

On C.D. Broad's *Sensa**

Mo Xiao

Department of Philosophy
East China Normal University
500 Dong Chuan Road, Shanghai, 200241, China.

Abstract

The purpose of this paper is to critically examine Broad's sensum theory. I begin by explaining why Broad introduced the sensum theory. The main part considers the nature of sensa in a historical context. Broad argues against the view that sensa are mental in the sense of existentially mind-dependent, but his scrupulousness prevents him from denying their qualitative mind-dependence. Broadian ontological commitment to sensa departs both from Russell's over-highlighted substantiality and self-subsistence of sensa and from Strong's denial of sensa as existences. In doing so, I defend my own position on this issue by arguing for a relational phenomenological commitment to sensa in the sense that they cannot exist as independent entities, but merely exist phenomenologically arising from an interaction between physical objects, perceivers and the environment.

Key Words: sensum, perception, realism, phenomenalism, phenomenology, metaphysics

On C.D. Broad's Sensa

The topic of sense-data is in no sense new, which was discussed under various names, like sensible species by the Ancients and the Schoolmen, ideas of sensation by Locke and Berkeley, impressions by Hume, *Vorstellungen* by Kant, but hadn't dominated in the theory of perception in the English-speaking world until the first half of the 20th century. The advocates of the various positions on this issue in this period include British academics such as the Edwardian philosophers¹, A. N. Whitehead, C.D. Broad, H.H. Price, Gilbert Ryle, and A.J. Ayer, together with the American scholars who labeled themselves New Realists (Edwin B. Holt, Walton T. Marvin, William P. Montague, etc.), Critical Realists (Durant Drake, Roy Wood Sellars, C.A. Strong, etc.), and Neutral Monists (e.g., William James). These theorists debated the epistemological and metaphysical merits of sense data (as introduced by Moore and Russell) in opposition to forms of naive realism or the more complex realisms of the American New Realists and Critical Realists. In this paper, I am particularly concerned with the metaphysical aspects of the Theory of *Sensa* proposed by Broad. Like Moore and Russell, Broad is also a central figure in developing the sense data tradition (under his preferred name of "sensa"). His influence, however, has been decidedly less than his philosophical merits warrant. This might be due partly to his extremely self-critical and meticulous attention to various possibilities, which in my opinion is nonetheless his peculiarity among the contemporaries, and beneficial to weighing the complexity of issues.

I begin by explaining why Broad introduced the sensum theory. The main part considers the nature of sensa in a historical context. Broad argues against the view that sensa are mental in the sense of existentially mind-dependent, but his scrupulousness prevents him from denying their qualitative mind-dependence. Besides, Broadian ontological commitment to sensa departs both from Russell's over-highlighted substantiality and self-subsistence of sensa and from Strong's denial of sensa as existences. In doing so, I defend my own position on this issue by arguing for a relational phenomenological commitment to sensa in the sense that they cannot exist as independent entities, but merely exist phenomenologically arising from an interaction between physical objects, perceivers and the environment.

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¹ Omar Nasim's terminology "Edwardian philosophers" is referred to the philosophers involved in Edwardian Controversy which begins and roughly ends between 1901 and 1910: G.F. Stout, T.P. Nunn, G. Dawes Hick, Samuel Alexander and G.E. Moore, etc. Cf., Omar W. Nasim, *Bertrand Russell and the Edwardian Philosophers*, Houndmills, Basingstoke, Hampshire, Palgrave Macmillan, 2008, p. 15.

1. *Sensum Introduced*

C.D. Broad's sensum theory is introduced in his *Scientific Thought*, which, generally speaking, deals with the philosophy of physics, with an effort to capture the undergoing conceptual transition from classical to modern physics. In that work, after exposing the general problems of the traditional conceptions of Space and Time of the classical mathematical physics, Broad further points out the difficulty in reconciling the supposed neutrality, persistence, and independence of a physical object (according to both science and common-sense) with the obvious differences between its various sensible appearances to various observers at the same moment, and to a single observer at different moments between which no physical change is supposed to have occurred. Historically, Whitehead develops this problematic earlier on in *Principle of Extensive Abstraction*, but Russell makes it his own in 1914. To resolve the tension between unchanging objects and changing appearances, Broad introduces the sensum theory, which lies on the basis of Russell's *Lowell Lectures on the External World* under the inspiration of Whitehead, and uses it to analyze the traditional concepts of Matter and appearance, with the aim of clearing up their meanings in both common-sense and science.

Although Broad held that the common-sense and the scientific concepts of Matter diverge more widely than the respective concepts of Space and Time,² he nonetheless found four accepted fundamental conditions between them: (i) publicity between various observers; (ii) neutrality between various senses of one and the same observer; (iii) persistence regardless of our presence; (iv) a more or less permanent extension while in a constant changing state. However, the usual distinction between things as they are and things as they seem to be, or between physical reality and sensible appearance, raises difficulties. Let us use a typical example of Broad's: a penny on a table usually looks more or less elliptical in shape when an observer views it from various positions, and its appearance varies along with the movement of the observer. But one and the same penny, at which we were looking all the time, is usually thought to remain unchangeably round, not elliptical, in shape.

