Kantian Antinomies in Digital Communications Media

Ejvind Hansen

It is probably no controversial claim to state that there has been a major change in the communicative landscape during the last 10 to 20 years, due to technological innovations that have created utterly new types of digital communicative media. In the following, I apply an analysis, rooted in Kant’s analysis of the antinomies of reason in Critique of Pure Reason, by which I argue that we can see a dogmatic strain in the digital media.

Kant arrives at the discussion of the antinomies in book two, “The Dialectical Inferences of Pure Reason.” The aim of the transcendental dialectic is to articulate some important insights about the relationship of reason to experience, or the logical possibilities that ground the “concepts which understanding frames in regard to objects.” Kant is concerned to combat the rationalist orthodoxy that would derive experiential laws from pure reason. Out of this overriding project, Kant concerns himself not just with disputing the claims of the rationalists, but also with tracing those claims to the “illusions” of reason. It is here that the antinomies take on their philosophical importance.

The antinomies demonstrate that our knowledge about the world is fundamentally indeterminate, since the conflicts that arise between the formal rules of reason and the inductions of understanding cannot be solved by finding one or another side involved in a contradiction:

Since this unity of reason involves a synthesis according to rules, it must conform to the understanding; and yet as demanding absolute unity of synthesis it must at the same time harmonise with reason. But the conditions of this unity are such that when it is adequate to reason it is too great for the understanding;

and when suited to the understanding, too small for reason. There thus arises a conflict which cannot be avoided, do what we will.  

The realization that the indeterminate character of our knowledge is embedded in the relationship between reason and human understanding is an important source for critical reflection. Since we are inevitably bound up in a dialectics between finitude and infinitude, we are never allowed to fall back into a self-assured conviction of the infallibility of our understanding.

I will, however, argue that digital media are characterized by a fundamental finitude. This poses a potential bias in digitally mediated communication of which it is important to be aware. Kantian transcendental dialectics thus proves to be relevant in framing our communication within the digital systems—and in the creation of new media. The point is not that there is never room for critical reflection in digital media, but rather that digital media in certain respects diminishes our awareness of the need for critical reflection.

Before going on to the actual analyses, it is, however, appropriate to make a conceptual clarification. When contemplating digitally mediated communication, it is helpful to distinguish between communicative meaning and the transferred information. I will use the term information in order to designate what is being distributed between the digital tools, over the domain of which a given algorithm will have control, and which constitute representations in various media. Information designates the bits, bytes, numbers, letters, etc. This informational content can, if represented through a proper interface, be interpreted meaningfully. Communicative meaning, on the other hand, is what we exchange when we communicate. In order to get from digital information to meaning, we need a proper interface and an interpreting, spontaneous subject. In this note I will start out with some reflections on the nature of digital information, and from this extract some implications for the resulting communicative meaning.

II.

Ever since Turing in 1936 published his paper on computable numbers, it has been clear that the possibility of reducing the flow of necessary information into a finite number of discrete units, as opposed to the continuously variable flow exploited by analog media, gives us a much more flexible communicative technology. These thoughts came to be a fundamental starting point in the development of the digital media in the late twentieth century. Digital technology can thus be defined through the discrete and finite character of the communicated information.


Digital information is thus finite in its character. Any digital system is at the outset determined as to its reach. The divisibility and extensibility is decided by the system developer(s). This can be demonstrated by considering a simple digital alphabet that contains the letters {A, B}. In a binary digital system with only one bit, which represents the letter A if set, and B if cleared, it is not possible to communicate anything outside the range of {A, B}. An attempt to express either C or @ will be transmitted either as A, B, or nothing at all.

Digital computation is certainly much more complex than what is demonstrated in this example. If the range of {A, B} is too simple, it is possible to create systems in which bits are grouped together, letting specific patterns of successive settings represent various alternate symbols or groups of symbols.

Due to technological advances in digital media, the possible extension and divisibility of various forms of representation has reached a level that seems to be pragmatically adequate. Without this pragmatic adequacy, the media would certainly not have been successful. But on the one hand, this does not change the fact that the degree of extension and divisibility is determined by what the system-developer has decided to make representable, ranging over the possibilities encoded within the brackets of his basic set. On the other hand, human creativity continuously challenges existing systems, and what at one time seems to be adequate may later prove to be a straitjacket or a dead end.

