĀ 49.5): feeling (*vedanā, vedanā, 受, tshor ba*), perception (*saññā, sañjñā, 想, du shes*), intention (*cetanā, cetanā, 思, sems pa*), contact (*phassa, sparśa, 觸, reg pa*), and attention (*manasikāra, manaskāra, 思惟, yid la byed pa*).

“Feeling” stands for the affective dimension of experience as pleasant, unpleasant, or neutral (it thus does not stand for emotion). “Perception” represents the matching of experience with concepts and thereby stands for cognition and recognition. “Intention” covers the purposive dimension, the ability to react to experience or its potential. “Contact” designates the actual event of experience, in the sense of the conjunction of the mind with one of the sense doors and its respective object in a particular time- and space-instant. “Attention” is responsible for noting a particular aspect out of whatever situation is present.

These five factors taken together are responsible for the genesis of a “name,” in the sense of the forming of a concept through which experience is categorized and recognized, be it mentally or verbally.

Name and form together comprise the whole gamut of what is experienced by consciousness. According to the early Buddhist analysis, just as consciousness depends on name-and-form (as what gives it content), so name-and-form depend on consciousness (in order to be known). This reciprocal conditioning ensures continuity during human life (and beyond) in the absence of a permanent agent in experience.

A basic implication of this presentation in the early Buddhist analysis of experience is that any experience of matter comes intrinsically interwoven with the mental factors assembled under “name.” In this respect, early Buddhist thought differs from later Buddhist traditions, where at times a tendency manifests to reify matter as an ultimate reality, requiring a concept-free mode of apperception in order to be truly understood. Although such notions are certainly meaningful within the doctrinal framework of such later traditions, they are not relevant for an understanding of early Buddhist epistemology (Dhammadinnā 2017).

From an early Buddhist viewpoint, there is no way for consciousness to be aware of matter as such. It can only be aware of matter as part of name-and-form, and thereby as something that is inseparable from its mental processing. The idea of a pure experience of matter, apart from any mental processing (and thereby influence), is from an early Buddhist perspective thus indeed a “myth,” to borrow the term used by Barret (quoted above).

Be it vision, sound, or any object of the other physical senses, the constructing activity of mental processing is indispensable for seeing, hearing, etc. to take place. In this way, the mental factors and activities collected under the header of name are indeed “in some important sense the primary source of all the contents of our perceptions”, to use the expression employed by Clark (quoted above). The factors collected under “name” decisively influence and shape our experience.

In what follows, I briefly turn to a poetic counterpart to what has emerged from examining the relationship between consciousness and name-and-form in the context of the doctrine of dependent arising.

Mind Is the Forerunner

A complementary perspective emerges from the first verse that opens a collection of poems known as the *Dhammapada/Dharmapada*, a popular collection of poems held in much esteem by Buddhists from ancient to modern times. The verse in question concerns a specific application of conditionality. Its purpose is to highlight that speaking or acting with an evil intent is productive of affliction. This has its counterpart in the next verse, which proposes that speaking or acting with good intent is bound to lead to happiness. The overall point is not so much to illustrate the construction of experience, as evident in the reciprocal conditioning of consciousness and name-and-form, but to highlight the preeminence of the mind over any other phenomena in experience.

These twin verses have a range of parallels in collections preserved in other Indic languages, in Tibetan, as well as in Chinese. The majority of these parallels agree so closely that a single translation of their first line can serve for nearly all of them:

The mind precedes phenomena; the mind is foremost.
(Pāli *Dhammapada* 1: *manopubbaṅgamā dhammā manośeṭṭhā*).

(Patna *Dharmapada* 1: *manopūrvvaṅgamā dhamma manośreṣṭhā*).

(Gāndhārī *Dharmapada* 201: *maṇo-puvagama dhama maṇo-śeṭṭha*).

(Sanskrit *Udānavarga* 31.23: *manaḥpūrvvaṅgamā dharmā manaḥśreṣṭhā*).

(Tibetan *Udānavarga* 31.24: *chos kyi sngon du yid 'gro ste ... yid ni gtso bo yin*).

