

Philosophy of Information and Pragmatistic Understanding of Information

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1. Introduction

In this paper, I will raise a number of philosophical concerns about the conceptual puzzles related to Luciano Floridi's work on information. In response to the posed problems, I will sketch my own, pragmatist intuitions about an adequate reconstruction of the understanding of information in our everyday epistemic practices. While Luciano Floridi's writings were sustainably informative to me, especially his elaborated reconstruction of semantic information, there remain some questions related to the more ambitious project of a philosophy of information that I would like to address in the following sections. The first section discusses the analysis of the notion, respectively the notions of "information" itself, insofar as all too tolerant conceptual pluralism undermines not only the centrality of Floridi's semantic understanding of information, but furthermore invites theoretical equivocations and invalid inferences in inter-disciplinary communications.

The second section treats the problematic idea to adhere to an objectivist understanding of information as a transferrable commodity, while at the same time emphasising its relationality, as Floridi's semantic definition of information suggests with respect to epistemic relevance. The third section deals with the centrality of the semantic definition itself and questions it with respect to the central, pragmatic intuition of informative events like metaphors, pictures or environmental clues that do not figure neatly in a

purely semantic approach. In a concluding section I will sketch a relational, pragmatist and inherently epistemic understanding of information, which reconstructs our everyday intuitions about information as de-reified informativity. Since this intuitively relational understanding of informativity contrasts with all objectivist conceptions, an integrative philosophy of information is in danger of losing contact to our epistemic self-understanding.

2. *One or many conceptions of information?*

The first issue concerns the prevalent, but loose talk about *the* concept of information, complemented by the idea that philosophical endeavors aim at an explication of *the* nature of information. Both ideas ignore controversial conceptions of information, since different uses imply different concepts and different concepts call for different extensions. In the literature we find a notorious under-determination with respect to the use of the word “information” in different contexts and the different concepts endowed by that. In a wittgensteinian perspective, different uses of words are the best evidence for different conceptions. In the light of the different uses in physics, biology, cognitive science or communication theory, it seems biased to start with a question about “the conceptual nature and basic principles of information” (Floridi 2011:1), since this idea suggests the existence of “the phenomenon of information” (Perez-Montoro 2007). Complementary to the assumption about a given phenomenon of information, there is the problematic idea that we start with Shannon’s conception of information as a unifying core notion, a “well-understood notion [...with] often incompatible interpretations” (Allo 2011:1). The problem with those formal preferences is that Shannon himself occupied an already disparately used word for promoting reasons, a telling confession that Floridi repeatedly quotes (Floridi 2011:81).

Insofar it is at least unfortunate that Floridi sometimes seems to support such undifferentiated presuppositions, for example in framing the task of a philosophy of information as “offering the systematic treatment of the conceptual foundations of the world of information and of the information

society” (Floridi 2011:2) or in claiming to deal with “a specific kind of information” (Floridi 2011:82). He thereby seems to suggest that we already have a clear idea about the world of information, populated by *kinds* of one type of phenomenon. Fortunately, in Floridi’s writings those formulations contrast with far more careful considerations, exemplified in his use of the discomfiting metaphor of a “conceptual labyrinth” (Floridi 2010:19), which hints at clear concepts and phenomena as desiderata.

As far as I can see, the ongoing struggle about different uses of the word “information” poses a serious problem for a “philosophia prima” (Floridi 2011:24). As long as we deceive ourselves with unifying presuppositions, we will have problems in finding any consensus on the range of a first philosophy. Maybe this is no catastrophic insight to the philosophy of information as an area of research, but to ignore the disparate use of a word and start with unifying assumptions leads to prejudiced analysis. The question in the context of an ambitious philosophy of information should be, how different uses of the word “information” reveal different conceptions of information, in order to explain conceptual interrelations - without presupposing that these must exist. I don’t see any reason why there *must* be conceptual relations between homonyms, not even etymological ones. On the contrary, if real homonyms of information are conceptually confused, there remains a steady danger of theoretical equivocations. Hence, one should expect trans-disciplinary, invalid inferences, which lead to substantial consequences for example in educational practices in terms of “information literacy”. With respect to the unifying presuppositions quoted above, it is not yet clear, if we end with an integrationist or a differentialist philosophy of information, when welcoming a “healthy pluralism in the theory of information” (Scarantino/Piccinini 2011:157). Even the latter idea of a single theory of information should not be supported, since it should not come as a surprise that different concepts used in different contexts imply different theories. After these fundamental remarks on theoretical and conceptual pluralism I will proceed with questions more closely related to Floridi’s projects.

