RECLAIMING COMMUNICATION FROM INFORMATION

Knowing in the Digital Age

One of the deep areas of confusion accounting for the culturally fraught character of our contemporary digital media environment is the relationship between communication and information—and, further, the relationship communication and information have to knowledge. Indeed the very ontology of computer circuits as processors of information in its most elementary quantified form—that is, as binary digits or answers to the question as to whether a particular voltage in a circuit will take the state represented as 1 or 0, yes or no—means that in the digital environment, we truly live in a world of—at least digitized—information. At the same time, in the very name designating many of the instruments and devices responsible for the transmission of this information—that is, ICTs or Information Communication Technologies—we are presented with the fact that in our digital environment we are not just transmitting and receiving information but that, in doing so, we are also "communicating."

However, it is by no means evident that, when we communicate, we are only communicating information. This seems to be the case if information is understood as simple binary yes-no answers resolving uncertainty, along with the more everyday understanding of information as, according to the Stanford Encyclopedia of Philosophy, "any amount of data, code or text that is stored, sent, received or manipulated in any medium."[1] Indeed, if communication were to be understood in terms of such informational transmission and manipulation, the human experience would seemingly devolve into a form of mechanistic utilitarianism.

Of course, such mechanistic devolution has formed the basis for a widespread critique of technological man by thinkers who laid the ground for some of the major concerns of contemporary philosophy. The phenomenologist Edmund Husserl (1859-1938), for instance, identified a "crisis of the European sciences" that could be traced to the so-called "mathematization of nature" set in motion by the 17th century scientific

[1] Pieter Adriaans. "Information." The Stanford Encyclopedia of Philosophy, last modified Nov 1, 2023.

innovations of Galileo.[2] Husserl's objection was that such mathematization tended to conceive the world as if it consisted, in its very ontology, of the formal abstractions arrived at by the human mind. In other words, this modern conception of space, which reigned from the 17th century to Husserl's—and perhaps even to our own—time, failed to acknowledge its own underlying reality—namely that it attributed to the world itself what was only a mental idealization of the world, thereby disregarding the existential and interpretive process through which the human being imposes such an idealization onto one's lifeworld. The crisis resulting from this conception of space, according to Husserl, is that the scientific and technical objectification of the human lifeworld seemed to have no place for human subjectivity itself as a rationally accessible but nevertheless transcendental phenomenon. In other words, the sense of what was true, as discovered by rational scientific method, could no longer be coherently reconciled with the sense of metaphysical and ethical value tied to the living experience of the human person.

1. The Transmission vs. Ritual Views of Communication

Husserl's phenomenological critique of technological modernity can be viewed in a more contemporary light in the work of the late 20th century media scholar James W. Carey, who frames the same mechanistic model of human culture (along with its alternative) in terms of the communication and media forms that have come to structure our present social experience.[3]

Drawing explicitly on the American pragmatist philosopher John Dewey—though likely bearing a closer relationship to the Canadian communication theory of Harold Innis[4]—Carey identifies two opposing views of communication in American society. The more prominent view Carey calls "the transmission view of communication." In this view, Husserl's (along with his student Martin Heidegger's) description of the mathematization of nature becomes a model for human culture. That is to say, communication is conceived quantitatively according to a neutral expanse of space through which particles of information are transmitted. Just like Galileo's substitution of the actual being of the world for a mental idealization allowing for scientific control of the world, the transmission view of communication sees space as a potential commodity to be conquered by way of faster and larger amounts of information transmission. As Carey writes:[5]

> [In the transmission view, communication] is defined by terms such as "imparting," "sending," "transmitting," or "giving information to others." It is formed from a metaphor of geography or transportation. In the nineteenth century but to a lesser extent today, the movement of goods or people and the movement of information were seen as essentially identical processes and both were described by the common noun "communication." The center of this idea of communication is the transmission of signals or messages over

[2] Edmund Husserl, The Crisis of European Sciences and Transcendental Phenomenology: An Introduction to Phenomenological Philosophy, trans. David Carr (Evanston: Northwestern University Press, 1970), 21-59.

[3] James W. Carey , "A Cultural Approach to Communication," in Communication as Culture: Essays on Media and Society (New York: Routledge, 2009), 11-28.