Such inconsistencies between the apparent shapes and the supposed real shape, and between the change in the appearances and the supposed constancy of the physical object, worry philosophers like Broad and impel them to reconsider our concepts of Matter, appearances. Broad considers the scientific explanation of this phenomenon as "nonsense",³ in that it is an inconsistent mixture of two utterly different theories of perception: it follows the naive realism of unsophisticated common-sense in terms of spatial attributes, while it adopts a quite different causal theory for color and temperature. To account for the varying appearances, he offers us two different types of theory: the *Multiple Relation Theory* and the *Object Theory* of sensible appearance. The former, according to Broad, has been suggested by Dawes Hicks and Moore,⁴ holding that "appearing" is simply a kind of relation between a physical object, a mind, and a characteristic. Although he says of it as "quite possibly true,"⁵ he leaves it wholly aside, and elucidates the latter, a Russellian *Object Theory* of sensible appearance:

Supposing "that x appears to me to have the sensible quality q, what happens is that I am directly aware of a certain object y, which (a) really does have the quality q, and (b) stands in some peculiarly intimate relation, yet to be determined, to x, thus, y might sometimes be identical with x, or might be literally a part of x."⁶

² As to the concepts of Space and Time, there is no essential distinction between common-sense and science - the latter generally develops and clarifies the former. However, there is a sharp difference between them regarding the concept of Matter, in that common-sense thinks of Matter not merely as in spatio-temporal relationship, but also having many other intrinsic qualities, such as color, temperature, etc., whereas science treats Matter as being simply "the movable in space," no intrinsic non-spatio-temporal qualities except mass. C.D. Broad: *Scientific Thought* (London: Routledge & Kegan Paul, 1923, reprinted in New York: Humanities Press, 1952), p. 228.

³ Ibid, p.274

⁴ Moore, in fact, seems to endorse various attitudes towards this issue over time, switching from naive realism through direct realism to indirect realism and phenomenalism. The multiple relation theory is seemingly held in 'Some Judgments of Perception,' stating that the datum is a part of a surface of a physical object - not a separate sense-datum or sensum, as in Broad. Cf., G.E. Moore, *Philosophical Studies* (New York: Humanities Press, 1951), p.251. In addition, Hicks seems to be a type of direct realist in suggesting that what actually appears is simply the physical thing, i.e., the direct relation between a mental act (of appearing) and the physical object without introducing a mediatory element in between, cf., G. Dawes Hicks, 'Appearance and Real Existence,' *Proceedings of the Aristotelian Society*, New Series, 14(1913-14), pp38, 46.

⁵ Ibid, p.239

⁶ Ibid, p.240

Such objects as y are called *sensa* by Broad. In this way, the connection between *sensa* (y) and physical objects (x) is established, but he conceptually leaves open that $y=x$, which, however, can at most be taken as his punctiliousness. He does not in fact endorse, but rather argue against, a naive realism that *sensa* are identical with physical objects. For Broad, *sensa* are regarded as the objects of our sensations, such as colored or hot patches, noises, smells, etc. As concrete particular existents, *sensa* have properties like shape, size, hardness, color, and so on.⁷ Let us apply the *sensum* theory to the penny: when I view a penny at a slant, I have a sensation, whose object is an elliptical brown *sensum*, but not the penny per se. There is only a particularly intimate relationship between them, which does not imply that they must be identical with each other. Russell develops this idea under his preferred term of sense-data and claims that there is no error in sense-data. Similarly, Broad holds that *sensa* are not merely mistaken judgments about physical objects but are as real, in the most general sense, as anything else.⁸ But the lack of a corresponding name in common speech to the existence of *sensa* results in ambiguous use of the words like “seeing”, “hearing”, and so forth. Given the real existence of *sensa*, Broad makes a distinction between the meanings of these words as denoting acts of sensing, whose objects are *sensa*, and, as describing acts of perceiving, whose objects are supposed to be bits of matter.

2. The Nature of *Sensa*

Are *sensa* as such physical or mental? Russell, like Nunn and Alexander, insists that *sensa* are not mental, or even physical. Instead of giving a direct answer, Broad analyzes the word “mental,” which was ambiguous under Russell’s usage, into two different meanings: the sense of “a state of mind” and of “mind-dependent”, and the latter is further analyzed into “existentially mind-dependent” and “qualitatively mind-dependent.” With these two distinctions, he argues that *sensa* are by no means states of mind, but more or less mind-dependent. However, he goes mainly against the view that *sensa* are mental in the more radical sense of mind-dependent, i.e., *existentially* mind-dependent, whereas his meticulous consideration of the facts he adduces prevents him from denying that *sensa* are *qualitatively* mind-dependent.

