Commentary on ‘The Erotetic Theory of Attention’ by Philipp Koralus

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A. Introduction

The study of visual search is one of the experimental paradigms for the study of attention. Visual search in the laboratory often starts with a question the experimenter asks the subject: where (in this display) is Waldo? Where is the ‘T’? Is there an object (in this display) that is both red and round? The subject then answers the question by looking through the display, and the experimenter tests reaction times, reliability, the influence of various factors, brain activity etc.

Why would question-based visual search be a good tool for the study of attention? There is a fairly deflationary answer: questions tend to engage our attention in the pursuit to finding the answer (though sometimes we find it without paying attention). Since the experimenter can control the question she asks the subject, she has experimental control of how attention is engaged. And hence to ask the subject questions about the visual display is a helpful tool for the study of attention. It is consistent with this use of questions in the laboratory study of attention that outside the laboratory our attention is engaged mostly by things that aren’t questions (though sometimes, of course, we do asks ourselves and others questions): playing basketball might engage our attention in an attempt to win the game; or our attention might be drawn to a random noise outside. According to the deflationary conception, the relationship between asking and answering questions and attention intrinsically is not much closer than the connection between playing basketball and attention: it is both hard to answer questions and to play basketball without attention. Scientists prefer to ask subjects questions instead of having them play basketball because a simple question provides much better experimental control over visual attention than what would be found in other tasks (aside from the obvious advantages of investigating subjects who don’t move around).

In contrast to this deflationary conception of the connection between questions and attention Koralus believes that there is a deep and constitutive connection between questions and attention. Hence: the erotetic theory of attention. Consequently, we are supposed to understand attention better by employing tools developed in the linguistic study of questions. In what follows I will briefly outline what I take Koralus view to be, and then ask four critical questions.

B. Summary of Koralus’ View

Koralus follows a recent proposal by Christopher Mole, and holds that attention is not a neuronal or computational process, not a mental activity, not a mental resource, or a mental capacity, but a manner in which subjects perform a task. Tasks, according to Koralus, can be performed more or less attentively. The erotetic theory of attention consists in a general account of that attentive manner (which for Koralus can be graded, unlike on Mole’s account). Each task determines a question (which, Koralus believes, need not be linguistically encoded). The task is performed attentively to the extent to which the subject is sensitive to the occurrence of congruent answers to that question (a congruent answer is one that is both within the domain and within the
function that is associated with each question; i.e. it’s a well-formed answer). Koralus then suggests that the erotetic theory may shed light on the phenomenal contribution of attention as well as on the role of attention for practical rationality.

C. Tasks and Questions

According to Koralus (Section 3.2, and p. 39) every task determines a question and hence we can model what people do when they perform tasks by thinking of them as answering the question that is determined by that task. And so we can make progress in our understanding of tasks and their performance (e.g. how attentive the performance is) by drawing on resources in the linguistic study of questions.¹

A task, according to Koralus, is an activity or form of behavior that “aims at some range of goals that can be cognitively monitored” (p. 33). Further, a task is anything that can be performed attentively (cf. p. 33). There is quite a bit of technical or quasi-technical apparatus in Koralus’ discussion of the question-approach to tasks that, in my view, somewhat obscures the courageous boldness of his approach: the category of tasks is at least as general as what philosophers often call “intentional action”, or “goal-directed action.” So, Koralus is offering us an erotetic understanding of intentional action. Think of actions as questions, he in effect suggests, and you get a better grip on them.

It would be extremely surprising, it should be acknowledged, if this approach were successful. Asking and answering questions is one kind of action or activity (a linguistic one): why should it be the model for all actions or activities? Given the boldness of this idea, we would like to see very good arguments for this approach.

It was striking how little there was in terms of argument at this crucial junction. On p. 32/33 there is an argumentative chain moving from the basic definition of a task to the Q and A account of tasks by way of argumentative devices like “it seems natural to suppose that”, “I suggest it is quite natural to think”, or “is intuitively”, and “it would make sense to think”. The movement went from (1) each task determines a goal, to (2) goals imply completion conditions, to (3) completion conditions are like answer conditions, to (4) the semantic content of question is their answer condition. So (5) each task determines a question.

