

In Pylkkänen, P., & Pylkkö, P. (Eds). *New Direction in Cognitive Science*. Publications of the Finnish Artificial Intelligence Society. International Conferences, No 2, Helsinki. Also in Pylkkänen, P. & Pylkkö, P. & Hautamäki, A. (Eds.). & *Brain, Mind and Physics*, Amsterdam, IOS Press, 1997

Dialog as Collective Thinking

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Abstract

This paper argues that "collective thinking" is a real phenomenon and that it occurs in dialog. Dialog is analyzed as coordinated joint activation of factual, emotive and conative information on several levels of awareness. It is claimed that collective thinking as a consequence of its relation to dialog also exhibits these traits.

1. Collective thinking

In this paper, I want to argue that "collective thinking" is a real phenomenon. In fact, it is a rather mundane ordinary phenomenon which occurs in dialog. The argument goes as follows:

If we characterize "thinking" as cognitive processes involving awareness of, attention to and processing of factual, emotive and conative types of information, we might characterize "collective thinking" as interrelated cognitive processes of these types occurring in several individuals. The nature of the relations between individual cognitive processes could be of various kinds.

A relatively low requirement would be similarity. Collective thinking would on this criterion occur if several people think alike. However, requiring merely similarity would leave the possibility open that the similarity was accidental or preprogrammed (like in Leibniz Monadology cf. Leibniz, 1952). It therefore seems reasonable to primarily require not similarity but mutual influence. Building on influence, we can now further explore the idea of collective thinking as interactive, joint or cooperative thinking. Similarity might then possibly be a product of such mutual influence. By analogy, we might remember that it is not necessary that parts of the brain are similar for us to claim that thinking is an activity associated with the brain. It is influence and coordinated activity which is crucial, not similarity.

The following criteria are possible for collective thinking:

1. joint goal, function or purpose
2. coordinated cognitive activities
3. mutual influence between cognitive activities in different individuals

The next step is now to ask whether collective thinking, in the sense of these criteria, can occur. Following the analysis suggested, this would mean asking whether people can influence each other's cognitive activities in such a way that these activities become coordinated and could be said to serve a joint goal, function or purpose.

Below, I will explore a positive answer to this question and suggest that we can think collectively and that we do it through dialog. Like parts of the brain, interlocutors are different but through dialog they can engage in coordinated cognitive activity.

2. What is dialog?

Etymologically dialog comes from Greek (dia logos) which means through words or thoughts. In a sense, this etymology captures an important part of the proposal I want to make. Dialog is a means whereby we through linguistic or other types of communication influence each other in order to coordinate (share) factual, emotive and volitional information for more or less joint purposes.

Let us therefore take a look at the mechanisms of dialog. A very fundamental trait of a dialog is that it can be divided into contributions or utterances made by the participants in the dialog. It is through these contributions that collective thinking is incrementally conducted. Each contribution enables the contributor to incrementally share or in other ways influence the cognitive processes (e g attention, awareness, cognitive operations, emotions and volition) of the other participants.

Let us now consider an example of how such collective processing of information can take place in a dialog. The example consists of a somewhat edited, translated transcript of a recorded interview where the goal is to get participants to characterize their view of Nature, through discussion and counter examples.

