Emergent Meaning in the Information Age

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IS THERE A CRISIS OF MEANING PRODUCED BY THE DIGITIZATION OF CULTURE?

In his path-breaking work of the 1930s, The Crisis of European Sciences and Transcendental Phenomenology, Edmund Husserl argued that European culture had necessarily fallen into a crisis of meaning due to the hegemony of Galilean science with its mathematization of nature over the modern concept of knowledge (Husserl, 1970: 5–7). Since meaning and value were not a part of the objectivistic model of Galilean science, this hegemony reduced issues of meaning and value to subjective-relative prejudices outside the sphere of reason. Only a new form of science that would incorporate a conception of subjectivity within itself could restore meaning and value to the centre of the concept of reason and thereby overcome the crisis.

The necessary loss and restoration of meaning was embedded in the mathematization of nature, whereby nature was understood as fundamentally a mathematical structure underneath qualitative and subjective appearance. The relation between number and experience as a world-historical theme is
investigated by other philosophers beside Husserl, of course. Martin Heidegger described information as

> the appraisal that as quickly, comprehensively, unequivocally, and profitably as possible acquaints contemporary humanity with the securing of its necessities, its requirements, and their satisfaction. . . . For the determination of language first of all creates the sufficient grounds for the construction of thinking machines and the building of frameworks for large calculations. . . . As an appraisal, information is also the arrangement that places all objects and stuffs in a form for humans that suffices to securely establish human domination over the whole earth and even over what lies beyond this planet. (Heidegger, 1996: 124)

While this formulation states what is at issue in information as a world-historical form, it states it as a matter of the rule of number over experience, such that the implication can only be (in a manner characteristic of Heidegger’s philosophy) the setting-aside of number for experience, which is stated as an ontology. Thus, his meditation ends by asking, “Are we obliged to find paths upon which thinking is capable of responding to what is worthy of thought instead of, enchanted by calculative thinking, mindlessly passing over what is worthy of thought?” (Heidegger, 1996: 129). While thought indeed needs to pass beyond entrapment within number-thinking, this way of formulating the issue leaves out the possibility that it is number-thinking itself that needs to be thought. Ontology is assumed as a “simply beneath” that can be rediscovered by setting aside the world of abstraction from which number is generated.

Alain Badiou similarly characterizes the rule of number in world-historical form, though in reverse image to the Heideggerian priority of ontology over number. He claims in similar terms to both Heidegger and Husserl that “the reign of number . . . imposes the fallacious idea of a bond between numericality and value, or truth” (2008: 213), but in order to assert that “number is a form of being, and that, far from being subtended by the function of the subject, it is on the contrary the basis of number . . . that the function of the subject receives its small share of being” (2008: 25). Ontology is thus reduced to the presentation of the bare “x” of number theory.

> The first presented multiplicity without concept has to be a multiple of nothing. . . . Ontology commences, ineluctably, once the legislative Ideas of the multiple are unfolded, by the pure utterance of the arbitrariness of a proper name. This name, indexed to the void, is, in a sense
that will always remain enigmatic, the proper name of being. (Badiou, 2007: 57–59)

By reducing ontology to number, in mirror-image to Heidegger’s reduction of number to ontology, Badiou can assert that the primary ontological being is the “x” grounded in set theory—that is to say, a being of no particular sort whose being is only such as to be one of a certain multiplicity.

Only Husserl formulates the issue precisely as one of tracing back the sedimented meanings of formal abstractions to their ground in the lifeworld such that they can be reactivated through phenomenological intuition. It is not only a question of both number and ontology but of the precise connection between number and ontology. This is what is at issue in the Husserlian problematic of “grounding,” or the tracing of abstractions back to their origin in immediate intuition. But I do not want to simply apply a Husserlian account of intuition to the contemporary problem of the cultural meaning of number. Instead, I want to use this contemporary problem to motivate an inquiry into meaning that will require revision of Husserlian phenomenology to complete. While taking its cue from Husserl’s investigation, the current issue is whether contemporary digitization of culture poses a crisis for knowledge comparable to the crisis of the sciences: does the digitization of knowledge undermine the experience and concept of subjectivity that could ground an integration of reason with meaning and value?

WHAT IS THE DIGITIZATION OF CULTURE?