Since there isn’t much in terms of argument I could detect, let us think about what is natural or intuitive. How intuitive is this approach? Many activities (potentially attentive) are not easily modeled as questions (in contrast to what Koralus seems to think). Here is a very partial list: playing basketball, learning French, singing “Twinkle, Twinkle, Little Star”, cleaning the house, watching TV, looking at my friend’s face, listening to Mozart’s Requiem, pulling a rope, walking to the supermarket, etc. Indeed, the tasks that are naturally modeled as questions are rather few and far between (roughly, these tasks are searches, e.g. searching for the Fountain of Youth). No doubt, many (maybe all) of the above can somehow be fit into the Q and A mold. Think of learning French as “How does one speak French?” or playing basketball as “Have we won the basketball game, yet?” (see Koralus p. 33), or listing to the Mozart piece as “What is the next tone going to be?” Most of these look very

¹ In fact, Koralus focuses exclusively on wh-questions, and picks one specific approach to the semantics of those questions as his model.
strained, and one would like to know why one should try to fit all tasks into this kind of mold that seems so obviously inadequate. Indeed (though Koralus never mentions this), performing the task and answering the task’s associated question are clearly distinct: I might get an answer to the question “Where is the banana?” without having found the banana, or an answer to the question “Is the ball in the goal, yet?” without having kicked it in the goal (e.g. someone else might have) (This is even more obvious for all the other examples I provided).

It is, of course, true that questions and goal-directed tasks have a structural similarity. That is because asking question is one kind of goal-directed task: its goal is to get an answer. Koralus doesn’t, as far as I can see, do anything to convince that there is more to the connection between tasks and questions than this.

In light of this, here is a suggestion. While Koralus speaks of the “erotetic” theory of attention, given the strain one has to put on tasks in order to come up with the question it determines, it might be best to drop all appeal to questions. The formal apparatus would be affected only in what seems to be a good way: since each task/activity has a goal, that task/activity determines a success condition in which that goal is achieved. Now just model a task in terms of the set of conditions in which it has been successfully performed. What drops out here is the differentiation we find in the semantics of wh-questions between the domain of objects and the function that takes us from these objects to the propositions that are answers to the question. But that, I take it, is a good thing: while wh-questions determine a focus object or term (the what, where, who, when, why, etc.) most tasks do not have a clear focus object (some do, like cleaning the house). In any case, the erotetic account makes no mention of the domain/function distinction anyway and simply speaks of answers (which are complete propositions) (p. 40). Instead of speaking of answers, I suggest that we can simply speak of success conditions for the relevant task or activity.

So, first question: is there really anything substantially erotetic about the erotetic theory. If so, what is it?

D. Attentiveness, Sensitivity and Reliability

Let us now move to attention. The primary notion of attention for Koralus is the notion of performing a task more or less attentively. Call this the manner model of attention. He doesn’t provide an argument of his own for this approach, but instead draws on an argument from Christopher Mole (p. 29 f.): one and the same process might count as a slip of attention or as indicative of an attentive performance relative to a different task. There is much to say about this argument. For the present discussion, let me grant the manner model though.

The erotetic theory then says, as I have said before, that task T is performed attentively to the extent to which the agent is sensitive to the occurrence of congruent answers to T’s associated question. So, what does this come to?

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2 Koralus sometimes speaks of the task as the object of attention, p. 30; I take it that Koralus doesn’t actually mean that when I look for a banana the objects of my attention are not the various places and objects in my environment but my own activity. Attending to the activity and performing the activity attentively in general are distinct.
Since congruent answer, as we have seen, simply seem to be success conditions (at least, very close to them) it seems that we can rephrase the erotetic theory as follows: T is performed attentively to the extent to which the agent is sensitive to the success conditions of T.

Suppose, for example, that your search for Waldo is attentive. You are now sensitive to conditions under which you might have found him (i.e. congruent answers to the question “where is Waldo?”). So, you will tend to stop searching when you have found Waldo, and tend to continue when you haven’t (see Koralus (p. 40) where he speaks of ‘cognizing something as an answer’). What we get thus seems to be just this: T is performed attentively to the extent to which the agent is reliable in performing T (or: how reliable she is at monitoring T). Attention thus is just a measure of reliability (of either kind). If this is right, then would have been desirable to find acknowledgement that behind a lot of apparatus there is a very simple idea. This idea is quite independent of the technical apparatus. In the end I didn’t find the apparatus helpful to motivate the idea, argue for it, make it clearer, show its consequences, or its connections to other areas. But maybe I misunderstood what is happening here.