3. Transferability or relationality?

One prominent instance of a presupposition about “the nature of information” (Floridi 2011:14) is the persistent idea about the indubitable “information flow - understood as the carriage and transmission of information by some data” (Floridi 2011:32). My concern is that by conceptualising information as some transferable commodity, one binds oneself to a pragmatically unsustainable, since reifying understanding of information. It is the reification of information that collides with conceptions of information insisting on its relationality - as suggested by Floridis understanding of data (Floridi 2011:87) and his approach to semantic information in relation to types of informees (Floridi 2011:197). Combined with the intuition about relationality, the idea of a transfer or a flow leads to a theoretical paradox and consequently to misleading models of the relation between informative events and the means, processes, interests and competences of informed interpreters. What sense can we make out of the idea that what gets transferred depends - among other things - on the interests of the interpreter?

For reasons of space I will illustrate the tension by an analogy, namely the idea that you can get rid of a fever by sweating it out. This is a popular advice, while any medic can explicate the ill-advised, underlying model: Since the word “fever” does not refer to a particular but to a relational property, there is no sensible way to account for the recovery by any kind of transfer. To conceptualise fever as a transferable commodity and hoping thereby to explain the underlying processes is obviously metaphorical, implying a categorical mistake: since fever is a relational property, it cannot figure in explanations that draw on the motion of a substance. A similar explanatory problem lies in the combination of transferability and relationality in the case of knowledge via semantic information: Conceptualising information as a particular deprives oneself of the possibility of claiming relationality, while conceptualising informativity as a relational property prohibits its transferability. Since the relevance-condition posed by Floridi clearly points towards a conception of informativity as a relational property of medial constellations, it is hard to see how the transferability-condition should hold at the same time. While the intuitions about transferability with respect to human communication have long been reconstructed as technical remainders by metaphorological analysis (Reddy 1979), it is Floridis own approach that

tries to reconstruct a notion of information conforming to our everyday intuitions about the relation between informative events and the quest for pragmatically relevant knowledge. As soon as one commits oneself to the idea of relational informativity, one can easily immunise oneself against the misleading metaphors of transportation. The price one pays for the relational perspective is of course the loss of the explanatory forces that we gain by assuming mobile entities and their interaction with epistemic agents. But in taking seriously the fact that the same data can become informative in different ways, depending on the interests and competences of a given interpreter, one can see how uninformative the metaphor of transportation is in the end. To reduce explanations of belief revisions to explanations of mobilised information means to ignore the enormous problems we face in modelling the abductive competences and epistemic interests on the side of interested interpreters. Insofar Floridi approaches the latter, hard questions with respect to pragmatist conceptions of epistemic relevance, I wonder if his approach would suffer any bad consequences when relinquishing the transferability-jargon all together. We could still use it as a pragmatic shorthand - like the advice about fevers, but we should enlighten ourselves by a concentration on interpretative competences and theories of understanding when reflecting informativity in the light of relevance. Floridi's work is a rich and ramified mine in this respect, but I will nevertheless move on to question the adequacy or sufficiency of his semantic approach with respect to our everyday epistemic practices.

4. Semantic information by non-semantic means?

When observing our everyday epistemic practices, one wonders to what extend a semantic approach really can come to terms with the rich variety of medial formats like intonation, gestures, pictures, maps or tracks that become informative to interested, competent interpreters. It seems to me that semantically defined information misses important features of our social epistemic practices, insofar many information-artefacts are not propositionally structured. Many types of them might lead to propositionally fixed beliefs, but some forms of knowledge draw on other medial means. A