In beginning to define the phenomenon of the digitization of culture, we can take a clue from the structure of the word “digitization” itself, in which the suffix “-ization” means “putting into the form of,” where the form in question is “digit,” or, more commonly, “digital.” Digitization is an active process of putting into digital form that which is not initially in such a form. It is of course the case that contemporary cultural products may be inscribed directly into digital form, but cultural products as a whole have not been in a digital form. Digitization of culture refers both to the direct inscription of cultural products into digital form and the putting of cultural products not in that form into digital form. It is thus both a primary and a secondary cultural process: primary in the sense that it affects the form of some contemporary cultural products in their process of production and secondary in the sense that those that are not so affected in the
process of production are secondarily affected by being subsequently translated into that form. Digitization not only says something about the leading edge of the contemporary cultural process but also something about how the contemporary cultural process incorporates and transforms cultural production and heritage that does not occur at this leading edge.

Digitization is most often defined through the sign system in which it is expressed. As is well known, the digital form is a series of ones and zeros in a binary code. A complex code, a code with many possibilities for inscription of a signifier, conveys a great deal of information with a very few signs. For example, since the English alphabet contains twenty-six signifiers, the mere inscription of a single signifier excludes twenty-five possibilities. A code of several hundred signifiers would exclude several hundred minus one possibility at each inscription. A binary code, by contrast, excludes only one other sign and thus conveys very little information with each inscription. If, however, a very large number of inscriptions are made, a very simple code can convey a large amount of information. A cultural product in digital form is a number, that is to say, an abstract formal sign that, like any sign, is understood as such within a certain code. The simplicity of the binary code requires that the number be exceptionally long. It is this combination of a minimal code and very large capacity for storage that defines digitalization in a technical sense. Texts, photographs, and so on in digital form are expressed as extremely long binary numbers and it is the difference between these numbers that expresses the difference between the cultural products.

Number is a basic and pervasive aspect of human experience. More exactly, the fundamental human experience of speaking can be investigated by formal disciplines that abstract certain features of speech for scientific determination. The formal discipline that studies number concerns itself with the relation between different contents such that they can be collectively connected together. Such collective connection is the essence of counting with numbers. Jacob Klein noted that reflection on speaking leads to the formal disciplines of grammar and logic, but that also

the act of speaking presupposes the distinguishing of one word from another and the relating of one word to another. It presupposes, that is, counting. For counting is distinguishing and at the same time relating one thing to another. At all times, therefore, speaking and the thinking involved in it have been understood as a sort of computing. This does
not mean that in speaking we have an explicit knowledge of numbers. But reflecting and pursuing our exploratory questioning, we arrive at the formal discipline of arithmetic, that is, the science of numbers and their relations on which all our computing is based. (Klein, 1985: 164)

Number is in this sense a formal knowledge of a fundamental aspect of human speech. Digitization relies on this formal discipline to express cultural products as numbers.

Application of the theory of number to digitization yields only a technical definition, however: that is to say, a definition of its internal structure. It does not extend to the use of number in human making or doing, nor, more specifically, to the role of digitization in human culture. While cultural products are expressed digitally as numbers, they function to give a certain form to culture in its role within human experience. We may call this a cultural definition of digitization that would pertain to its primary and secondary roles in culture and the formation of such culture from human experience. For the institution of digital culture, it is not the form of number that matters primarily, but the function of the form of number in human experience and the inserting of this form as the basic process of cultural formation and transmission.

A cultural definition of the digitization of culture is inseparable from the question about the institution of digital culture and the question of whether it provokes a crisis by undermining the integration of reason with meaning and value.

The form of culture constituted by digitization of culture is constituted by the primary and secondary processes of translating culture into numerical form but also making it available within human experience. Clearly, in the secondary process, where a preexisting cultural form is translated into digital form—such as the scanning of a text or photograph and insertion of that scan within a downloadable document—the digital form is a representation of another cultural form (a cultural form that is itself a representation, for example, a text or image) in the sense that it both refers back to that prior form and contains the content of that prior form within itself. Furthermore, it refers back in such a way that the content of that form is made available through the digital form, so that it is not only a representation of a prior form but also an experiential form which is experienced itself as a cultural content. At least in the case of the secondary process, digitization is both the representation of a cultural form and a cultural form itself. In the case of the primary process of digitization of culture,
where a cultural content is inscribed directly into digital form—such as the writing of a text on a computer or taking a photograph on a digital camera and its insertion within a downloadable document—it is clearly a cultural content as an experiential form. Because of the digital form of inscription, however, the cultural content is already “copiable,” or, more exactly, *producible without restriction* (since there is no original) and communicable and therefore represented so that—even though there is no prior cultural form to which it refers—the digital form refers to the cultural content that it itself is.

Thus, the digital form of culture, whether as a primary or secondary process, is both a cultural content and the representation of that same cultural content. The numerical form of digitization, its internal form as captured by a technical definition, when applied to cultural content expressing human experience, enables an identity of that cultural content with its representation. Digital culture is this making-identical of content and representation through the numerical form described in the technical definition of digitization.