In the first place, Broad points out that the view held by many philosophers that *sensa* are supposed to be in some way mental rests partly on sheer verbal confusions, and partly on some actual facts. The verbal confusion is due to the ambiguous uses of the word “sensation” in common speech: (i) a patch which one senses; (ii) act of sensing the patch; (iii) the whole complex state of affairs which, on the *sensum* theory, is analyzable into (act of sensing)—directed on to – (red patch).⁹ A verbal confusion of (i) and (ii) or of (i) and (iii) results in people’s inclination to believe that a *sensum*, such as the red patch, is itself mental. Broad holds that, in the second meaning, “sensation” is obviously mental; in the third it is undoubtedly a complex whole which involves a mental factor; and yet in the first, it is by no means mental, for the reason that a patch one senses goes on existing with little or no change of quality when one ceases to perceive it. He professes to use the concept of “sensation” always in the third sense. Given the verbal confusion, Broad insists on distinguishing *sensum* from sensation and act of sensing.

However, such a distinction cannot completely save *sensa* from being considered as mental, as Broad mentions of Stout¹⁰, who like Russell, agrees that sensible objects are what mental acts are immediately directed towards in experience, but does account them as mental. Let us consider more closely Broad’s distinction between two meanings of the statement “ x is mental”: being “a state of mind” and being “mind-dependent.”¹¹ The former exists only as “a constituent of a *particular* mind,” and in this sense, a thing is entirely mind-dependent; while the latter means a *sensum* could be mind-dependent without being a component of a particular mind, just as Berkeley’s famous saying that “the essence of a sensible object is to be perceived” might literally imply that such objects are mind-dependent, without *implying* (while remaining *consistent with*) the view that they are states of mind.

⁷ Ibid, p.243

⁸ Ibid, p.242

⁹ Ibid, p.249

¹⁰ Stout holds sensible objects to be psychical existents in their own right, who was labeled as a “Proto-New-Realist” to emphasize the vital role he played in aiding the development of the British New Realism. Cf., G.F. Stout, “Are Presentations mental or physical”, *Proceedings of the Aristotelian Society*, New Series, Vol. 9 (1908-1909), pp. 246-47; G.F. Stout, *Manual of Psychology* (New York: University Correspondence College Press, 1899), pp. 57-60; Omar W. Nasim, *Bertrand Russell and the Edwardian Philosophers* (Houndmills, Basingstoke, Hampshire: Palgrave Macmillan, 2008), p. 4.

¹¹ Ibid, p.250

With this distinction, Broad indicates that sensa are in no way states of mind in the first sense, but might be mind-dependent to some extent.

Furthermore, he clarifies a more or a less radical sense of mind-dependence: “existentially mind-dependent” and “qualitatively mind-dependent.” The former means that an item, though not a state of mind, can only exist as a constituent of a certain state of mind; while the latter means that its qualities but not its existence are relative to mind, in other words, it can still exist and have qualities when it is not a constituent of any state of mind, but it might acquire some new qualities or alter some of its old qualities on becoming a constituent of a state of mind.¹² This differs from his expression in previous writing on the theory of perception – *Perception, Physics and Reality*. In that book, he describes himself as forced to conclude that the objects of perception probably do not exist when not perceived, despite no absolutely conclusive proof of this.¹³ This change is vaguely hinted by saying that he has “come to see the extreme complexity of the problem of the external world” in his preface to *Scientific Thought*.¹⁴

On the basis of the distinctions between sensum, sensation and act of sensing, between “a state of mind” and “mind-dependent”, and between “existentially mind-dependent” and “qualitatively mind-dependent”, Broad immediately excludes that sensa are acts or states of mind analyzable into acts and objects. The reason has been explained in his previous clarification of the term “sensum.” He starts discussing two different views of sensa as presentations (or parts of presentations).¹⁵ Identifying sensa with sensations, the first (like Stout) would treat the whole thing “my sensation of red patch” as an unanalysable state of mind, and therefore as a presentation. The second (perhaps Berkeley) would think of the red patch itself as a state of mind indivisible into act and object and therefore as a presentation, even though it would accept the analysis of “my sensation of a red patch” into an act of sensing and the red patch sensed. Broad ascribes both versions to three possible failures: (a) no clear distinction between sensa and sensations; (b) no clear distinction between sensa as presentations and sensa as being mind-dependent without being states of mind; (3) no clear distinction between existential and qualitative mind-dependence.

As part of his argument, he presents a sensation scale, starting with those of sight, passing through those of taste and smell, and ending with bodily sensations. He holds that the top members of the series are clearly analyzable into act of sensing and object sensed, for the reason that when we have a sensation of, say, a red triangular patch, some things are true of the patch itself (e.g., that it is red and triangular) which are hard believed to be true of our sensation of the red patch. Conversely it seems more plausible to treat the bottom members as unanalysable mental acts, within which no distinction of act and object can be found.¹⁶ Overlooking their difference, two extreme positions arose: Stout would argue that it is a mistake to analyze sensation (even the top members) into act of sensing and sensum, holding that “a sensation of red = a red sensum = a feeling or presentation which is red.”¹⁷ In contrast, the British New Realists¹⁸ like Laird and Alexander would argue against the indivisibility of the bottom members, such as a sensation of headache.