[4] Cf. Harold A. Innis, The Bias of Communication, (Canada: University of Toronto Press, 1951).

[5] Carey, 12.

> distance for the purpose of control. It is a view of communication that derives from one of the most ancient of human dreams: the desire to increase the speed and effect of messages as they travel in space.

Concluding his description by referencing his own American identity, Carey writes, "our basic orientation to communication remains grounded, at the deepest roots of our thinking, in the idea of transmission: communication is a process whereby messages are transmitted and distributed in space for the control of distance and people."[6]

Distinguished from the "transmission view of communication" is what Carey calls the "ritual view of communication." Aligned closely with Heidegger's formulation of the existential integration of *building* (i.e. technique) and *dwelling* (i.e. contemplation),[7] the ritual view of communication, Carey notes, "sees the original or highest manifestation of communication not in the transmission of intelligent information but in the construction and maintenance of an ordered, meaningful cultural world."[8] According to this view, then, communication does not consist in sending a certain quantity of information from one place to another, but rather in the constitution of a cultural environment that is capable of *communicating communion*—or, rather, imparting the fundamental existential, and even transcendental, meaning, which provides the essential connective power underlying a community's ability to dwell. As Carey writes,[9]

> In a ritual definition, communication is linked to terms such as 'sharing,' 'participation,' 'association,' 'fellowship,' and 'the possession of a common faith.' This definition exploits the ancient identity and common roots of the terms 'commonness,' 'communion,' 'community,' and 'communication'… If the archetypal case of communication under a transmission view is the extension of messages across geography for the purpose of control, the archetypal case under a ritual view is the sacred ceremony that draws persons together in fellowship and commonality.

Carey's association of the sacred with the ritual view of communication recalls Heidegger's grounding of true building or *techné*[10] in the capacity of any artifactual form or system of forms to instantiate patterns of dwelling that communicate—or make "common"—the overarching pattern of existence itself that gives meaning and order to our daily lives.

However, underlying the ways in which the terms "information" and "communication" are conflated, and thus problematically understood, in the contemporary technological environment is the important fact that, throughout its historical genesis and development, the so-called "transmission view of information" advanced a particular attitude toward the divine—namely that the human connection to God was fostered, precisely, by the

---

[6] Ibid, 13.

[7] Cf. Martin Heidegger, "Building Dwelling Thinking,"in Basic Writings, (New York: HarperCollins Publishers, 1977), 343-363.

[8] Carey, 15.

[9] Ibid.

[10] Cf. Heidegger, 361. The Ancient Greek etymology of techné, Heidegger notes, pertains to the sense in which "to bring forth or to produce" is the mode by which the very essence of beings is brought forth to human perception. As Heidegger writes, "To the Greeks techné means neither art nor handicraft but, rather, to make something appear, within what is present, as this or that, in this way or that way".

development of new communication technologies which could conquer space, and the human minds within it, more effectively.

Historically aligned with the mechanized conception of space indicative of Galileo's scientific innovations, this attitude can be traced to the 17th century colonization of New England by Puritan European settlers, who aimed to establish a "New Jerusalem" in the New World of America. The extension of the Puritan community in space, including the transmission of the Christian faith to indigenous populations, was thus equated with an extension of God's kingdom, laying the ideological background for American consciousness through the belief, as Carey writes, "that movement in space could be in itself a redemptive act."[11] As new technologies, such as the railroad and electric telegraph, created more powerful ways of transmitting people and messages through space, the conflation of spirituality with spatial extension was redefined more specifically as the spiritualization of technology itself. As Carey writes, "This new technology entered American discussions not as a mundane fact but as divinely inspired for the purposes of spreading the Christian message farther and faster, eclipsing time and transcending space, saving the heathen, bringing closer and making more probable the day of salvation."[12]

2. Cybernetics as the Conflation of the Two Views

As the explicit faith of Protestant Christianity began to decline through the secularization of American culture, the identification of technology and salvation remained, and perhaps even intensified. In the context of the digital media environment, for instance, the conflation between information and communication by way of a deeper conflation between technology and spiritual liberation may be seen to lay the very foundation for many of the technical and cultural developments associated with the networked personal computer. In his 2006 book *From Counterculture to Cyberculture*, for instance, Fred Turner illuminates the relationship between the psychedelic counterculture of the 1960s and the application of the new science of cybernetics to the design of digitally networked systems integrating man and machine.