Since the content of a cultural expression contains cultural knowledge, and the representation of cultural content makes that knowledge available in a shared framework, digitization of culture is both knowledge and communication. Because of the identity of content and representation in digitization, knowledge and the communication of this same knowledge become identical. The form of digitization collapses the distinction between knowledge and communication—between what is known and persuasion to utilize what is known, or, in the widest possible optic, between science and rhetoric (Angus, 2005). The digitization of culture inaugurates the collapse of this classical distinction because the relation that it establishes between numerical form and cultural content establishes the representation and thus *repeatability* of this cultural content identically with the inscription of the cultural content itself. The digitization of culture institutes *information* as identically the content and representation of culture. In order to understand the concept of information as the central institution of digital culture, we must understand how it collapses knowledge into the form of information and communication into the form of information, such that information is both knowledge and its communication. Information is thus the cultural definition of the digitization of culture that raises the question of whether information provokes a crisis for culture by undermining the integration of reason—which now takes the form of information—with meaning and value. The ground for a retrospective investigation of the institution of digital
culture is the contemporary convergence of knowledge and its communication based upon an inscription that is simultaneously the representation of itself.

INFORMATION AS FORM OF KNOWLEDGE

Information is a form of knowledge that consequently refers to an aspect of the world about which it is knowledge. It formulates, or gives a certain form, to that knowledge. That form is distinct from other forms of knowledge about the world—say, in speaking, or writing, or drawing—even though these other forms can retrospectively be characterized as containing information. Knowledge in the form of information is a historical latecomer that nevertheless can be used to describe some common content of other forms of knowledge.

*Information as Cybernetic Circuit*

The form of knowledge in information conveys two fundamental aspects of knowledge: its quantitative aspect and its relational aspect. Information is knowledge of which one may have “more” or “less,” “enough” or “too much.” It is knowledge understood primarily from the side of its quantity, even though to characterize this quantity it requires a reference to “context,” we usually say very generally, but more exactly to the relational aspect of that information. One has enough or too much information in relation to other information with a greater or lesser proximity, or relevance, to the information in question. The quantity of information is defined through its relational aspect and the relational aspect is defined through an information system. An information system is an organized array of mutually pertinent information.

We may recall here that a cybernetic system—such as a house with a heating regulator inside itself—functions as an internally organized, self-steering, self-correcting, system in relation to its environment such that, while the organization of the internal system responds to the external environment, it is its internal organization that defines the nature of this response.

Feedback is a method of controlling a system by reinserting into it the results of its past performance. If these results are merely used as numerical data for the criticism of the system and its regulation, we have the simple feedback of the control engineers. If, however, the information which proceeds backward from the performance is able to change the general method and pattern of performance, we have a process which may well be called learning. (Wiener, 1954: 61)
Internal self-regulation distances each internal component from its environment by routing this relation through the totality of internal organization. Each internal component of the system reacts to environmental influence through the structuring of the whole system and not individually. This internal organization, which thereby achieves a high degree of self-monitoring and self-correction, is constituted by each internal component of the system functioning as *information* for the other components.

A person inside a house with an internal heating regulator benefits from the maintenance of the temperature of the house at an approximately even level—say between 18 and 20 degrees centigrade—and does not normally need to pay attention to when the heater is functioning and when it is off. However, should the person feel too cold, then it is possible for that person to raise the temperature of the self-regulating sensor a couple of degrees. Ideally, this resetting of the regulator achieves a new equilibrium at which the person feels more comfortable. Note here two things: that changing the regulating level of a self-regulating system, in this simple case, requires an actor who resets the sensor. If the sensor could reset itself, except on a preset model such as a recording device that regularly resets daytime and nighttime sensor temperatures, it arguably becomes a living system because the sensor becomes an actor.

This circular organization constitutes a homeostatic system whose function is to produce and maintain this very same circular system by determining that the *components* that specify it be those whose synthesis or maintenance it secures. Furthermore, this circular organization defines a living system as a unit of interactions and is essential for its maintenance as a unit; that which is not in it is external to it or does not exist. The circular organization in which the *components* that specify it are those whose synthesis or maintenance it secures in a manner such that the product of their functioning is the same functioning organization that produces them, is the living organization. (Maturana and Varela, 1980: 9)