Unlike either, Broad presented an intermediate approach to this question: considering the plain difference, he argues against Stout, since some sensations at least are analyzable into acts of sensing and sensum, while leaving open the bodily feelings. The divergence between them, he points out, might result from the fact that the sensations, as commonly described, are not defined psychologically through their intrinsic properties but physiologically through their bodily antecedents. From a psychological perspective, he’s against the view that the structure of both the top and bottom members of the series must be the same. Rather, he finds it more plausible to respect the plain introspective difference between them, in that the top ones seem quite clearly analyzable (for the above-mentioned reason).

Now that sensations are not presentations but are analyzable into acts of sensing and their objects sensa, can these objects themselves be presentations?

¹² Ibid, p.251

¹³ C.D. Broad, *Perception, Physics and Reality* (Cambridge: Cambridge University Press), 1914, xi.

¹⁴ Broad, *Scientific Thought*, p. 5.

¹⁵ Ibid, pp.253-4

¹⁶ Ibid, pp. 255-7.

¹⁷ Ibid, pp.253-4, Broad describes Stout’s views in the *Manual of Psychology*.

¹⁸ Like the American New Realism, the British New Realism also departs from the direct realism of “naive realism” while believing in physical appearance, but didn’t develop a neutral monism otherwise.

As Broad acknowledges, the denial that *sensations* are presentations does not exclude the possibility that *sensa* themselves are presentations. He must therefore further prove the latter. Given the agreement that if *sensa* are presentations they must be states of mind, he first considers whether they can be proved to be states of mind.

This involves proving that *sensa* are not only mind-dependent, but are constituents of a mind as well. His argument against *sensa* as states of mind rests on the same reasons as in distinguishing sensations from *sensa* and treating the latter as objects contained in the former, i.e., “the view that *sensa* are presentations does logically imply the extremely paradoxical propositions that some states of mind are literally hot or red or round.”¹⁹ This paradox seems, in Broad’s mind, a good reason to refute Stout’s claiming that *sensa* are states of mind and hence are presentations. However, are *sensa* existentially mind-dependent, though not states of mind? Or are they to some extent qualitatively mind-dependent, though not existentially mind-dependent? As to the former, Broad does not slur over the view that *sensa* are existentially mind-dependent, though not states of mind, to which Berkeley and Stout²⁰ are vaguely hinted to commit. This view agrees on the analysis of sensation into acting of sensing and *sensum*, but argues for *sensa* as existentially mind-dependent on the grounds of the inseparability of both factors: no act of sensing without some *sensum* on which it is directed, and no *sensum* without an act of sensing directed upon it.²¹ It argues from: (a) the privacy and variability of *sensa*; (b) the analogy between *sensa* and bodily feelings; (c) the analogy between *sensa* and “mental images.” Broad challenges these quite plausible arguments one by one with alternative explanations.

With regard to the privacy and variability of *sensa*,²² he points out that this conclusion does not necessarily follow. Rather, he would appeal to a theory of perspective to explain the spatial variation of visual *sensa*, i.e., *sensa* are partly conditioned by the positions of our bodies (e.g., the position, internal states, and structure of one’s body). But this would be challenged by a more powerful argument: our past experiences and present expectations affect not only our judgments about physical objects which we base on *sensa*, but also the actual properties of *sensa*, as in the case of the staircase figure.²³ Nevertheless, these examples he invoked, as he explicitly stated, don’t suggest *sensa*’s “existential mind-dependence,” but do suggest that they might be “qualitatively mind-dependent” to some extent. This might be due partly to his scrupulous attention to various possibilities, partly to the complexity of this question per se. It is nevertheless undeniable that a reference to mental conditions in this case, as Broad admitted, does help to explain concrete facts, whereas a reference to bodily conditions such as brain-trace or nervous-system-trace fails.

As to the analogy between *sensa* and bodily feelings, the crucial point consists in whether unfelt bodily feelings, such as an unfelt headache, can exist. Those who argue that *sensa* are existentially mind-dependent would deny the existence of unsensed bodily feelings. Although they concede that the sensation of a headache can be analyzed into act of sensing and headachy *sensum*, they argue that the latter could not exist without the former. An unfelt headache is thus merely absurd (*Unding*). Furthermore, if this be true of headachy *sensa*, it would follow that it would also be true of red *sensa*, and indeed of all *sensa* assuming the continuity of the series of sensations entails sameness of kind. However, this is simply an inconclusive argument to Broad. In reply, he raises two questions to impugn it: (a) Supposing it to be true that an unfelt headache is inconceivable, does the continuity of the series of experiences called “sensations” justify us in extending this conclusion to all *sensa*, and in particular, to those of sight and hearing? (b) Is it really true that an unfelt headache is inconceivable?²⁴

¹⁹ Ibid, p.258

²⁰ Even Broad, though reluctantly, seems to have committed himself to this position. Broad: *Perception, Physics and Reality*, p. xi.