The very title of the 1948 book *Cybernetics: Or Control and Communication in the Animal and the Machine*—the book in which the inventor of cybernetics Norbert Wiener first presented his ideas to the mass public—suggested a new and exciting homogeneity in conceptualizing the primary functions of both animate and inanimate beings, and of communication and information processing. The basic approach of cybernetics originated in Wiener's research at MIT's Radiation Laboratory, which was formed in 1940 as part of the American and British attempt to develop radar technologies for World War II. Working with the engineer Julian Bigelow, Wiener designed a predictor machine, which employed radar and statistical information to determine the future trajectory of an enemy plane for an anti-aircraft gunner. The revolutionary insight that occurred to Wiener was that in order to model the process of tracking and shooting down an enemy plane, both the machines and the humans operating the machines, needed to be reduced to the same mathematical equations. That is, the probabilities according to which the enemy pilot and the anti-aircraft shooter adapt their behavior in specific ways through feedback—or, in other words, through processing the effects of their actions as self-

[11] Carey, 13.

[12] Ibid, 14.

correcting information—needed to be quantified as intrinsic to the structural functions of the anti-aircraft predictor.[13]

In conceptualizing this overall human-machine assemblage as a purposive system, which corrects itself through responding to informational feedback—thus generating what later became known as a "feedback loop"—Wiener viewed the human-machine interaction as a "servomechanism" akin to the 18th century steam governor. Consisting of rotating mechanical arms that could regulate the speed of an engine through automatically opening and closing a steam valve, the steam governor was an early example of a feedback loop and provided one of the inspirations behind the term cybernetics, which comes from the Greek *kybernētēs* meaning "steersman" or "governor."

Significantly, that the type of governor central to a cybernetic system refers not to human action and deliberation but rather to the ways in which such human action can be identified with any self-sustaining—or homeostatic—process governed by the informational processing of feedback would seem to indicate a steep decline in the social and metaphysical status of human agency. As Turner points out, however, Wiener viewed the cybernetic analysis of systems as providing a profitable lens to view universal order in its various forms ranging from the self-regulating behavior of organisms to that of society itself. As Turner writes,[14]

> Wiener and Bigelow offered up a picture of humans and machines as dynamic, collaborating elements in a single, highly fluid, socio-technical system… [Wiener] argued that society as a whole, as well as its constituent organizational parts, functioned much like organisms and machines. That is, society could be seen as a system seeking self-regulation through the processing of messages. In Wiener's analogy, for instance, public information systems such as the media served as servomechanisms. The TV screen became to the society as a whole what the radar screen was to the World War II gunner—a system through which to measure and adjust the system's performance. Wiener believed that the media ideally served to 'correct' the actions of public leaders by offering them accurate information about the performance of society as a whole.

Much more than Wiener, however, social theorists, computer engineers, and countercultural figures in the 1960s-1970s saw cybernetics as providing a new ecological paradigm that could spiritually elevate human consciousness itself. Thus, referring to his philosophical approach as a "cybernetic epistemology,"[15] the anthropologist Gregory Bateson believed that viewing all existent entities as interlinked systems and subsystems of information processing would lead to a more profound cosmic knowledge—and even wisdom—through surmounting the rigid categorical distinctions of the past, which threatened the well-being of the interconnected systems in which human life was embedded. Accordingly, in his 1972 book *Steps to an Ecology of Mind,* Bateson reframes traditional monotheistic spirituality by identifying God with an overall planetary intelligence which emerges through the adaptation and homeostatic order indicative of subsystems mutually constituting each other

---

[13] Cf. the discussion in Fred Turner, From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism (Chicago: University of Chicago Press, 2006), 18-24.

[14] Ibid, 22-23.