In responding as a self-organized system to environmental prodding, such that the sensor resets itself differently to monitor the functioning of the system as a whole, the sensor acts as the overseer of the whole information system—the part that regulates the whole in response to environmental prodding. This would be the bottom line of a biological, living system as opposed to the physical, first-order cybernetic one.
The second thing to note is that the person who feels cold feels cold. From the viewpoint of the system, the feeling cold functions as information for the resetting of the regulator. Feeling cold becomes information by being set within the relational context of other information such that it functions as information. But one can feel cold without it becoming such information. I may simply remain cold because it is not my house to alter or because I can’t afford more oil or gas. Information contains a reference to what I called previously a “cultural content,” or in this case a physiocultural state of feeling cold, but it is not this aspect of material cultural content itself. This is precisely what is achieved by the intensification of internal organization such that reference to the environment is routed through the totality of the system rather than each component individually so responding. The form of information is quantitative relation to other information within an organized system, not directly to states of affairs outside those relations. The development of the concept of information from that of a self-regulating, cybernetic system means that information is simultaneously both the movement of information within a system and the self-monitoring and self-regulation of that system. Practice and the theory of that practice collapse in cybernetic information. Knowledge has become information in a form that converges with its communication.

FROM INFORMATION TO EMERGENT MEANING

This preliminary characterization of information as a quantitative and relational form of knowledge allows a more detailed schematization of levels of complexity of information. This schematization elaborates a cultural definition of digitization, which refers to the way number in its digital systematization functions within human experience by inserting this form into the basic process of cultural formation and transmission.

The smallest amount of information is the piece. A piece of information can only be defined as the smallest amount with reference to the topic or theme in relation to which it functions as information—that is to say, the relational totality of relevant information. This determination is impossible without a

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a In Love the Questions: University Education and Enlightenment I used the term “bit” but distinguished it from its technical meaning. It now seems clearer to adopt a different terminology entirely for the cultural definition and classification of information (Angus, 2009: 113–6).
much greater and more complex arrangement of information than the piece itself. There is always more than one piece of information but the relevance of a piece depends upon a totality of information, not its reference to an element of the experienced world, and can in that sense only be defined retrospectively, as it were, as a piece of a totality. This totality of information can appear in two forms: as an indeterminate multitude of other pieces of information or as a totality organized by a theme. Here we have, *in nuce*, the cultural problem of information: there is a great deal of it and it isn’t necessarily organized into a meaningful whole. The problem of the meaning and value of the digitization of culture is in large part contained in the issue of how a plethora of pieces of information might be selected and organized to become a meaningful whole. And the cultural failure to be able to institutionalize this process of selection and organization may indeed be called a “crisis of culture.”

We may distinguish three higher-level collectivities of pieces of information that are built upon this primitive piece. There is a *pile* of information, which is an unorganized larger collection with indefinite magnitude made up of individual pieces of information. Such a pile exhibits the cultural crisis: we have piles of information without a sense of the relevance of piece to pile or overlap of piles. We are awash in such a plurality of piles, so much so that the coherence that a culture requires to organize its sense of meaning and value is essentially lacking. We don’t know when we have enough information, when we have too much, or whether the information being gathered is of any real relevance.

Out of several piles of information, a *bunch* of information might, under certain conditions, be constituted—and here we would have the first step out of the crisis. I use the term “bunch” here thinking of a bunch of grapes or flowers, or fingers bunched into a fist. It signifies in the first place a significant number—at least a pile, and maybe several piles—but, more important, a pile with a certain sort of discernible, though perhaps weak, organization within itself. Flowers are bunched by florists according to their shape and colour; grapes are bunched by the logic of growth in their stems; a fist is bunched by its fingers and cannot contain a toe. The transformation of a pile, or several piles, into a bunch involves the problem of *emergent organization* that can, if sufficiently followed through, lead to the organization of knowledge in the form of information into cultural knowledge pertinent to the organization and persistence of a culture in time and space. If we can determine, in micro-logical fashion, what happens to turn a pile into a bunch, then we begin to address the construction of cultural meaning in the age of information.
Bunches of information can be collected into a discourse. By a discourse I mean an organized presentation of bunches of information that elaborates a coherent perspective on a theme. The term “discourse” breaks from the primarily quantitative terminology that precedes it to emphasize the internal qualitative organization that it achieves, such that cultural meaning is expressed and the discourse itself can enter into a wider relation between discourses that address cultural value.

Now, all I have done here is to propose a terminology that aims to aid the definition of the problem of the crisis of culture in the age of information. The terminology can neither solve the problem nor even assert that the problem can be, in principle, resolved. It does, however, pinpoint where such a resolution is to be sought and what would constitute the possibility of such a resolution. How, out of the combination of higher collectivities of pieces of information, can a meaningful whole emerge that would be comparable to earlier discourses of cultural meaning and value that did not begin from the quantitative and relational form of information?