²¹ Broad: *Scientific Thought*, p.259

²² This argument holds that *sensa* are characteristic of both physical objects and mental states, i.e., although they have shapes, sizes, colors, etc., they do seem to be private to each observer. So the privacy of *sensa*, for the common sense, does suggest that *sensa* are mental—at any rate in the sense of being mind-dependent. Ibid, p259

²³ Broad: *Scientific Thought*, p.260. The “staircase figure” is an instance of ambiguous figures common in psychology and visual science textbooks, whose sensible appearance changes along with the observer’s concentration from that of a staircase to that of an overhanging cornice. More ambiguous figures such as duck/rabbit figure, etc., see Stephen E. Palmer: *Vision Science: Photons to Phenomenology* (Cambridge, MA, MIT Press, 1999), p.9.

²⁴ Ibid, p.262

His arguments run as follows: (a) Given the fact that there is no intrinsic difficulty in conceiving the existence of unsensed red patches or unsensed noises while a considerable difficulty in conceiving the existence of unfelt headaches, it is unsafe to rule out the plain difference between them simply on the grounds of continuity. What is more, as he pointed out, there is just as good reason to argue from continuity in the opposite direction.²⁵ (b) He finds it questionable that an unfelt headache is inconceivable.

In the first place, the improper identification of headache with pain in ordinary language resulting from our selective focus on pleasantness or painfulness, leads us to be prone to regarding an unfelt headache as *nothing* when the truth simply is that it would not be a *pain*. Thus Broad finds it unconvincing to hold an unsensed headachy sensum as a mere *Unding*, if a feeling of headache be a genuine sensation and not a mere presentation, and therefore, to say nothing of extending this view to all *sensa*.

The third argument comes from the resemblance between *sensa* and “mental images”. “Mental images” are literally supposed to be existentially mind-dependent, if not actually states of mind. Granted the resemblances between them, Broad doubts whether images are really existentially mind-dependent, except the case of voluntary images, which would not be imaged here and now without our will, and are thus mind-dependent. But he uses an analogy of chemical reactions that only happen in a laboratory to illustrate the irrelevancy of voluntary images: most chemical reactions that take place in a lab would never have happened unless the reagents had been deliberately introduced under controlled conditions, but nonetheless nobody considers such reactions in any important sense mind-dependent.²⁶

Thus, all images, quite like the spatial variation of visual *sensa*, depend on our minds simply in the qualitative sense. Like the case of *sensa*, this could be alternatively explained with a reference to physiological traces, but its philosophical importance remains doubtful to Broad, considering a pure hypothetical correlation between them. Therefore, the resemblance between *sensa* and images does not entail *sensa*’s existential mind-dependence, because images themselves, in Broad’s opinion, are not in fact existentially mind-dependent, but simply in part qualitatively mind-dependent. *Sensa* are even less qualitatively dependent on mind than images. Thus far, the existence of unsensed *sensa* seems beyond a question.

With all these questions cleared up, Broad concluded that *sensa* are by no means states of mind, but more or less mind-dependent, not in an existential sense, but in a qualitative sense. This shows Broad’s effort to take all possibilities into account and thus avoid being dogmatic. Because of his open-mindedness, he cannot be assimilated to any of the contemporary positions, including the pure realists, the British and American *New Realists*,²⁷ the pure idealists,²⁸ the Critical Realists,²⁹ or the Neutral Monists.³⁰

²⁵ Ibid, p.265

²⁶ Whether his argument from the analogy of chemical reactions is convincing, if relevant at all, seems questionable to me. Two points are worth considering: (a) unlike mental images, the reactions themselves are mind-independent, despite how much the procedures to make such reactions possible are deliberately designed; (b) That which happens in a lab is different from what happens in a mind, in that the former is in any case external and separable from a mind, whereas the latter is internal and inseparable from a mind. Still, it’s his contribution to pick out voluntary images from the rest as a special case.

²⁷ “American *New Realists*” is referred to the well-known six American youths who in 1910 came together and professed to return to naive or natural realism to a certain extent, with an aim to rebel against the hegemony of both Berkeleian and Kantian tradition of subjectivism since Locke and Descartes. They endeavored to amend the realism of common sense, so as to make it compatible with the facts of relativity. Regarding the question under discussion, they believe that the physical world exists independently of our knowing, and yet that same independent world can be directly presented in consciousness not merely represented or copied by ideas. See Edwin B. Holt, etc. al. *The New Realism: Cooperative Studies in Philosophy* (New York, Macmillan, 1912), p.10.

²⁸ The pure idealists, such as Berkeley and Kant, differ essentially from Broad who is basically a realist.