[15] Cf. Gregory Bateson, "Form, Substance, and Difference," in Steps to an Ecology of Mind (New York: Ballantine Books, 1972), 461.

and co-evolving through continually processing each other's messages as feedback. He writes, 'The individual mind is immanent but not only in the body. It is immanent also in pathways and messages outside the body; and there is a larger Mind of which the individual mind is only a sub-system. This larger Mind is comparable to God and is perhaps what some people mean by 'God,' but it is still immanent in the total interconnected social system and planetary ecology."[16]

Applied to digital technology, such a view reflected the computer engineer Douglas Engelbart's vision for his Augmentation Research Center, established at Stanford in the 1960s. Revolutionary for his integration of collaborative real-time computing with video monitors, keyboards, mouses, hyperlinks, and even video conferencing, Engelbart believed that his so-called NLS or "oN-Line System" would literally augment or evolve the human condition through "bootstrapping," or the manner in which the information system composed of human and computer would increase the understanding of each of its users through the collective production and assimilation of feedback.[17]

Strongly resonant with Gregory Bateson's ecology of mind, Engelbart's vision would also resonate with the psychedelic spirituality of the 1960s counterculture—particularly, the counterculture centered around the author Stewart Brand, with whom Engelbart participated in LSD experiments. A fundamental part of computer history, Brand's periodical the Whole Earth Catalog, published in the 1960s-1970s, would spread the message of ecological unity and spiritual enlightenment by way of human-computer integration. The vision of the Catalog would eventually lead to the design of what is often acknowledged to be the first personal computer by Lee Felsenstein, who was involved with groups of computer hobbyists and innovators in Berkeley, one of whom adopted the name "Loving Grace Cybernetics."

One of the primary points of Fred Turner's book *From Counterculture to Cyberculture* is the deep irony, according to which the potentially dehumanizing cybernetic reduction of human beings to machines, as originating in the functionalist telos of World War II military research, turned into a new ideology of social and spiritual liberation promoted by the very counterculture that, in its founding energy, vehemently opposed such military-bureaucratic dehumanization. This is an irony, in other words, where the transmission model of communication, as described by Carey, is no longer opposed to the ritual model of communication, but, in a culturally defining way, actually *merges into* the ritual model of communication.

3. McLuhan's Identification of the Cybernetic "Inner Trip"

However, if we return to our examination of technological environments, and their power to shape cultural attitudes, the strange merger between information transmission and spiritual communion becomes not only comprehensible but also suggestive of the ways in which the contemporary digital environment both promotes and invalidates this merger. For instance, in light of Marshall McLuhan's analysis of the distinct media environments of print technology and electric technology, the grounding of the transmission model of communication in the cultural environment constituted by print technology can be clearly seen. For instance, the printed book's character of presenting language as a mechanical 'thing'—that is, as uniform sequences of

[16] Ibid, 461.

[17] Turner, 108.

exactly repeatable text—may be seen as generating the psychological association of communication and meaning with the extension of analytic thought into space. Further, the private point of view one brings to the act of reading a printed book may be seen as promoting a culture of individualism, and, thereby, the attachment to material acquisition as a sign of one's rational—and even spiritual—virtue. Such a fusion of the rationalization of space with the spiritual worthiness of one's individual self would be consistent not only with Carey's description of the transmission model of communication as being enthusiastically promoted by the puritan founders of America but also with the sociologist Max Weber's famous discussion of the Protestant Ethic and the Spirit of Capitalism.

While such a model uniting technological progress and spiritual salvation can certainly be seen—especially in an American context—as laying the ground for the even stronger reverence for technology in more recent history (such as in the development of cybernetics), the manner in which cybernetic spirituality no longer makes a categorical distinction between technological instruments and the human individuals behind them, but rather fuses technology, humanity, and spirit into the same ontological unit, points to a fundamentally distinct mode of cultural perception. McLuhan would identify this mode of perception, not with print technology, but with electric technology. Specifically, in its involving and immersive character, the medium of television would induce in its viewers what McLuhan called the "inner trip," which was the exact psychological state whereby the individual forgets the ontological distinctions separating human from machine, and person from person, and instead merges into an ecology of information which, through stimulation of one's imagination, appears to take on the character of one's projected mental life. Thus, while McLuhan famously asserted that electronic technology extended one's central nervous system into the environment, thereby imbuing its own mechanical nature with the sense of an organic and holistic information network, McLuhan noted that it was really television that brought this new environment into actualization. Drawing an equivalence between television and hallucinogenic drugs, therefore, McLuhan commented in his 1969 Playboy interview:[18]

> One turns on his consciousness through drugs just as he opens up all his senses to a total depth involvement by turning on the TV dial. Drug taking is stimulated by today's pervasive environment of instant information, with its feedback mechanism of the inner trip. The inner trip is not the sole prerogative of the LSD traveler; it's the universal experience of TV watchers. LSD is a way of miming the invisible electronic world; it releases a person from acquired verbal and visual habits and reactions, and gives the potential of instant and total involvement, both all-at-onceness and all-at-oneness, which are the basic needs of people translated by electric extensions of their central nervous systems out of the old rational, sequential value system.