Chinese versions of this first line differ slightly in so far as they speak of the mind as the “source” of phenomena rather than as preceding them:

The mind is the source of phenomena; the mind is foremost.

(T 210, T 211, and T 212: 心為法本, 心尊).

One Chinese version further adds “all” to “phenomena,” probably in order to achieve a count of five characters per line as a metric requirement in Chinese poetry. This addition conveys a sense of comprehensiveness that in the other versions can safely be assumed to be implicit:

The mind is the source of all phenomena; the mind is foremost.

(T 213: 心為諸法本, 心尊).

The close correspondence between a range of parallels regarding this first part of the verse is noteworthy as the same parallels exhibit more marked differences with the remainder of the verse (Agostini 2010; Skilling 2007).

In sum, the precedence taken by the mind over phenomena and the clear recognition that these phenomena have in some way their true source in the mind emerges as something clearly and explicitly recognized in early Buddhist thought.

Feeling and Mindfulness

Returning to the doctrinal teaching on dependent arising, feeling occurs in this formulation not only as part of name. It also features on its own as the seventh link in the series of 12 links of dependent arising. In this context, feeling forms the condition for the arising of the eighth link of craving (*taṇhā*, *ṭṣṇā*, 愛, *sred pa*). Whereas the affective dimension of feeling is a given of any human experience, the reaction to it by way of craving is not. This is precisely where meditative training in mindfulness comes in, by way of learning to become aware of the push of feeling toward reaction. With mindfulness established, one can learn to withstand the propensity of feeling to lead to craving.

The formal cultivation of mindfulness takes place by way of four establishments of mindfulness (*satipaṭṭhāna*, *smṛtyupasthāna*, 念處, *dran pa nye bar gzhag pa*), the second of which concerns precisely feelings. It is remarkable that, alongside the body and the mind as the first and the third establishment of mindfulness, feelings have been considered sufficiently important to merit becoming the theme of an entire establishment of mindfulness (Anālayo 2018b).

According to the instructions common to the *Satipaṭṭhāna-sutta* and its two Chinese discourse parallels, contemplation of feeling requires clear recognition of the affective tone of present-moment experience as being either pleasant, or unpleasant, or neutral. The first part of the relevant instructions proceeds in this way:

When feeling a pleasant feeling, one knows: “I feel a pleasant feeling”; or when feeling a painful feeling, one knows: “I feel a painful feeling”; or when feeling a neutral feeling, one knows: “I feel a neutral feeling.”

(MN 10: *sukhaṃ vā vedanaṃ vediyamāno, sukhaṃ vedanaṃ vediyāmi ti pajānāti; dukkhaṃ vā vedanaṃ vediyamāno, dukkhaṃ vedanaṃ vediyāmi ti pajānāti; adukkhamasukhaṃ vā vedanaṃ vediyamāno, adukkhamasukhaṃ vedanaṃ vediyāmi ti pajānāti*).

At the time of experiencing a pleasant feeling, one then knows one is experiencing a pleasant feeling; at the time of experiencing a painful feeling, one then knows one is experiencing a painful feeling; at the time of experiencing a neutral feeling, one then knows one is experiencing a neutral feeling.

(MĀ 98: 覺樂覺時, 便知覺樂覺; 覺苦覺時, 便知覺苦覺; 覺不苦不樂覺時, 便知覺不苦不樂).

At the time of getting a pleasant feeling, one is then aware of it and knows of oneself: “I am getting a pleasant feeling”; at the time of getting a painful feeling, one is then aware of it and knows of oneself: “I am getting a painful feeling”; at the time of getting a neutral feeling, one is then aware of it and knows of oneself: “I am getting a neutral feeling.”

(EĀ 12.1: 得樂痛時, 即自覺知我得樂痛; 得苦痛時, 即自覺知我得苦痛; 得不苦不樂痛時, 即自覺知我得得不苦不樂痛).

Contemplation of feeling thus requires recognizing the affective tone of present-moment experience before the arisen feeling leads to mental reactions and elaborations influenced by the initial affective input of how one feels (Anālayo 2013). This serves to bring the influence of affect into the light of conscious recognition, thereby providing a tool to detect its impact on prediction and resultant experience.