²⁹ The critical realists are specifically referred to the American critical realists. Historically, the American critical realism was a response both to direct realism (especially in its recent incarnation as new realism), as well as to idealism and pragmatism. Critical realists believes that some of our sense-data (e.g., those of primary qualities) can and do accurately represent external objects, properties, and events, while other of our sense-data (e.g., those of secondary qualities and perceptual illusions) don’t. Therefore, they professedly endorsed an “epistemological dualism”, if not actually ontological dualism on the whole. By this term, they aim to emphasize the duality between the cognitive state which is the “vehicle of knowledge” and the object known. But they repudiate the conventional understanding of dualism as “what we know is a mental state (or ‘idea’), an existent from which we have to infer the existence and character of the physical object.” See Durant Drake, etc. al. *Essays*

His open-minded attitude towards the qualitative mind-dependence of *sensa* and images, on one reader at least, might produce an impression of trialism to some extent: matter, *sensa* and minds.

Broadian trialism commits to a separate ontological status for *sensa*, which differs ontologically from Moore's multiple relation theory where sense-data are parts of the surfaces of objects (as seen a type of naive realism), which, in Broad's eyes, does not imply *anything real* but simply involve a unique and unanalysable multiple relation of "appearing".

Unhappy with it, Broad explicates a *sensum* as a peculiar kind of object which actually possesses the properties that the physical object seems to have, on the basis of Russell's *Lowell Lectures on the External World*. This suggests in the case of penny that an elliptical object actually exists, which is in a certain epistemological relation to the observer, and is yet to be determined by the penny per se on the other hand. This intimate relationship between *sensa* and physical objects is also nuanced from Russell's theory, for the latter argues that sense-data are existents in their own right, whereas physical things are seen as logical constructions from them, which makes *sensa* too substantial and self-subsistent while leaving physical objects too ghostly and was rather believed to be eliminated.³¹

In contrast, Broad points out that it is false psychologically to assert we actually infer our perceptual judgments about the existence and properties of physical objects from *sensa* and their properties, and on the other hand, false logically to suppose the existence of a physical world in general could be inferred from the existence of *sensa*, on the grounds that the existence of *sensa* is a necessary, but not a sufficient condition of our belief in the existence of the physical world: we should not judge there to be any physical reality without sensible appearance to us, however, the existence of physical objects does not logically follow from the existence of appearances. Notwithstanding, he finds no possibility either to logically refute *sensa*, or to get rid of them, or to coordinate the facts without them.³² On this account, he meticulously holds that *sensa* would, at most, give a high final probability to our belief in a physical world. Furthermore, Broad contends that there is a world of physical objects and a world of *sensa* as well, both of which are parts of the whole existent reality, even though in some way, the latter seems to depend on the former. This strongly indicates that he ascribes a definite ontological status to *sensa* without nominalizing physical objects and is thus seemingly committed to a type of trialism.

This put me in mind a rejection of trialism proposed by the critical realist C.A. Strong three years earlier. Indeed, Broad does not mention the American Critical Realism in *Scientific Thought*, so there is no clue to claim for their associations. However, theoretically we might as well import Strong's rejection to unveil the intrinsic problem in Broadian trialism. In his essay "On the Nature of the Datum," Strong holds that the datum, which is referred to what we are immediately conscious of, is the logical essence of the real thing. The category "essence" here, opposite to existence, means the entire, detached concrete nature, including its sensible character. Strong emphasizes that the things we are conscious of in sense-perception, i.e., data, as distinct from the things we believe or affirm, are not the actual external existences, but simply "the detached concrete natures or 'essences' of those things," despite being treated as logical entities.³³ In this regard, he departs from the naive realism, representationism and logical objectivism. Besides, neither are data internal or psychical existences despite they are given by means of a psychic state, by which he departs also from psychological subjectivism, psychological objectivism and logical subjectivism.

Starting with the definition of data, Strong attributes three main characters to their nature: (a) Data are not the real things themselves; (b) data are not psychological in their nature; (c) data are not existences.³⁴ In the first place, like Broad, Strong repudiates the common sense of identifying data with real things. But Broad, unlike Strong, follows Russell in arguing that *sensa* are as real as anything else in the most general sense.

in *Critical Realism: A Co-operative Study of The Problem of Knowledge* (New York, Gordian Press, 1920, reprinted 1968), p.4.

³⁰ The Neutral Monists like William James regard the basic elements involved in perception as being neither substantially mental nor non-mental.

³¹ Of course, Broad believes that on Russell's theory, unsensed *sensa* do not as a rule exist in isolation, but are members of physical groups, connected together by qualitative similarity and regular rules of spatio-temporal correlations. Broad, *Scientific Thought*, p. 534.

³² Broad: *Scientific Thought*, p.268.