The fundamental difference that distinguishes this proposed form of emergent meaning from information from earlier meaningful cultural wholes is that such wholes were articulated in the first place as wholes with parts whose place within the whole was thereby determined. Their relative natural worldview, to use Max Scheler’s terminology (Scheler, 1980: 74), was given as a whole whose wholeness expressed meaning and value. Their problem, therefore, was to ask how a given situation that implicated a distinct part of the cultural whole could be understood and evaluated in relation to that cultural whole. Questions were oriented, first, to how this situation should be characterized in relation to distinct parts of the cultural whole and, second, to how the cultural whole determined the meaning and value of the part. Our problem is the inverse, though not the extant inverse. In any situation there is a plethora of information. Any piece of information coexists with an indefinite, but very large, plurality of other pieces of information. Every piece of information thus appears within an indefinite horizon represented by the Internet as the source of multitudes of more information. Our problem is how individual pieces of information within this indefinite horizon can become sufficiently organized to express cultural meaning and not fall back into the persistent background buzz of accumulating information.

Out of this organization, through the process of emergent meaning—if there can indeed be such a process—would be constructed a subject of discourse.
that could engage in the constitution of cultural meaning and value. The many discourses today that lament the decline of the subject, and the crisis of meaning, basically assume that such a process of emergent meaning is impossible, so that contemporary digitized culture cannot be a culture in anything like the sense in which we used to talk about cultural meaning. A contemporary subject of cultural meaning would be an emergent property of higher-level collectivities of information.

Overcoming the crisis of meaning and value produced by the digitization of culture would have to show that such emergent structure that could confer subjectivity and meaning is indeed possible under certain conditions even in the age of information. But before addressing this fundamental issue, let us address the second aspect of information brought forward by the collapse of knowledge and its communication: information as a medium of translation between media of communication.

INFORMATION AS MEDIUM OF TRANSLATION

Prior to the convergence of knowledge and its communication in information, one could distinguish between knowledge as a cultural content and its communication, or, in classical terms, philosophy and rhetoric (Angus, 2005). Communication can be studied from the viewpoint of its cultural content and its influence on the sociocultural formation or it can be studied from the viewpoint of the medium of communication that conveys the cultural content from place to place, or subject to subject, to exert an influence. If one focuses on the cultural content of communication, the specificity of the medium of communication recedes, whereas if one focuses on the medium of communication, the cultural content recedes in favour of the material relations constituted by the medium. Since the phenomenon of the digitization of culture includes within itself the possibility of the communication of cultural content—that is to say, the dispersal through the internet and related channels—that focus on the medium of communication is essential to pose the question of the implications for meaning and value.

Theory of Media of Communication

A medium of communication sets up a relationship between a point of origin and a point of termination of the communication that is inscribed within a given medium; for example, a relationship between a speaker, author, or sender and
an auditor, reader, or receiver. The nature of this relationship is defined by the specific character of the medium in each case. So that the relationship between speaker and auditor, in the case of the medium of speech, sets up a face-to-face relation that, consequently, includes aspects of appearance, gesture, and timbre. Author and reader are separated by an indefinite distance and therefore do not meet face to face, but through a text that is written on paper, papyrus, scroll, or computer screen. Appearance, gesture, and timbre are absent but finished, repeatable, and portable text allows for an individual distanced from surrounding social relations to be absorbed in the meaning of the text, to reflect upon it, to return to check it, and to later communicate with other readers of the same text (who read it at widely separated times and places). The study of various media of communication and their inherent features, including the way in which they affect social relationships and the circulation of meaning in a culture, is now an established field of study that is nowadays called “media ecology” (Angus, 2000: 37–38).

In the context of the digitization of culture, however, the main concern is not the shifting relationships among media of communication, the media ecology, but rather the status of digitized communications within the media ecology. It is often unclear whether the digital medium should be treated as a new medium of communication, in principle comparable to other media such as speech, scroll, book, radio, television, and so on, or whether it is an influence—perhaps an external influence based in electric or computer technology—that acts on all media. The latter captures something of the truth, insofar as any content of any medium can be given a digital form. This is why digitization poses a crisis for cultural meaning and value and is not just a shift within the media ecology. But a closer look will allow a more exact definition.