The influence of feeling on the mind and, in turn, the influence of the mind on how the world is perceived, is precisely the reason for the pervasive emphasis in early Buddhist soteriology on the need for meditative training. Here, the practice of mindfulness stands out in particular for its potential to shine the light of awareness on the influence of affect and on the degree to which human beings construct their own world of experience.

Bare Awareness

The potential of mindfulness in relation to the constructing activity of the mind comes to the front in an instruction on bare awareness, found in a discourse in the *Udāna*. According to the accompanying narrative, this instruction enabled someone without any previous acquaintance with the Buddha’s teaching to realize full awakening. The first part of the relevant instruction proceeds as follows:

You should train yourself thus: In what is seen there will be just what is seen, in what is heard there will be just what is heard, in what is sensed there will be just what is sensed, in what is cognized there will be just what is cognized.

(Ud 1.10: *te evaṃ sikkhitabbaṃ: diṭṭhe diṭṭhamattaṃ bhavissati, sute sutamattaṃ bhavissati, mute mutamattaṃ bhavissati, viññāte viññātamattaṃ bhavissatī ti*).

The instruction continues by pointing out that, by training oneself in this way, one will not be “thereby” (*na tena*). The implication appears to be that one is no longer carried away by reacting to what is seen, heard, sensed, and cognized and therefore no longer “thereby.”

The instruction continues by noting that, not being thereby, one will not be “therein” (*na tattha*). This in turn seems to imply that, as one is not carried away by sense experience, one no longer construes the sense of a substantial subject inherent in experience. One is no longer established “therein.”

According to the same instruction, not being therein, one will be neither here, not beyond, nor between the two (*nev’idha na huraṃ na ubhayamantarena*). This final part gives the impression of depicting a high degree of freedom from attachment in relation to any dimension of experience.

The rather cryptic instruction given in this discourse from the *Udāna* can be further explored with the help of another discourse extant in Pāli, Sanskrit fragments, as well as Chinese and Tibetan translations. This discourse reports the same meditative instruction according to which in the seen there should be just what is seen, in the heard just what is heard, and so on. A monastic who had received this instruction elaborates its import in a series of verses, which the Buddha is on record for approving. Hence, these verses can be relied on for determining the implications of a form of mental training such that in the seen there will be only what is seen, etc. The parallel versions of the passage that covers the case of vision offers, among others, the following indication:

Being mindful on seeing a form,
One experiences it with a mind that is unattached.
(SN 35.95: *rūpaṃ disvā paṭissato, virattacitto vedeti*).
Being mindful [on seeing a form],
One experiences it with a mind that is unattached.
(SHT V 1311V3: *pratismṛtaḥ araktacitto veda[ya](ti)*).
[If] on seeing a form one does not grasp its sign,
And the mind conforms to right mindfulness
Craving will not defile the mind with what is detrimental,
And the bondage of attachment will also not arise.
(SĀ 312: 見色不取相, 其心隨正念, 不染惡心愛, 亦不生繫著).
Being endowed with mindfulness on seeing forms,
the mind does not give rise to attachment.
(Up 4086: *gzugs rnams mthong nas dran ldan na, sems ni yang dag chags mi ’gyur*).

The reference to mindfulness in the above passages makes it clear that the instruction on training so that in the seen there will just be what is seen involves a cultivation of mindfulness,

which here takes the form of “bare awareness.” This is an approach to meditative cultivation already recognized in early Buddhism and not just a product of later times (Anālayo 2018a). At the same time, it needs be noted that this is not the only modality of mindfulness practice (Bodhi 2011).

Now, the task here is not just to avoid seeing. In fact, such an idea meets with criticism in the Discourse on the Cultivation of the Sense-faculties (MN 152, SHT VI 1226.22V–24V, SĀ 282; see Anālayo 2011, p. 849). A Brahmin had proposed that a cultivation of the sense-faculties involves the avoidance of seeing, etc. The Buddha is on record for drily replying that, on such reasoning, the blind should be reckoned accomplished practitioners.