This turns out to be significant because, unlike analog media, the set of information outside of the range chosen does not impinge inside digital media as noise. In analog media, information that is unsuccessfully coded for transmission is most often distributed as various kinds of noise (in a broad sense). The inadequacy of digital media tends to be silent. An attempt to express "C" in the simple system sketched above, will either be transmitted as "A," "B," or nothing at all. The addressee will not be able to determine (at least when looking at the received data in abstraction) that anything else has been sought to be communicated. The fact that there is no residual is not, in other words, synonymous with the fact that there is no problem. There is simply no way, inside the media, to see the problem.

III.

Much can be said about how these characteristics are essential in the overwhelming applicability of digital communicative media. In the following I will, however, mainly focus upon some drawbacks that are also the result of these characteristics. These drawbacks stand out as soon as we turn to an important intuition in Kantian epistemology, which we touched upon in section one.

In the chapter on the antinomies of pure reason, Kant articulates (among other things) a necessary dialectic between infinitude and finitude. According to the theses of the first and second antimony, the world is finite as to its spatial and
temporal extension and divisibility. According to the antitheses of the first and second antinomy, space and time are infinitely extendable and divisible.

Kant's point is that both the theses and the antitheses are unavoidable. They are conclusions into which reason of itself quite unavoidably falls. It certainly guards reason from the slumber of fictitious conviction such as is generated by a purely one-sided illusion, but at the same time subjects it to the temptation either of abandoning itself to a sceptical despair, or of assuming an obstinate attitude, dogmatically committing itself to certain assertions, and refusing to grant a fair hearing to the arguments for the counter-position. Either attitude is the death of sound philosophy, although the former might perhaps be entitled the euthanasia of pure reason.  

Reason is trapped inside this dialectic because it has a spontaneous, systematizing side that focuses upon certain aspects of reality that are granted the status of being more salient or essential than other aspects (in Kantian terms, this is the spontaneous source of knowledge). This aspect of reason tends toward the worldview that is represented in the theses: the world has certain clear limits. On the other hand, reason cannot but be receptive toward the diversity of reality. Insights are not reasonable if they are not somehow in accordance with the world toward which they are directed (in Kantian terms, this is the receptive source of knowledge). This side of reason points toward the worldview represented in the antitheses: any limit or border that is determined is always to some extent an unjustifiable reduction of what the case is. Reality is not reducible to firm and fixed systems. There is always more to it than what can be accounted for in concepts and principles. There is, as it were, a necessary conflict between the attempt to come to grips with the world in a systematic and finite way, and the attempt to account adequately for the worldly manifold in all its complexity.

The finite divisibility and extensibility of digital information points toward the worldview represented in the theses. When communicating through digital media, the received information is determinately finite and discrete. The resulting meaning (knowledge) is thus not challenged by the conclusions of the antitheses. This is not to say that we cannot gain knowledge through digital media. The information that seems from the digital media may have both a receptive and a spontaneous (in the Kantian sense) side. But since the receptive side has been necessarily reduced from its indeterminate diversity to a determinate message, the knowledge that is gained from the digitally mediated communication does not have the same unstable character as knowledge gained through other sources. This is so because the receptively presented information in the digital media is determined by limitations in the system-transcending possibilities. In the example

with the simple digital alphabet \{A, B\} you cannot suddenly be confronted with the surprising information of “C” or “between-A-and-B” that could force you to reconsider your approach to the topic of the exchange. Nothing on the other end of the line will indicate that the speaker wanted to upset the initial set of choices.

This point very quickly becomes less simple as soon as we leave the simple single-bit system and turn toward the more complex systems that characterize actual digital media. Human creativity sometimes manages to find “cracks” in the systems whereby the users are able to introduce elements of communication that were not envisioned by the system developers. This can be done by combining the possible states of information in surprising ways, by embedding the information in surprising combinations of new (and unforeseen) patterns of interpretation. But this does not change the fact that every digital media has certain limits in what can be presented, and that these limits are absolute. Even as the media grow more complex, the rules on combinations still apply: no combination can contain an element that is systematically excluded from the schema of representation. Given this, there is a tendency toward stabilization of the gained knowledge as if excluded elements were not excluded contingently, but excluded because they did not exist.