McLuhan's description of the inner trip as a feedback mechanism is instructive, for, in linking cybernetic ideology to the television environment, it suggests how the particular model of "knowing" guiding the development and use of digital systems is to a large degree rooted in the mentality of the television viewer—namely the psychological tendency to relinquish one's intellectual autonomy in order to enter a collective intelligence, whereby feedback manifests both imaginatively, in the individual viewer's behavioral identification with a host of electronically transmitted events and characters, and commercially, in the very programming and

[18] Cf. "Playboy Interview: Marshall McLuhan - A candid conversation with the high priest of popcult and metaphysician of media", Playboy, Mar 1969.

creation of content based on the feedback of ratings, audience interest, and demographic information. In the television network, we might say, there is indeed an ecology of mind, where the individual is a subsystem of a larger informational and at least partly organic whole.

4. Meme-ing the Cybernetic "Inner Trip" to Death

Of course, the metaphysical and ethical advantages of such an ecology are from clear. Indeed, the design theorist Nikos Salingaros' notion of the destructive potential of information sharing in the digital environment[19] seems to be rooted precisely in the TV "inner trip" as described by McLuhan, whereby knowledge of, and participation in, reality is linked to the individual's instinctive assimilation into a virtual informational organism, whose emergent power is to instantaneously produce collective human identifications with some magnetic unit of psychological experience. For Salingaros, such identifications take the form of "memes," a term which was coined by the biologist Richard Dawkins in his 1976 book *The Selfish Gene*. Interpreting Darwinian evolution as the self-replication of genes mutating, and thus evolving, among multiple organisms, Dawkins applied this model to the development of human culture, according to which he identified any element of culture, such as an idea, symbol, or attitude, as a self-replicating mental unit transmitting and adapting itself among multiple human beings. In contrast to Dawkins' neutral evaluation of the meme, however, Salingaros' use of the term alerts us, precisely, to the deep epistemological flaws pertaining to the ecological conflation of human and machine indicative of the cybernetic worldview.

For instance, if the human being is indeed reduced to one among many kinds of informational systems generating biological and social order through co-evolving mutual feedback then the very notion of culture loses its transcendental status along with its capacity to be discerned and developed by the transcendental nature of the human intellect. As a subsystem adapting and expanding in proportion to the type and amount of attention it receives, any instance of culture seems to be maximally susceptible to becoming the informational virus which Salingaros defines as the meme. As Salingaros writes:[20]

> In the universe of artifacts, images, and other elements of human culture, some entities act more like viruses than higher organisms. Just like in the biological case, the virus/organism distinction is based on complexity: the virus has a markedly reduced structural complexity…The secret of memes is this: the simpler they are, the faster they can proliferate. Simple slogans, tunes, and images have enormous mnemonic power…Memes spread not because of any benefit or advantage to us, but because they have something attractive that makes them stick in one's mind. Memes offer seductive features to people, who then propagate them… Something that is advantageous for a meme is frequently disadvantageous for human beings…One can largely explain the harmful properties of memes by their propensity to destroy and replace other mental entities.

Of course, it has become commonplace to observe the intellectually destructive character of the proliferating cultural content—or memes—on television. Now that the memetic content of television has migrated to the internet through various social media platforms, the same concern—coupled with new ones such as social

[19] Cf. Nikos Salingaros, "Architectural Memes in a Universe of Information." In A Theory of Architecture. Germany: Umbau-Verlag, 2006.