If we look at a computer screen as a contemporary user experiences it, we experience in succession written text, recorded speech, diagrams and illustrations, photographs, music, musical notation, and more. Each of these might previously have been considered a separate medium. But nowhere do we experience “the digital” as the content of the screen. The computer screen that connects with other computer screens does set up a determinate lateral relation between users. Much has been made of the “network” relation that computer communication constitutes. Enthusiasts often claim that such non-hierarchical networks prefigure a new form of democracy, whereas conservatives wonder whether the speed and immediacy of contact eliminates the space required for reflective thought.
The social relationship that inheres in computer communication is indeed of the network kind and this is undoubtedly of great significance, but neither can it be overlooked that the different media of communication that appear on the screen suggest that digital communication is not a medium in the same sense as the other media that it often uses and portrays.

Let us note a couple of aspects of this situation: First, while different media and their contents are portrayed, or represented, on the screen as a content, this is done in a manner that re-embeds them within the network social relations of digital communication. As Marshall McLuhan often reminded us (McLuhan, 1964: 60), media are not simply separate; in the media ecology, the content of a new medium is often an old medium. The huckster, the town crier, and the play appear on television, for example. In so doing, the previous media become content (in the sense that they are what is represented) while the social relations that were constituted by the old medium disappear in the new. It seems clear that this also happens with digital communication: books downloaded to be read appear alongside other digital possibilities and within the network of social relations that they constitute. In this sense, digitization is a medium resembling previous media, in that its constitutive social relations resituate those of other media as its manifest content.

We should note also, however, that the fact that these materials appear alongside each other allows for them to be edited and assembled in new ways. Again, we may see an analogy in the way that television allowed selling, announcing, and entertaining to enter into new relationships. But there is something more going on with digitization: all of these media forms—including the computer form, if we wish—can be translated into and out of each other through digitization, such that digitization is a universal medium of translation of cultural contents. It translates the contents of any medium into itself and thus can, with great speed, edit and reassemble them, and then re-embed the new content in another medium—either itself or in printed form as a book, a photo, and more. The aspects of representation and constitution are in principle collapsed through a universal medium of translation, even though the final content becomes re-embedded in a specific medium where the constitutive social relations of that medium apply. This distinction is not often clear because we tend to assume—living, as we do, within the predominance of the digital medium—that the re-embedding will always be of digital form. This, even though we often print up written texts and use them as if they were written manuscripts at academic conferences in a manner no different than many years ago.
Digitization functions as both a universal medium of translation and also as a specific medium comparable to others, in that its specific network social relations prevail when re-embedding is within the digital form. Digitization is both a specific medium of communication and a medium of translation between media of communication. While previous media translated prior media when appropriate and possible, digitization is distinguished by its possibility of universal translation and also by the fact that, since it obviously coexists with itself, re-embedding of the translated contents is likely to be within the digital medium. Perhaps we should reserve this latter possibility for consideration of the digitization of culture: not only the translating of all prior cultural content into digital form but the re-embedding of the products of such translation within the digital medium.

**Digitization and Cultural Meaning**

We need, then, to isolate what aspects of this full digital medium of both translation and communication pose issues for cultural meaning and value. It is no secret that the key aspect of digital translation and communication is speed. Conversely, we may say that every form of limited translation between media prior to digitization required an essential delay characteristic of the medium in question. A culture, which may be defined as a media ecology in temporary equilibrium, is defined formally by the speed, or delay, in translation between media. It is defined substantially by the cultural content transmitted through the media ecology—which is to say, equally by those silences constituted by what is untranslatable between media of communication in the media ecology. Delay in translation sets the formal boundaries of cultural content and innovation, whereas the cultural content that is itself communicated is simultaneously haunted by the impossible translations of content that construct the cultural unconscious—that which is not sayable within the media ecology and/or pushed to its margins by the dominant media. Thus, one structuring feature of digital culture is nearly simultaneous translation/communication such that the boundaries of previously separate cultures are routinely transgressed. Such transgression means that products of digital culture are necessarily interpreted within different cultural meanings than those that dominated during their production. Digital culture in this sense subverts any established context of interpretation and replaces such previously stable contexts with the necessity for an interpreter to establish a context of interpretation. Cultural interpretation becomes transversal and abandons the problem of depth. To summarize, while previous cultural
productions were produced and interpreted within relatively stable contexts of meaning, so that it was the search for an adequate interpretation that dominated cultural meaning, contemporary digital culture produces the search for a relevant context of interpretation and tends to regard any proffered interpretation as simply one possible interpretation among others (Poster, 2006).