Example 1 Dialog about Nature

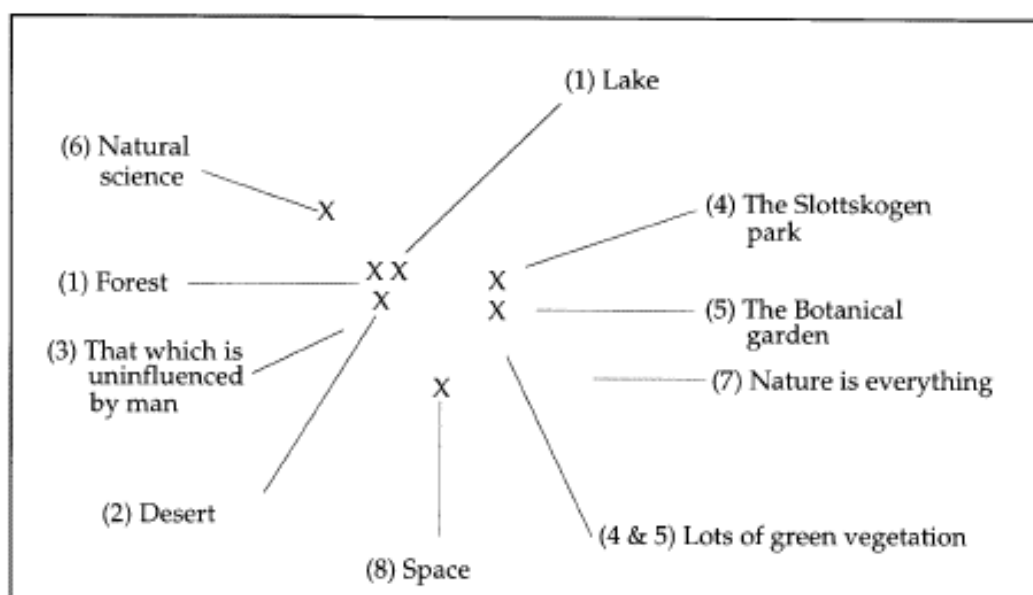
- A: What is Nature?
B: By Nature I mean forest and lake
A: What about deserts?
B: Everything that is uninfluenced by Man
A: Parks then - SLOTTSSKOGEN
B: Unnatural Nature
A: The Botanical garden?

- B: What I said isn't right
 A: Natural science?
 B: Nature is everything
 A: But when we journey out into space – are we going out into Nature then?
 B: Yes I suppose so

In the dialog, A and B together build up an analysis of the concept of nature. This is done in the following way: After A has formulated the task, B initiates by giving two examples of nature – forest and lake. A then indicates a need for something more than exemplification by providing a third example which goes beyond the two examples produced by B. B responds to this by producing a general definition of nature as everything that is uninfluenced by man. A tests this definition by producing a counter example which can be paraphrased as follows: a park is nature in the sense that it has a lot of vegetation, but it is not uninfluenced by man. B recognizes the force of this counter example by calling the park unnatural nature, i.e. something which both is and is not nature. A then produces another counter example of the same type whereupon B withdraws the proposed definition. A now continues with another type of counter example natural science, which more seriously questions B's definition. B tries to generalize again but ends up with having to say that nature is everything, i.e. an undistinguishing definition. A in a joking way ends the excerpt by pointing to another dimension of the concept of nature, it's connection with our planet, which B in a resigned way accepts.

The process described could also be described in more conceptual terms using the diagram below to show some aspects of the joint construction of the concept of nature.

Diagram 1. Dialogic construction of instances and dimensions of the concept of nature.



The diagram which is a modified Venn diagram shows in compressed form how A's and B's contributions, which have been chronologically numbered, slowly build up a conceptual structure of instances and attempted generalizations. Since none of the generalizations are definitively adopted, they are all represented by dotted lines.

The dialog and its analysis hopefully show how language and dialog can be used to influence and coordinate cognitive operations for the joint purpose of a shared characterization of the concept of nature. Through the dialog both the process of interactively cognitively constructing the characterization and its end result becomes jointly available and shared. It seems therefore not unreasonable to conclude that dialog is a candidate for what might be meant by collective thinking.

3. Language and collective thinking

Let us now briefly examine the role of language for collective thinking. The view of the role of language for thinking that underlies the present discussion is that language is an instrument for (collective) activation of information (or thinking). Through language, human beings have evolved an instrument which enables coordinated structured activation of information in mutually expectable ways.

The way the interlocutors together activate and structure the information is a result of their simultaneous making use of several interacting information sources attached to each contribution:

- (i) lexical choice
- (ii) grammatical structuring
- (iii) contextual information

These sources make it possible both to evoke new cognitive reactions from other interlocutors and to express reactions to the contributions of previous interlocutors. In fact, every contribution in a dialog, except possibly the first and the last, could be said to have both a backward looking reactive expressive aspect and a forward looking evocative aspect. I refer to these (cf. e.g. Allwood 1995) as the expressive and evocative functions of a contribution.