[20] Ibid.

fragmentation and algorithmic manipulation—are now being applied to social media use. What is particularly significant, however, is not the moral panic reapplied from television to social media but rather the manner in which the entire paradigm of the meme, as emphasized by Salingaros, is increasingly being seen in online discussions, not as the opportunity to evolve a collective intelligence as in cybernetic spirituality, but rather as the weaponization of human attention through reconfiguring human persons into culturally and economically profitable cybernetic systems. Videos and blog posts discussing topics such as: the end of the post-war consensus of global consumerism, the destructive presence of a meaning crisis in western modernity, and the importance of seeing the media system as a locus for psychological and informational warfare,[21] all seem to point to a new sense of pattern recognition, by which the human being is seeking reconnection to one's sensory and intellectual powers as fundamentally distinct from the cybernetic ecology governing mass media. Indeed, the fact that internet memes have become largely about satirizing, rather than perpetuating, the simple slogans and ideologies of the self-adaptive meme as identified by Salingaros seems to point to an inherent disenchantment with the ecological techno-utopianism behind the rise of the internet, along with an urgent need to differentiate the human person from technological networks.

5. Pattern Recognition Rehumanized: Relational Knowing in the Digital Age

From a theoretical standpoint, the sociological thinker Pierpaolo Donati reflects, and incisively advances, this contemporary urgency to regain consciousness of the unique nature of human existence. Significantly, instead of merely invoking human creativity and embodiment, or resorting to a simple return to traditional metaphysics, Donati attempts to uncover—to use Siegfried Giedion's term—a "constituent fact"[22] of the contemporary technological environment that might intensify our very conception of humanness.

For instance, in differentiating the human being from artificially intelligent systems, Donati notes that it is insufficient to base this distinction on the first-person experience of the human being, or even the manner in which this experience might be constituted by the human being's performance of reflexivity or self-reflection.[23] According to Donati, in distinguishing the human being from an artificial intelligence on the basis of cognitive function, what Donati calls the digital technological matrix, or the reduction of reality to a virtual sphere of information processing, is merely further entrenched. At the same time, however, through proliferating and

[21] Cf. John Vervaeke, "Awakening from the Meaning Crisis," Jan 20, 2019, and Alliance for Responsible Citizenship, "You're in a War (and You Don't Even Know It) | Eric Weinstein [ARC 2025]", Mar 15, 2025.

[22] According to art historian Siegfried Giedion, each historical period—as defined by the patterns cutting across its art, science, and technology—contains phenomena which are "constituent" and phenomena which are "transitory." Giedion writes, "Constituent facts are those tendencies which, when they are suppressed, inevitably reappear. Their recurrence makes us aware that these are elements, which, all together, are producing a new tradition." In contrast, transitory facts, for Giedion, "lack the stuff of permanence and fail to attach themselves to a new tradition. At first appearance they may have all the éclat and brilliance of a firework display, but they have no greater durability." Giedion, Space, Time, and Architecture: The Growth of a New Tradition, (USA: Harvard University Press, 1959), 18-19.

[23] Cf. Pierpaolo Donati, How the Digital Technological Matrix Redefines Human Identities and Relations, in Changing Media in a Changing World (Vatican City: Libreria Editrice Vaticana, 2022), 25-58.

transforming the relationships constituting human society to such an extreme degree—that is, to the point where human society itself is no longer immediately seen as being unproblematically human—the digital technological matrix, Donati argues, offers a key insight that *can* allow us to adequately differentiate the human being from the computational simulation of intelligence. For Donati, this insight is the ontological importance of social relations themselves. As Donati writes, "In my view, the 'relationality criterion' becomes more and more important and significant precisely because the [digital technological matrix] dramatically amplifies the phenomena of hybridization of social relations [between the human and the digital] and, more generally, it is the causal factor of a huge 'relational revolution' in the globalized world."[24]

It is this relational revolution spawned by digital media that is behind Donati's development of what he calls "relational sociology," according to which human society is not conceived as human persons entering into different kinds of relations, but rather as the intrinsically metaphysical and ethical nature of relations themselves both in their concrete emergence from social action and in their causal and qualitative capacities to constitute distinct kinds of human life (or, to again draw on Heidegger's term, dwelling). For Donati, therefore, the greater attunement to the reality of relations caused by digital society is an opportunity to understand not just the inherent dignity of the human person, but, more importantly, the distinct types of relations that are necessary in determining the very shape of human dignity. As Donati notes, "what is missing" in discussions of human dignity "is the clarification of what values are distinctive of the human and which characteristics must have the relationships that make them flourish. The argument that human dignity stems from the fact that the human person is a multidimensional whole is necessary but not sufficient. We need to enter into the analysis and evaluation of the vital relationality that characterizes that 'whole' and makes it exist as a living being that has a structure and boundaries, however dynamic and morphogenetic."[25]