If we understand culture at least provisionally in this fashion, as defined by the media ecology, then two characteristics of digitization stand out: First, speed of translation and communication means that delay in translation between media is increasingly reduced to zero. Second, digitization as a universal medium of translation means that the silences produced by impossible translations are increasingly reduced to zero. This is the basis of the common observation that information is accelerating beyond all capacity to follow it while the meaning of such information is increasingly hard to fathom. Digitization of culture does indeed pose a crisis for culture because, without delay and silence, culture approximates a pure transparency without stabilized meaning. This transparency is often the subject of either utopian praise or dystopian blame because it undermines any stable context of meaning, but it is more significant at this point to ask what such transparency does to contemporary possibilities for the interpretation of cultural meaning—for “crisis” understood as both loss and recovery, in Husserl’s sense.

The form of communication as information through universal translation between media means that communication converges with knowledge. A meta-medium of translation is the basis for defining the specific form of knowledge inherent in each medium. Communication in this form converges with knowledge as self-monitoring to become the form of information.

**DOES DIGITIZATION PROVOKE A CRISIS OF MEANING AND VALUE?**

The difficulty of a diagnosis of crisis is that one has to show how a grave issue arises necessarily, and not merely contingently, within the current situation and, simultaneously, through this same diagnosis, how this grave issue can be overcome. Crisis is neither decline nor ascent. It is a moment of decision in which the necessity of decline and the possibility of ascent are grounded in the phenomenon itself such that diagnosis points the way to a possible solution even though it cannot guarantee an outcome. Cultural crisis encapsulates our own struggles with meaning and value. Out of the cultural definition of information
we need to clarify the necessity of decline and the possibility of ascent. This is the substance of our conclusion.

Information becomes the central institution of digital culture by collapsing knowledge into the form of information and communication into the form of information, such that information is both knowledge and its communication. Digitization of culture is instituted as both knowledge and communication that is identically the content and representation of culture, its *doing* as well as its *monitoring*, in the form of information. This convergence, or collapse, of classical distinctions between content/representation, practice/theory, and knowledge/communication clarifies the ground of the institution of digital culture. The above sections investigated information-as-knowledge and information-as-communication separately, in order to clarify the nature of this convergence.

The question animating this analysis is the significance for meaning and value of the digitization of culture. In investigating information as knowledge earlier in this chapter, we have seen that information as knowledge poses the issue of how emergent meaning can appear in successively more complex collectivities of information built up out of its simple pieces. The core of this question—how quantity of information can turn into a structuring quality—was posed above, though not yet addressed directly. In investigating information as communication in that section of this chapter, we have seen that information as a medium of translation poses the issue of a culture increasingly tending toward transparency. Since information collapses the distinction between knowledge and the communication of this same knowledge, it is time, in conclusion, for us to address how both of these aspects of information stand with the crisis of meaning and value in digitized culture.

Let us state in summary form the characteristics of information that allow us to understand it as the institution of digital culture: information is both knowledge and its communication, content and representation; it operates within a self-monitoring and self-regulating network; it is a universal medium of translation of cultural contents which can define the knowledge-boundaries of different media of communication.

Our two parallel inquiries lead us to the two convergent aspects of the fundamental situation of the digitization of culture: Since every piece of information occurs within a horizon that includes an indefinite and very large number of pieces of information, how can an emergent structure appear within a pile of information? Since the speed of digital translation and communication reduces the delay traditionally attached to cultural translation and communication to
approximately zero, which means that the silences that constitute the unconscious of a cultural form also reduce to relatively zero, how can meaning and value congeal within the context of such a transparency of cultural meaning? Putting both of these formulations together: how can meaning and value emerge from the structuring of piles of information within the infinite horizon of a cultural form of pure presence, with neither silence nor unconscious, constituted by immediate transmission? From where can structuring come if not from the silence and delay that has determined subject-positions within a culture?

The characteristics of information show that digitization does indeed provoke a crisis of culture: without delay and silence, culture approximates a pure transparency; even though information contains the possibility of emergent meaning, such meaning does not emerge directly or automatically from the accumulation of information. The danger of pure transparency is lack of meaning or value. Restoration of meaning and value through emergent meaning implies that—unlike the subsumption and organization of individual meaning by an overweening “relative natural worldview” in traditional meaning systems—emergent meanings contain the possibility of bottom-up meaning construction.

The clue here is in the observation that in the construction of a circuit of information, “feeling cold” motivates the sensor to re-establish a renewed equilibrium between regulator and environment. “Feeling cold” in this context functions as information for the whole information system, even while the “feeling cold” itself is left outside by that system, since the perceiving itself is not information but perception. Information is quantitative and relational, whereas, even for a node within the system, the feeling of the “feeling cold” is a state of affairs, or a perception. In other words, the rendering as quantitative and relational renders the specificity of the registering of the state of affairs as irrelevant to quantitative relationality. Note that this “feeling cold” does not refer to a subject outside the information system, but to a node of perception within it. Similarly, I will not appeal to a subject external to the epoch of information but to perceptual nodes within it. Nevertheless, I am arguing, the difference between a registering perceptive state of affairs and its quantitative-relational reckoning within a total information system still applies.