“Bare awareness” is also not about reaching an experience that is entirely without concepts. Given the reciprocal conditioning between consciousness and name-and-form, from an early Buddhist viewpoint it would not really be possible to have an experience of vision that is entirely without the concept-forming activity of name. The very fact of seeing involves at least a minimum input of concepts, even though, by remaining just with the seen, this will not lead on to further proliferations.

Training in mindfulness such that in the seen there is only the seen rather concerns attachment, a problem noted in all of the four versions of the verse translated above. This relates to the problem of affect, mentioned by Chetverikov and Kristjánsson (2016), as a decisive component in the construction of experience. It is the affective glue of craving and attachment that makes predictions so convincing on the subjective level and prevents their being corrected easily, once additional information becomes available. The influence of affect is in itself entirely natural, as it serves to offer feedback on the success or failure of the mind’s ability to predict correctly what is taking place. Yet, the same mechanism is also responsible for stubbornly holding on to preconceived ideas and being unwilling to correct them.

Here, mindfulness can make a world of difference. This comes about through the simple act of remaining aware of what is happening and giving pride of place just to what is seen, etc., over the ingrained tendency to react to what is seen. Training in mindfulness can thereby foster the ability to monitor the constructing and predicting tendencies of the mind in a way that these can come closer to actual reality and are less prone to reflect the impact of subjective affect.

Conclusion

Current research in cognitive psychology and early Buddhist teachings agree in recognizing the substantial degree to which the mind’s constructing and predicting activity influences the way sensory experience is perceived. The predictive role of the mind has a counterpart in the concept of “name” in early

Buddhist thought, which comprises various mental factors responsible for mentally processing sensory data. The same eminent role of the mind also emerges in ancient Buddhist poetry. Besides its role as a factor of name, feeling features on its own in the doctrine of dependent arising as the place where craving can arise. This role of feeling relates to the impact of affect on prediction. In relation to both the influence of feeling and the construction of experience through the mind, the cultivation of mindfulness can perform a significant role. An important dimension of such cultivation of mindfulness is “bare awareness,” in the sense of learning to stay with just the seen in relation to what is seen. With mindfulness established, one is less prone to be misled into reactivity and detrimental behavior.

Limitations and Future Research

Being a scholar of Buddhist studies, the author’s acquaintance with relevant research in psychology is limited to the few selected publications cited in this article. Future research could improve on this by relating the early Buddhist perspective presented in this article more closely to evidence-based Western psychology as well as to empirical investigations of the construction of experience not quoted here.

Compliance with Ethical Standards

Ethical Approval This article does not contain any studies performed by the author with human participants or animals.

Conflict of Interest The author declares that there is no conflict of interest.

Abbreviations DĀ, *Dīrgha-āgama* (T 1); DhP, *Dhammapada*; EĀ, *Ekottarika-āgama* (T 125); MĀ, *Madhyama-āgama* (T 26); MN, *Majjhima-nikāya*; SĀ, *Samyukta-āgama* (T 99); SHT, Sanskrit handschriften aus den Turfanfunden; SN, *Samyutta-nikāya*; T, Taishō edition; Ud, *Udāna*; Up, *Abhidharmakośopāyikā-tīkā*