Donati's observation that the increasing hybridity of natural and artificial relations structuring the contemporary digital world leads us to inevitably inquire into the metaphysical nature of social relations themselves may be seen as a more sober continuation of McLuhan's "apocalyptic" understanding of the electronic information environment. For instance, prior to its ubiquitous application in generative AI tools, which are trained on massive sets of human data to recognize and reapply meaningful patterns or *relations* of behavior and perception, the notion of "pattern recognition" was identified by McLuhan as the new form of *human* knowledge commensurate with the electronic world. For McLuhan, such knowledge supplants the cybernetic application of feedback mechanisms to control the increasing speeds of information and communication in the early 20th century. In the bourgeoning digital world of the 1970s, McLuhan observed that "the much greater electric speed-up of today enables us to shift from information overload to pattern recognition, from experience to knowledge, and from reaction to anticipation."[26]

By replacing the natural world with a new ecology of programmable information, electronic media reverses the primacy of any one definition of nature—including the cybernetic model of feedback—by surrounding human perception with a multiplicity of potential patterns through which a given area or time period of world

[24] Ibid, 46.

[25] Ibid, 47.

[26] Marshall McLuhan and Barrington Nevitt, Take Today: The Executive as Dropout (New York: Harcourt Brace Jovanovich, 1972), 64.

experience can be restructured. In this situation, the very speed of perceptual phenomena in their mutually constitutive relations seems to turn one's habitual experience into the very disclosure of the fundamental construction of experience itself, such that, as McLuhan writes, "by directing perception on the interfaces of the processes in ECO-land, all gaps become prime sources of discovery."[27] Indeed, as McLuhan notes, due to the instant speeds through which causes become effects, it is only by perceiving causes directly with their effects as patterns determining human experience that the human person can develop the new rigor of existential and psychological discernment necessary for renewing the capacity to "dwell" in an existential truth beyond human artifice. McLuhan thus writes, "At instant speeds in our resonant Echoland, it is fatal to 'wait and see.' 'Feedback' relying on experience is now too slow. We must know in advance of action. The 'feedforward' of knowledge based on pattern recognition of process is essential for reprogramming beyond ideologies. What had always appeared inevitable can thus be bypassed."[28]

It is with a similar spirit that the late 20th century architect and design theorist Christopher Alexander attempted to reframe knowledge of the world in terms of the human recognition of patterns of events as comprising the very structure of being. Reintegrating (without submerging) the existential value of the human person with physical space itself, Alexander aimed to correct the mechanistic perception of space as a neutral field for physical and informational motion—Carey's "transmission model of communication." Thus, in contrast to the perception of space as communicating the potential for movement across space, any perception of space, for Alexander, intrinsically communicates a proportion of ultimate value as a function of the patterns through which any given organization of space embodies—and is recognized to embody—the ultimate order of existence itself.

Articulating his metaphysical claim that not only does the world we experience embody existential, and thus ethical, value in itself but that it embodies *different degrees* of existential and ethical value on account of the patterns underlying the organization of a particular region of space, Alexander writes:

> [B]ecause physics has concentrated on very simple systems, like atoms, we have been led to believe that what something 'is', is an entirely separate question from what it 'ought to be'; and that science and ethics can't be mixed. But the view which physics teaches, powerful and wonderful as it is, is limited by this very blindness.[29]

Continuing this line of thought, Alexander suggests that it is in acknowledging the nature of human perception as intrinsically ordered to the recognition of value in existential structure that any claim that such structure is neutral to moral values becomes erroneous. Just as the patterns of living discerned in a person's character unavoidably contain moral truth, so do the patterns of any structure forming a particular range of possibilities of human life contain moral truth. Alexander continues:

> Most men are not fully true to their own inner natures or fully 'real.' In fact, for many people, the effort to become true to themselves is the central problem of life. When you meet a person who is true to himself, you feel at once that he is 'more real' than other people are…And exactly the same is true in those larger

[27] Ibid, 3.