³³ Drake, etc. al. *Essays in Critical Realism*, p.223

³⁴ *Ibid*, pp.224-31

This is not equivalent to the naive realism of claiming they are just one and the same external physical objects. Nonetheless, from Strong's point of view, Broad's position confuses our understanding of the concept of "real". If the datum and the object pertain to same penny, and if they are both "real" in the same sense (i.e., in the way that physical objects are real), then datum and physical object would attribute contradictory properties to the penny, since a sensibly elliptical penny is obviously inconsistent with the supposedly round penny itself, and the same is also true in the case of the sensibly bent stick in water.

This "inconsistency" between data and physical objects yields an either-or situation: "if we say data are real; we are forced to say that physical things are not real,"³⁵ and vice versa. They are too contradictory to be simultaneously taken as real. Unlike Russell and Broad, he holds that perception can be mistaken and ascribes the possibility of perceptual errors to the very nature of data: they are directly subject-dependent and only secondarily and indirectly object-dependent.³⁶ The data, as essence, is given by means of a psychic state, and its givenness depends wholly on the psychic state, not on the actual existence of the object.³⁷

The essence, however, as an entity or a subsistent, is neither a physical existent, nor a psychological one, but simply a being of the logical type. By distinguishing "subject-dependence" from "psychological existence", he indicates the data, as essences, is directly dependent on an individual organism as a unity of mind-body functioning under a psychophysical correlation law. The essence transcends individual psychic states, despite that its givenness depends wholly on the psychic state. Thus, the givenness of a datum is existentially mind-dependent, whereas the datum itself is existentially subject-dependent, independent of, or merely secondarily and indirectly dependent on, physical objects. Taking hallucinations and dreams into consideration, such an organic explanation does alleviate their embarrassing position in naive realism and neo-realism. And the strength of his argument, in a broader sense, consists in its special attention to the subjective dimension of data.

Considering normal perceptions, however, Broad could also argue that *sensa* are "primarily object-dependent" and "secondarily subject-dependent," reversing Strong's expression, in the sense that they are subordinate to physical objects, which are supposed to be their prototypes. It's thus improper to allege that data could exist completely independent either of physical objects or of minds. Instead, their existences rely on an interaction of external objects, our bodies and minds, and the environment. Indeed, Strong does not deny the interaction in case of veridical perceptions, but he seemingly gives too much priority for the subjective factor. Rather, all three components in my opinion are equally indispensable to the occurrence of data.

The subjective character of data led Strong further to deny the existences of data by arguing that since things, which do not exist, can be given, there must be things which are mere essences,³⁸ not as existences. In response to the argument for data's existence from their extension in space, he argues that the affirmation of locality has reference only to what the visual data bring before us, i.e., the physical objects, not to the visual data themselves, which are neither here nor there.³⁹ Apparently Strong and Broad show us two totally opposite attitudes towards one and the same inconsistency.

In order to further this question, we have to re-raise and reconsider our questions: Are *sensa* real? In what sense? No one (with the possible exception of idealists such as Bradley) would give a negative answer to the first question, once the difference between a sensibly elliptical penny and the supposedly round one is recognized, no matter whether *sensa* are supposed to be real things or logical essences. Even when *sensa* are, or are treated as, illusory, they are nonetheless "real" in the sense that it is just their reality that made whatever judgment of yours possible, whether in normal sense perception or hallucination. By this, I mean whatever is denied as unreal by Bradley or any other idealists cannot be utterly *nothing* for the very same reason of its being rejected.⁴⁰ They are real in the sense that you cannot change or remove them at will, rather than real in the sense as is a physical object. Let's consider the case of a stick in water.

³⁵ Ibid, p.225

³⁶ Ibid

³⁷ C.A. Strong, *The Origin of Consciousness: An Attempt to Conceive The Mind As A Product of Evolution* (London, Macmillan, 1920), p.41.

³⁸ Strong, *The Origin of Consciousness*, p.38.

³⁹ Drake, etc. al. *Essays in Critical Realism*, p.232.

⁴⁰ Even Bradley does not adhere consistently to this denial; for he elsewhere emphatically asserts it to be absolutely certain that appearances exist. Cf., G. Dawes Hicks, "Appearance and Real Existence", p. 31.

So long as you let a motionless⁴¹ straight-edged stick with one portion in air and the other in water, the air-water interface being a plane, it will look bent whenever the edge is not perpendicular to that plane, regardless of your desires. Whatever Bradley or any other idealists would describe the sensibly bent stick; he would not say he does not see anything at all.

In this regard, I would say *sensa* are phenomenologically real. I guess Broad would not disagree with me on this point,⁴² even if he would believe that it doesn't grant sufficient reality to *sensa*. Broad is not content to cease simply at a phenomenological status for *sensa*, but would further to treat them ontologically real, as he claims, "a complete inventory of the universe must mention the one as much as the other."⁴³

This sounds far from satisfactory, to me at least, since such an ontological status implies a commitment of an entity. But it seems the bent stick exists rather as a phenomenon than as a certain independent entity, for it cannot be real without the function of media such as air and water. On this occasion, the existence of a phenomenon does not necessarily entail a certain single object as entity, whether practically or logically. Nevertheless, a *sensum*, as a phenomenological existence, is not in itself mental, because what is phenomenologically perceived is objective or public, rather than subjective in the mental sense, in that it will more or less remain both existentially and qualitatively similar (not totally identical), to various perceivers at the exact same spot, and to a single perceiver at various moments. For instance, if your eyes were at the exact same spot from which I am now looking at the penny under normal conditions, we would phenomenologically have qualitatively *similar* *sensa*, rather than totally irrelevant mental images, but neither the very *same* *sensum* because of its subjective features (not in the psychological sense).