References

- Agostini, G. (2010). ‘Preceded by Thought Are the Dhammas’: The ancient exegesis on DhP 1–2. In G. Orofino & S. Vita (Eds.), *Buddhist Asia 2. Papers from the second conference of Buddhist studies held in Naples in June 2004* (pp. 1–34). Kyoto: Italian School of East Asian Studies.
- Anālayo, Bh. (2011). *A comparative study of the Majjhima-nikāya*. Taipei: Dharma Drum Publishing Corporation <http://www.buddhismuskunde.uni-hamburg.de/pdf/5-personen/analayo/compstudyvoll1.pdf>.
- Anālayo, Bh. (2012). The historical value of the Pāli discourses. *Indo-Iranian Journal*, 55, 223–253. <https://doi.org/10.1163/001972412X620187>.
- Anālayo, Bh. (2013). *Perspectives on Satipaṭṭhāna*. Cambridge: Windhorse Publications <https://www.buddhismuskunde.uni-hamburg.de/pdf/5-personen/analayo/perspectives.pdf>.
- Anālayo, Bh. (2017). Nāma-rūpa. In K. T. S. Sarao & J. D. Long (Eds.), *Encyclopedia of Indian religions, Buddhism and Jainism* (pp. 802–804). Dordrecht: Springer. <https://doi.org/10.1007/978-94-024-0852-2>.
- Anālayo, Bh. (2018a). The Bāhiya instruction and bare awareness. *Indian International Journal of Buddhist Studies*, 19, 1–19.
- Anālayo, Bh. (2018b). Why be mindful of feelings? *Contemporary Buddhism*, 19(1), 47–53.
- Barret, L. Feldman (2017). *How emotions are made, the secret life of the brain*. Boston: Mariner Books.
- Bodhi, Bh. (2011). What does mindfulness really mean? A canonical perspective. *Contemporary Buddhism*, 12(1), 19–39. <https://doi.org/10.1080/14639947.2011.564813>.
- Carter, O. L., Presti, D. E., Callistemon, C., Ungerer, Y., Liu, G. B., & Pettigrew, J. D. (2005). Meditation alters perceptual rivalry in Tibetan Buddhist monks. *Current Biology*, 15(11), R412–R413. <https://doi.org/10.1016/j.cub.2005.05.043>.
- Chetverikov, A., & Kristjánsson, Á. (2016). On the joys of perceiving: affect as feedback for perceptual predictions. *Acta Psychologica*, 169, 1–10. <https://doi.org/10.1016/j.actpsy.2016.05.005>.
- Chiesa, A., Calati, R., & Serretti, A. (2011). Does mindfulness training improve cognitive abilities? A systematic review of neuropsychological findings. *Clinical Psychology Review*, 31(3), 449–464. <https://doi.org/10.1016/j.cpr.2010.11.003>.
- Clark, A. (2013). Whatever next? Predictive brains, situated agents, and the future of cognitive science. *The Behavioral and Brain Sciences*, 36(3), 181–204. <https://doi.org/10.1017/S0140525X12000477>.
- Dhammadinnā, Bh. (2017). Bhikkhu Nānananda’s concept and reality: a reply to Stephen Evans. *Buddhist Studies Review*, 34(2), 151–180. <https://doi.org/10.1558/bsrv.35391>.
- Jensen, C. G., Vangkilde, S., Frokjaer, V., & Hasselbalch, S. G. (2012). Mindfulness training affects attention—or is it attentional effort? *Journal of Experimental Psychology: General*, 141(1), 106–123. <https://doi.org/10.1037/a0024931>.
- Lao, S., Kissane, D., & Meadows, G. (2016). Cognitive effects of MBSR/MBCT: a systematic review of neuropsychological outcomes. *Consciousness and Cognition*, 45, 109–123. <https://doi.org/10.1016/j.concog.2016.08.017>.
- Lutz, A., Slagter, H. A., Dunne, J. D., & Davidson, R. J. (2008). Attention regulation and monitoring in meditation. *Trends in Cognitive Sciences*, 12(4), 163–169. <https://doi.org/10.1016/j.tics.2008.01.005>.
- Sauer, S., Lemke, J., Wittmann, M., Kohls, N., Mochty, U., & Walach, H. (2012). How long is now for mindfulness meditators? *Personality and Individual Differences*, 52, 750–754. <https://doi.org/10.1016/j.paid.2011.12.026>.
- Skilling, P. (2007). ‘Dhammas are as swift as thought ...’ A note on Dhammapada 1 and 2 and their parallels. *Journal of the Centre for Buddhist Studies, Sri Lanka*, 5, 23–50.
- Verhaegen, P. (2016). Mindfulness and meditation training. In T. Strobach & J. Karback (Eds.), *Cognitive training, an overview of features and applications* (pp. 127–136). Cham: Springer. <https://doi.org/10.1007/978-3-319-42662-4>.
- Westra, E. (2017). Stereotypes, theory of mind, and the action-prediction hierarchy. *Synthese*, 1–26. <https://doi.org/10.1007/s11229-017-1575-9>.