One might ask in what sense this situation poses a problem. Is it not a good thing that we hereby eliminate possible sources for conflicts? Is not the triumph of digital over analog technology all about the triumph over noise? To have stable knowledge would by many seem to be the very point of the techné. One of the important insights that springs from Kantian epistemology, however, is that knowledge that is not challenged by the intractable character of the given, tends to become dogmatic and loses its relationship to worldly matters. This is so because reasonable inferences happen through a focus upon certain aspects of the world (to extract the special out of the general in a process of abstraction). And this process of abstraction tends to shed the connection to worldly matters outside of the pattern of its expectations if it is not continuously challenged by systems-transcending incidents.

IV.

If we generally communicate through media with a thème character, it is reasonable to expect that the epistemological outlooks will be shaped in that direction as well. The epistemological outlooks thus tend to become dogmatic (in the Kantian sense). My claim is thus that the modern digital communicative media tend to reduce our awareness of the importance of critical reflection and receptivity.


5. An example of this can be found in the introduction of the “smiles” in the ASCII-based emails. I have elaborated this example in a paper called “Explicit Emotions in E-mail Communication” (yet to be published).

And the source of this tendency lies in the absolute degree of the modern digital constitution. There is nothing new in the point that communicative media shape and reduce communication in order to be effective. But what is little noted is that the absolute character of the digital constitutions makes the reduction imperceptible, because any transcendence of the digital system is reduced to silence, not to noise.

This is not to claim that there can be no critical engagement through modern digital communicative media. It is also not to say that there cannot be critical gains in the introduction of digital media. To make such claims would demonstrate an outrageous lack of sensibility as to what has happened inside, for example, various chat, email, and blog communities since the general expansion of the Internet (the digital communicative media par excellence). These communities have amplified critical voices who speak up against, for example, neoliberal globalization (e.g., the Seattle and Attac movements) and non-democratic regimes (e.g., Iranian blog communities).

So my point is not that digital media can never further critical engagement. My point is rather that the dogmatizing character of the digital media may entail a diminishment in our capacity for critical contemplation—except for problems that have already been designated. If our horizon is formed by media in which the indeterminacy of the world is put into fixed frames, we tend to lose our awareness of the unpredictability of the world. More than two hundred years after its publication, we have yet to fully absorb the lessons of Critique of Pure Reason.

David Kishik

Life and Violence

How light power would be, and easy to dismantle, no doubt, if all it did was to observe, spy, detect, prohibit, and punish; but it incites, provokes, produces. It is not simply eye and ear: it makes people act and speak.

Michel Foucault, "Lives of Infamous Men"

The word for "life" and the word for "violence" are etymological neighbors in many languages. Compare, for example, vita and vis in Latin, bios and bia in Greek, jiva and jiva in Sanskrit, as well as the Indo-European *gʰuius and *gʰuie (all the former stand for "life," "aliveness," or "living," while the latter stand for "violence," "force," or "strength"). But when you try to trace a genealogy of this decisive link within the field of theory, rather than that of linguistics, you soon come to face a founding text that is actually a phantom. In a letter to Gershom Scholem from April 17, 1920, Walter Benjamin reveals that he has just finished writing "a very short but timely note" called "Life and Violence" (Leben und Gewalt). In another letter, dated a month later, Benjamin promises to send his friend a copy of the essay, now entitled "Violence and Life," but Scholem claims that it never reached him. Scholars believe that this lost piece was planned to be part of a larger work on the subject of politics, the sole sure survivor of which is "Critique of Violence" from 1921. Perhaps, "Critique of Violence" is "Violence and Life." But even if there were a separate lost text, the surviving essay must be our starting point.

Giorgio Agamben formulates the basic thrust of "Critique of Violence" in the following terms:

The aim of the essay is to ensure the possibility of a violence (the German term Gewalt also means simply power) that lies absolutely "outside" (außerhalb) and "beyond" (jenseits) the law and that, as such, could shatter the dialectic between lawmaking violence and law preserving violence (rechtsetzende und

3. Ibid., p. 164.