As far as we know all human languages provide means for the following basic evocative functions:

- (i) evoking attention (exclamations)
- (ii) sharing (i.e. evoking) beliefs (statements)
- (iii) evoking information (questions)
- (iv) evoking activity (requests)

In various combinations and with refinements, they provide ways of influencing and coordinating cognitive (and other) activity of interlocutors. Using these and other linguistic means interlocutors can jointly construct shared perspectives on the world in the manner shown in our dialog of nature.

Let us look at some more of these mechanisms. A large group of mechanisms concern what might be called Own Communication Management (OCM), cf. Allwood, Nivre, Ahlsén, 1990 or Levelt, 1983. These mechanisms enable a speaker to gain space for selecting adequate types of information activation (hesitation sounds etc.) and to publicly change and edit contributions to shared information. OCM mechanisms are fundamental to enable individual contributions to collective thinking to be as flexible as possible. Compare example 2 below where an OCM mechanism (eh/) permits B to hesitate and change a contribution to make it more adequate.

Example 2: B: Everything that is not touched eh/ uninfluenced by man

Another important type of mechanism enabling dialog to function as collective thinking is what has been called interactive mechanisms of dialog, i. e. mechanisms of feedback, turntaking and activity sequencing, cf. Allwood 1995. Through these mechanisms efficient and just access to both the production and reception of shared information (thinking) can be ensured. One example of this is how collective agreement can be built up through the use of feedback mechanisms ensuring incremental consensus, cf. below where part of a transcribed discussion is given in translation.

Example 3. Build up of Consensus through Feedback

A: I started thinking about our country side place
B: mm

A: It's so nice when you get rid of all traffic
B: mm

A: and now during spring when plants are growing
B: yeah

With the help of feedback words like mm and yeah, b can tell a that she wants A to continue, that she hears, understands and provisionally accepts the content of the story that is being shared.

It is important to note that the thoughts (information) shared through dialog are not all on an equal level of awareness. Information can be actualized through behavior which the person who is the target of the inferences is neither intending nor aware of or through behavior which the person is aware of but not intending, etc.

Similarly, reactions to contributions may vary very much in how much interpretation and understanding they evoke, and in how aware and intentional these reactions are.

In dialog, it is here instructive to compare the differences in production and interpretation which might occur with regard to different aspects of language such as categorematic lexemes like table or run, syncategorematic lexemes such as if and about, prosodic variation and facial gestures.

Briefly, one might say that categorematic lexemes provide the bulk of the activated substantial conceptual material while syncategorematic lexemes provide means for operating and structuring this material. By use of prosody and facial gestures, the conceptual structures are then, often on a lower level of awareness, related to the speakers emotions and intentions.

Thus, dialog can very well relate to and perhaps even take place on a low level of intentionality and/or awareness. It does not merely have to involve factual information but can also involve emotional, volitional and other attitudinal elements. Through the intimate connection between dialog and collective thinking which I am suggesting here, collective thinking can therefore also be not only factual but also emotional, volitional and occur on many levels of intentionality and awareness.

Related to the suggestion that dialog is a form of collective thinking is also the issue of which is the more basic form of thinking – individual or collective thinking. Is individual thinking also in some sense dialogical? Are we internally constructing information with imagined dialog partners when we think? This is of course what many classical theorists have suggested (cf., for example, Mead, 1934; Vygotsky, 1978).

So even if dialogic thinking relies on individual mechanisms of information activation and it is true that without such coordinated individual information there would be no dialogic collective thinking, dialog has added features to individual thinking which are essential.

Let me conclude by saying that if the idea that dialogs can be seen as collective thinking is sound, we might now try to classify types of collective thinking according to what type of dialog they occur in.

We might then get such types as:

- (i) argumentative collective thinking
- (ii) consensus oriented thinking
- (iii) emotional collective thinking
- (iv) subconscious collective thinking

These types of dialog can further be subjected to analysis to move our understanding of the nature of dialog and collective thinking forward.

Summary

In this paper I have tried to suggest some parts of an argument to the effect that dialog can be seen as collective thinking. Hopefully, the idea can be more fully developed in the future by consideration of data from different types of dialog.

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