Indeed, for the same reason, the *same* *sensum* could also occur, say, to a color-blind perceiver. Let's take a case of a perceiver color-blind only to red and green, the color he perceives can be called *gred*.⁴⁴ Suppose you show him first a red and then a green T-shirt, he will probably have the *same* *gred* *sensum* under the same environment. In this regard, I share much with the contemporary qualia realist Prof. Gary Hatfield on his construal of color as a disposition for producing subject-dependent experiences of certain kinds in perceivers.⁴⁵ Therefore, I would consider the existence of a *sensum* as an objective phenomenon arising from an interaction between a physical object, a perceiver and the surroundings as a medium, instead of corresponding to a certain entity.

In this regard, Strong's denial of data as existences does hit the right target. Still, it is necessary to distinguish "phenomenological existence" from "ontological existence." I do find it favorable to maintain data's existences in the phenomenological sense, while I agree with Strong to deny their ontological existences. By "phenomenological existence," I mean that data cannot exist as independent entities, but only exist phenomenologically arising from an interaction between physical objects, perceivers and the environment. Accordingly my phenomenological construal of *sensa* departs from Broad's purely phenomenological construal (equivalent to naive realism in its positing of an entity that is sensed directly) in that my version takes the epistemological aspects into account, and thus the conflicts between epistemological and phenomenological aspects could be melted away under an explanation of interaction. In this sense, I would mark it as a relational phenomenological construal. Its merits consist mainly in that logically it does not necessarily entail an ontological entity, and can also overpass the fixed boundary between subject and object, between mind and body, between "physical" and "mental".

Indeed, the illusion such as color afterimage cannot be merely ascribed to a property of a particular real object, and this is why we cannot consider a *sensum* as a mere mind-independent physical property of objects, but neither can we unconditionally assert it as existentially mind-dependent.

⁴¹ As James J. Gibson has pointed out in his unpublished manuscript "Purple Perils," the case would differ with a moving stick, 1966.

⁴² Broad, 'Elementary Reflections on Sense Perception,' in R. Swartz (ed.), *Perceiving, Sensing, and Knowing* (Berkeley, University of California Press, 1965), pp. 35-41. Broad starts from a "phenomenological point of view" and ends up opposing its results. But these results are developed through "common sense," which yields a naive realism that Broad undermines with an example of seeing mirror images and leading him again to assent the reality of *sensa*.

⁴³ Broad: *Scientific Thought*, p.242.

⁴⁴ The word "gred" originated in Hacker's work. P. M. S. Hacker, *Appearance and Reality* (Oxford, Blackwell, 1987), p.152.

⁴⁵ Gary Hatfield, *Perception & Cognition: Essays in the Philosophy of Psychology* (Oxford, Clarendon Press, 2009), p.350.

As is shown in Palmer's experiment, we could experience a vivid color illusion after we stare at the dot in the middle of a green, black, and yellow flag for about a minute, and then fixate on the black dot in a plain white rectangle.⁴⁶ In this case, the red, white, and blue flag inside the plain white rectangle is universally recognized as an illusion, partly because it lasts no longer than a minute, but mainly because it cannot be seen without staring at the highly saturated colors in the left rectangle. It is therefore fair to say that even color afterimage has a certain physical stimulus reactions led to its occurrence.

Together with the distinctness of normal sense perception, it's inappropriate to unconditionally assert a sensum either as existentially mind-independent or existentially mind-dependent, but rather plausible to regard it as a complicated phenomenological property of an interaction between objects, perceivers and the environment in our sensible experience.

3. Conclusion

To sum up, this paper critically expounds C.D. Broad's theory of sensa, particularly regarding the nature of sensa. I critically examine Broad's basic position on this conundrum: he argues mainly against the view that sensa are mental in the sense of existentially mind-dependent, but his scrupulousness precludes him from denying that sensa are qualitatively mind-dependent. Also, Broad commits an ontological position to sensa, which differs both from Russell's over-highlighted substantiality and self-subsistence of sensa and from Strong's denial of sensa as existences. Inspired by both Broad and Strong, I defend my own position on this issue by arguing for a relational or an interactional phenomenological commitment to sensa in the sense that they cannot exist as independent entities, but only exist phenomenologically arising from an interaction between physical objects, perceivers and the environment.

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⁴⁶ See Color Plate 2.1, Palmer, *Vision Science*, p.105.