So, second question: is the above a fair representation of Koralus view, i.e. is he proposing that attentiveness is a matter of sensitivity/reliability? If it isn’t, what exactly is the difference? Further: what is the substantial work that is done by any of the technical apparatus?

Supposing now that I haven’t grossly misunderstood Koralus’ view (which I might have): I could not detect any argument or clear motivation for the reliability/sensitivity view of attention (except for some hard-to-understand and out-of-context quotes from Mill and Husserl).³

So, third question: what are the arguments for the sensitivity approach?

One possible argument might be this: attention is known to enhance task performance (for many tasks). Reliability of task performance, detection thresholds, etc. are routine measures for attention in psychological experiments. Doesn’t this show that attention is a matter of sensitivity or reliability?

It is certainly not implausible that it is one of the common results, maybe even one of the functions of attention to make subjects more reliable the more attentively they perform a task. People are usually better at finding bananas, calculating sums, playing basketball or the piano when they do what they do attentively compared to when they are inattentive other things being equal. But the sensitivity/reliability of approach does not follow. It is not plausibly that attentiveness is simply a measure of sensitivity or reliability: automated tasks are often performed very reliably and with great sensitivity to success and with detailed unconscious monitoring. Attention is one route to sensitivity and reliability; it is not the only one. We can put this in the form of a family of counterexamples to Koralus’ view. I give two.

³ Both of whom, by the way, once one looks at the text that surrounds the quoted passages – clearly do not subscribe to anything even in the neighborhood of Koralus view of attention (Mill and Hamilton, whose view Mill discusses in the book Koralus cites, for example, often associate attention with “concentration of consciousness”, see Mill 1865/1979, p. 283 and others)
Counterexample 1: Inattentive walking to my regular supermarket. I walk to my supermarket. While doing so, I think about something else. My walking is inattentive. Nevertheless, I am very reliable at making it to the supermarket, at avoiding obstacles, at adjusting my speed so as to avoid exhaustion but make it there in a reasonable time. I am good at getting to the supermarket and good at keeping on track. But that doesn’t make my walk to the supermarket attentive. (Objection: don’t you, unlike a distractible two-year old “keep focused” on getting to the supermarket, and hence aren’t you attentive after all? Reply: maybe, though this is straining the notion of attention. Unlike on Mole’s unison view (which Koralus mentions) attentiveness and automatization are now not opposites (or even pull in different directions); we also seem to lose any connection to the psychology and neuroscience of attention if non-perceptual tasks that are performed without much executive control are said to be attentive).

Counterexample 2: Inattentive banana search. I’ve been trained to find bananas (they used a scheme of classical conditioning on me). I am really good at responding to bananas in my environment. I find them very reliably. Indeed, I find bananas automatically (it’s an automatism of sorts. I can’t help it. I just search and find them). Banana search doesn’t distract me from anything else I do (I often find bananas while solving problems in mathematical topology in my head). I am highly inattentive in my banana search, and yet highly “sensitive to the occurrence of congruent answers” (p. 40).

One might try to avoid such counterexamples by linking attention to a specific kind of sensitivity in task monitoring. But now all the work seems to be done by whatever this kind of monitoring is (it’s a kind that requires (attentional) resources, one that requires executive control (= executive attention?), it’s a kind that is closely linked to working memory capacity, it’s a kind that requires the attention-typic selection or prioritizing, one that requires or consists in cognitive unison (a la Mole), etc.). We seem to presuppose an independent account of attention.

So, fourth question: how does the sensitivity approach (that lies behind the erotetic view) deal with this family of counterexamples? How, if at all, can it do so without relying on an independent account of attention?

E. Conclusion

I have asked some critical questions about Koralus’ erotetic view of attention. Part of the problem, I believe, is the ambition to say something “erotetic” about all forms of attention or all forms of task. A less ambitious project might be more promising. I was surprised that Koralus does not actually provide an analysis of visual search, which is arguably the best-case scenario for where attention takes a question-answer form. Even though I am critical of Koralus’ erotetic theory of attention I do believe that visual search deserves close scrutiny and might force us to revise common models of perception (partly in order to account for the essentially dynamic element in visual search). It is possible that such an approach might make limited use of a speech act analogy, and be construed as a kind of questioning of the environment. How such an account would be developed, and if the notion of a “question” in this context would amount to more than a helpful analogy remains to be seen.