It is this registering node within the information system that, when cancelled or ignored, produces the crisis of digital culture. Similarly, it is the generation of a different attitude from this registering node that can overcome the crisis. As delay and silence approach zero, the node is cancelled as a registering site,
to become almost entirely absorbed into the information system as a whole. But this absorption can never be complete. It is in the small and continuous difference between complete absorption and the singularity of the registering site that the crisis and healing of digital culture occur. How does this difference appear and how can it be widened into cultural meaning?

If the registering at the registering site is accepted as itself a phenomenon of interest, the speed of absorption is slowed and from this delay originates the emergence of structuring of piles of information. This phenomenon may be called intensity. I have spoken up until now of “meaning and value” as one phrase, but whereas “meaning” traditionally would be considered prior to a higher-level valuation, I want to suggest that this relation has reversed because of the epochal form of information. The root experience of value is the significance of the singularity of the registering site as a site for interest and investigation, to which the term “intensity” refers. Such intensity can be characterized as a remnant of Husserl’s demand that sign-systems, such as numbers, be rooted in immediate intuition: it no longer has the self-evidence and universality required by Husserl but does contain the “experiential” moment on which these were based—even though “experience” here is no longer a presupposed foundation but a lack found within sign-systems that points to an outside always operative in every actual operation of a sign-system. To be information, a sign-system must matter, and in mattering it encounters a singularity of a certain intensity. The intensity of the registering is the delay of absorption into the information circuit, which provides the motive for structuring piles of information that constitutes value and thereby the meaning of such piles as they become bunches and discourses.

Such an embrace of the singularity of the registering site focuses on the intensity of the registering as that which in the registering is not taken up into the circuit. It is a localizing move (Angus, 2008: 13–36). This intensity becomes structuring as a value that grounds the emergent meaning of bunches of information. It is a risk taken at the registering site, and even by the registering site, which is co-extensive with philosophy itself.4 Once the node becomes a site or location, and not merely a node in a circuit, as a result of the intensive singularity of its registering, value and meaning emerge to structure information. Such value and meaning institute delays and silences that form the horizon of a culture. A culture is instituted that is not digital culture but an emergent culture within digitization.
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NOTES

1 Media ecology has also been called the “Toronto School of Communication” due to the fact that Eric Havelock, Harold Innis, and Marshall McLuhan each worked, at least for a while, in Toronto. In my previous work (Angus, 2000), I have used the term “comparative media theory” to underline that the characteristics of a given medium only become clear when one is “outside” that medium, that is to say, within another medium. I have discussed the relative validity of the various terms and the contemporary near-consensus on “media ecology” in an interview (Ralon).

2 The recognition of this universality of translation that is becoming ubiquitous in contemporary civilization is the key factor that takes media analysis from being a mere catalogue of different forms toward a general theory of culture. “Now that we have extended not just our physical organs but the nervous system, itself, in electric technology, the principle of specialism and division as a factor of speed no longer applies. When information moves at the speed of signs in the central nervous system, man is confronted with the obsolescence of all earlier forms of acceleration, such as road and rail. What emerges is a total field of inclusive awareness” (McLuhan, 1964: 103). “The general digitalization of channels and information erases the differences among individual media” (Kittler, 1999: 1).

3 This is a universalization of the changed situation of the classical practice of quotation that I have previously analyzed. “There is a reversal here of the relationships of (in)completion as they occur in traditional quotation. In quotation, the single quotation is incomplete in the sense that its complete meaning depends on the whole text—the original text, the new text, and the relation between the two. Incompletion is on the side of the quotation whereas completion is on the side of the whole text. In contrast, a bit of information is complete since it is single and closed upon itself, whereas its proximity to other bits through the infinite addition made possible by the Internet renders it incomplete. The larger structure is now incomplete; the smaller structure is complete. Is it any wonder that knowledge has come to mean bits of information?” (Angus, 2009: 116).
“The beginning of philosophy is in a decisive act whereby the situation of the thinker is interrogated as a way of understanding the human condition. . . . One is forced to risk a decisive act that institutes, brings into being, a philosophy” (Angus, 1997: 105).

REFERENCES


Ralon, Laureano. “Interview with Ian Angus.” Available at *Figure/Ground Communication* website at http://figureground.ca/interviews/ian-angus/.