telling example for informative utterances that exceed the scope of a purely semantic perspective are metaphors, which can be found in Floridi's work itself and which he addresses only shortly, as far as I can see (Floridi 2011: 203). Consider Floridi's almost lyrical diagnosis about information being "a conceptual labyrinth" (Floridi 2010:19). Does this statement qualify as information? A more differentiated question would be: Under which conditions would this statement become relevant in the light of a question? According to Floridi, we have to reconstruct the content of the metaphor in the light of his version of a correctness theory of truth, where the relevance of the question derives from the context, namely the purpose with which the corresponding question was posed. But this hypothetical posing of purposeful questions in the light of the context quite obviously calls for *pragmatic* considerations about relevance. One wonders if this can really count as a strongly semantic approach any longer, respectively, one wonders which understanding of semantics got invested (Korta&Perry ###). This question concerns all metaphorical utterances, since their truth-value – if one is willing to assign one – clearly depends at least on the context and the competences of the interpreters (Guttenplan 2005:60). At first glance, Floridi's labyrinth serves as a programmatic opener to his dealing with vexed problems about different conceptions of information. But furthermore, an understanding of the utterance will draw upon the respective conception of labyrinths that an interpreter must have, in order to have any idea what answer is given in this context. Is it a labyrinth with dead ends? How many passages are to be found? Is there one or are there many entrances or exits? In order to determine the informativeness of Floridi's phrase, there should furthermore be a match between his own conception of labyrinths and the ones of the interpreters. Although the expression might be meaningful under any invested conceptions of labyrinth, in order to count as information, it must be meaningful and true, while the case of metaphors illustrates that truth alone does not grant informativity (compare Floridi's own example of the negative metaphor 'Mary is not a fox' (Floridi 2011:203)). The veridicality in the labyrinth-case is bound to Floridi's conception of conceptual labyrinths – whether we want to make a statement about his beliefs or an intellectual inquiry in general. The notoriously difficult questions

I am not even dare to address here concern the identity of thoughts and what it means to *share* a thought in general.

In order to determine what conception of labyrinths got invested in Floridi's metaphorical statement, it is *informative* to browse the context of the utterance yet a bit further. The enlightening conceptual maps presented by Floridi (Floridi 2010:19) might then appear as an answer to the question, what Floridi might have in mind, when he talks about labyrinths. But in which sense are these maps and their contextual interpretation to be understood semantically? What we find are arrangements of concepts related by lines, structured as a reversed tree with one entrance, a few dead-ends and knowledge as the exit. Now this diagram is not itself propositionally structured, although I took my chance to summarize the presented elements and relations in propositional form. As a diagrammatic representation of conceptual relations, there seems to be an exclusive connection between semantic content, information and knowledge. But where in this picture should we place Floridi's metaphor and the corresponding diagram? Maybe we can stick with the last remnants of semantic explanations of metaphor, but how can films, models, pictures, diagrams and the like fit in Floridi's semantic passage through the informational labyrinth?

My hunch is that they cannot and should not be integrated in Floridi's picture, since it does not sufficiently differentiate between the means by which knowledge is acquired and the resulting belief states, eminently - but not exclusively - individuated by propositions. To learn from a photograph about the appearance of an unknown person intuitively qualifies as an act of informing someone about something, while the photo serves as a perceptoid sign and the content of the acquired memory is not propositionally but pictorially individuated. To get informed about the actual size of the continents by Peter's projection reveals *how* misled our normal representation of the world is - and this is by far a richer thought than the one *that* we are misled. Similarly, one's positioning in the world by means of a map is not a propositionally comprehensible competence, but a bodily awareness about ones surrounding and some of its features. Even worse, one's positioning on Floridi's conceptual map requires even more imaginative capacities, while drawing on the competences acquired by acquaintance with the use of real maps as non-propositional representations of spatial relations.

Even more intriguing for a strictly semantic approach is Floridi's marking of the 'regions' in his conceptual map, with which the surrounding text is occupied: "You are here" on a regular map is informative for interpreters who know to 'read' maps. But this proposition seems to be in danger of falling out of the space of Floridi's account of relevant semantic information, since considered strictly semantically, it is a sentence that is always true, hence hardly ever relevant in a straight-forward sense. Furthermore, the interpretation of the meaning of Floridi's "You are here" is supported by an arrow, hinting at different regions in the map. The sentence together with this arrow allow competent interpreters to position themselves within an ongoing conceptual analysis – in the space of reason, as one might say. On the other hand, the arrow points to some abstract space – away from the reader's body, to a region where he is not! So, strictly speaking, the sentence becomes false in the context of the ostensive hint, again endangering its qualification as information in Floridi's perspective. In order to count this combination of signs *as* informative, one needs to know a lot about maps, conceptual analysis and philosophical inquiries in general, permanently using the presented means (propositional, signicative, pictorial...) to understand the depiction as a response to potential questions – but not so much as a propositional answer. So the response Floridi gives is itself semantically under-determined, since many epistemic means he uses himself exhibit either pragmatic constraints, rely on implicatures or fall out of the scope of propositionality all together. I wonder how one can at this stage differentiate between a strongly semantic approach and an inferentialist understanding of information – a conception Floridi uses as a contrast to his own (Floridi 2011:31).