[28] Ibid, 16.

[29] Christopher Alexander, The Timeless Way of Building (New York: Oxford University Press, 1979), 27.

> systems, outside us, which we call our world. Not all parts of the world are equally true to themselves, equally real, equally whole.[30]

As with Christopher Alexander's conception of patterns as both the fundamental ontological units of the world, and, in the context of *techné*, as "the atoms of our man-made universe,"[31] Donati conceives of relations as the fundamental beings or 'molecules' of society. Further, in relation to the submergence of human value into the 'transmission model of communication,' Donati notes that it is only in understanding relations as real entities comprising society that the cybernetic collapse of human life into virtual life—or what McLuhan calls the "inner trip" through which one's psyche is projected onto the world—can be avoided. As Donati writes:[32]

> Generally speaking, in the so-called 'relational turn' of the last two decades mentioned by Raya Jones, social relations have been almost always understood as interactions and transactions, instead of 'social molecules' to which we can attribute human qualities and properties or not. When social relationships have been observed as more substantial, stable and lasting phenomena, their characteristics have been treated in terms of the psychological (mainly cognitive) qualities deriving from the related terms, that is, human persons and AIs. The attributions of qualities and properties to the human/AI relationships as such are, mostly, psychological projections of human persons on entities to which is attributed an ontological reality that is the result of subjective feelings and mental abstractions. In short, social relations have been treated as psychological entities, instead of being considered emergent social facts in which we can objectively distinguish human characters from those that are not.

Donati's point is that, in the context of the contemporary networked environment, in which relations have become so complex as to threaten overriding human agency itself, it is only in understanding such relations as possessing real ontological characteristics in themselves—or, like Alexander's patterns, distinct potentialities in fostering or diminishing human life—that the cybernetic reduction of the human experience to networked relations of information systems can be repossessed by human persons in order to, as Donati writes, establish a "relational criterion…[that is] even more discriminating than in the past."[33]

As an inheritor of the Aristotelian and Thomistic tradition, therefore, Donati understands the digital technological matrix as offering an opportunity to revise the Aristotelian conception of relation so as to understand the human condition with greater specificity. Thus, in distinction to Aristotle's conception of relation as an "accident" only existing to the extent that it qualifies the truly existing "substance" of the human form, Donati identifies relation as an independent feature of being, which is nevertheless constituted by the human being even as the human being is constituted by the relation. In terms of the media environments of print and electronics, therefore, Donati understands the importance of avoiding both the individualism of the

[30] Ibid, 28.

[31] Timeless Way of Building, p. 99.

[32] Donati, 47-48.

[33] Ibid, 56.

print environment (in which the constitutive reality of society is neglected) and the holism of the electronic environment (in which the constitutive reality of the individual is neglected). As Donati writes,[34]

> Traditional personalism…as a cultural model developed before the advent of the digital matrix, had a non-relational substantialist character. It cannot be further supported. The person must now be conceived in relational terms. However, here is a new comparison between those who reduce the person to relationships, and relationships only to communications, and those who maintain that the person cannot be dissolved in communications, because, if it is true that communications form the person, they cannot replace her nature.

In rising to the challenge of the digital technological matrix, Donati distinguishes information, communication, and knowledge in a manner that is both new and traditional. By evaluating distinct relations of communication in terms of their metaphysical potential to instantiate "relational goods" or "relational evils,"[35] Donati resurrects the ritual view of communication to promote the new knowledge of pattern recognition as applied to the complex variety of relations constitutive of our increasingly hybridized digital world. At the same time, through wresting communication from information, Donati resurrects the ancient Latin understanding of information as *informare*,[36] according to which the very form of things—or in Donati's case relations—becomes impressed upon our minds. Importantly, as Donati observes, it is the distinctly human capacity to exist in a second-order relation—that is, to have the full weight of one's own relation to social relations impressed upon one's mind—that is denied to an artificial mind.[37]

[34] Ibid, 55.

[35] Ibid, 51.

[36] Cf. Adriaans.

[37] Donati, 46.