As a consequence, Floridi's semantic approach reveals problems in dealing with non-propositional occasions of epistemic modifications, since it is prone to classify both the worldly occasion and the cognitive effects as 'information' under a semantic description. Although it is certainly true that revisions of belief are best traceable in a propositional mode, there seem to be forms of knowledge that cannot qualify as propositional. Yet other formats of knowledge may appear propositionally individuated, while their content is non-propositionally grounded in phenomenal memories. In other words, if there are non-propositional forms of knowledge, a semantic approach must

implicitly or explicitly exclude those cases from the definition of information. But this leads to a rather restricted conception of information, which falls short on our daily epistemic practices, since these practices do not always draw on propositionally well-formed occasions. Examples for the problematic modes of knowledge in question are those of pictorial representation and other perceptoid signs as well as knowledge about practices, persons, locations and last but not least metaphors as semantic disturbances.

In the light of Floridi's erotetic approach, these modes of knowledge may be represented propositionally as answers to questions, but these propositional means serve mostly in communicative acts about this knowledge, while the means to respond to the question must not be semantically structured. Questions about *how*, *who*, or *where* (Schaffer 2007) in many cases may be reasonably responded to by non-propositional means, like gestures, photos, maps or films. Responses to those questions may be informative, even though there are no propositionally structured expressions or thoughts involved. In some cases, propositionally structured expressions are unavailable or simply no rational means to initiate epistemic modifications. Architectonic, choreographic or simply visual patterns for example cannot be fully 'semantised', while our epistemic practices allow us to 'inform' ourselves and others about those occasions by means beyond semantics - by models, maps, pictures or films, which are quite regularly found in public space under the omnipresent sign 'i'.

Since I am very sympathetic to Floridi's erotetic approach, I wonder if it could integrate answers that do not qualify as propositions – although it might sound paradoxically at first. But our practices of informing ourselves and others show that there are forms of responsiveness that cannot be reduced to knowledge with propositional contours. In this observation of epistemic practices, I see an adequacy-condition for any substantial conception of informativity that matches our self-understanding as epistemic agents. By the use of a pragmatist conception of relevance, it seems to me that Floridi already uses epistemological vocabulary in his account of semantic information upgraded to knowledge. In addition to the problem of non-propositional forms of knowledge, maybe this dealing with relevance amounts not so much to an informational epistemology but to a pragmatist conception of informativity as I will shortly sketch in the last section.

5. *A pragmatist understanding of informativity?*

As developed above, we find a pragmatist perspective implicit in Floridi's use of relevance as a necessary condition for the determination of semantic information and its upgrade to knowledge. With his use of terms like 'informative' and 'relational informativity', Floridi's account of information approximates to a pragmatic conception of information – a task he saw himself unaccomplished so far (Floridi 2004:57). It seems to me that his semantic approach in the end amounts to the missing pragmatic conception as soon as one tries to conceptualise the relation between information and knowledge. But since relevance is determined with respect to an interpreters given knowledge, her abductive competences and her epistemic interests, information – or rather informativity - itself can hardly be a foundational conception for epistemologic enterprises. Informativity in Floridis sense appears to be itself an epistemically derived conception of the very relational property that medial constellations eventually instantiate with respect to pragmatically embedded interpreters.

In my own sketchy words: Informativity depends on a given medial constellation as well as the interpreter, her competence and her contextually variable (epistemic) interests. Thereby it is Floridi's relevance-condition that leads to a pragmatist conception of informativity, which is epistemically framed from the very beginning, as our intuitive use of the word 'information' in descriptions of our everyday epistemic practices suggests. 'Semantisation' is the eminent but only one mode in which epistemic modification takes place. Therefore, information should not be identified with true propositions, since not all formats of knowledge can be subsumed under propositional descriptions. The underlying critique against rash reduction of different types of knowledge to propositional uniform knowing-that concerns the modes of representations of the how, the where, the when, the who etc. Even in respect to seemingly clear cases of knowing-that, pragmatist perspectives point to the contextual factors that can determine different informational contents for the same proposition. The difference in verbal communication that plays a crucial role is the one between propositionally 'minimal' forms of locutions and the

different illocutionary and perlocutionary forces unleashed by them. But in a broader, pragmatist conception of communicative acts one must come to terms with the observation that not only propositionally structured utterances can be informative. All kinds of non-propositional means like intonation, gestures, pictures and so on can be informative, without there being semantic means involved. Another important distinction concerns the difference between the occasions that become informative and the resulting epistemic states. It is this distinction that the metaphor of a transmission of information confuses.

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