

ECOLOGY OF THE INNER SENSES: AN INTRODUCTION

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Dianoetikon: A Practical Journal is a publication of the Center for the Study of Digital Life (CSDL). We are a strategic research group engaged in educational and advisory services. Our mission includes the commitment to develop a new range of social sciences, with a particular focus on psychology and economics. This first issue explores Faculty Psychology and, in particular, the organization and practical implications of the “Inner Senses,” which are the subconscious seat of human perception. This Introduction includes sections on the Center, this Journal, details of the contents of this volume, background on our study of the Inner Senses, our plans for future research.

INTRODUCTION

This is the first issue of *Dianoetikon: A Practical Journal* from the Center for the Study of Digital Life (CSDL). The Center was formed in 2015 and is a non-profit strategic research group focused on the impact of digital technology on society and its people. We call ourselves “technological constructivists” and view human behaviors and attitudes as being fundamentally shaped by our dominant communications technologies. Since digital technology aims to displace humans (and even become self-aware in the process), it is something quite new to civilization, so it requires a new effort to understand the accelerating consequences.

We are a diverse group of entrepreneurs, investors, educators, authors and geopolitical experts who have come together from around the world to dig much deeper towards comprehending our current condition than is typically possible. We were formed to “think the unthinkable.” Our guiding principle is the recognition that the previous psycho-technological paradigm is finished and we have already been living in a different world for the past decades. Globalism, which grew out of the world order crafted after WWII, is finished – upending that previous stability. We already live in a world of Three Spheres: East, West and Digital, which means massive uncertainty about the looming outcomes.

This new Digital Paradigm presents a wide-range of new problems, dangers and opportunities. Since many people continue to live in what Marshall McLuhan called the “rear-view mirror,” resisting the recognition of what has already happened to them, basic risks at every level have escalated -- as reflected in board-rooms and on front-pages worldwide. Confrontations, driven by raw misunderstandings, seem inevitable. McLuhan underscores the dangers that accompany these fundamental shifts in “identity.”¹ The Center was formed

to help minimize the escalating dangers of these potentially catastrophic clashes.

The Center's mission includes the commitment to develop a new range of social sciences – with particular focus on psychology and economics. It is now widely recognized that these disciplines have fallen into disarray and, for the most part, have failed to achieve either the promised knowledge or results offered when they were established (and reformed) in the 20th-century. A series of attempts to reduce humans and their affairs to what can be “modeled” have left us vulnerable to all that is “exogenous” to these naive reductive approaches. In many ways, we have collapsed into the “land of the blind” along the way. Human perception has been stripped of its ability to recognize patterns, in a world over-saturated with fantastic make-believe images. Digital technology, based on precise memory architectures, confronts this fantasy and is already changing these attitudes. In order to avoid modern fantasies of idealized “world construction,” a retrieval of earlier sensibilities is now required. One motto for the Center is “Digital retrieves the Medieval” and perhaps that is most evident in psychology. Modern psychology has removed the “psyche” (the Greek term for which “soul” is perhaps closest in English) and replaced it with clockwork and computer chips. Putting the psyche back requires retrieving Faculty Psychology, as it was shaped before the Printing Press. This issue of *Dianoetikon* seeks to begin that process.

DIANOETIKON: A PRACTICAL JOURNAL

There can be no ecology without an adequate anthropology.

- Pope Francis²

Dianoetikon is a Greek word, which means ‘the power of thinking-things-through’. We have adopted it from Aristotle’s *On the Soul*. The word kept its life in the early middle ages when Bishop Nemesius made it central to his anthropology, and was further “set in stone” when St. Thomas Aquinas translated it to the *vis cogitativa*, the highest bodily power of the human soul.

Our subtitle, “a practical journal” refers to the real nature of this power, as it deals with “particulars”, not “universals”. Being bodily, concepts are alien to it – rather it is the height of subconscious human percepts, which we study and lay bare to scrutiny. The subtitle is also an homage to Marshall McLuhan’s first essay, written under the guidance of Fr. Gerald B Phelan, “G. K. Chesterton: A Practical Mystic”, where McLuhan noted the English apologist’s skill in using analogy, chiasmus, paradox to reveal structures of being.

This journal will appeal to those who have noticed little relevance from the fields of modern social science (psychology, economics, politics), and their futility in dealing with the new problems and threats appearing in this century. We hope that it will serve as a key in pointing to a new grammar, a new mode of

being brought about by changes to our technological environment which have already occurred.

Our contributors are academics and ‘autodidacts’ from many fields who are united by an understanding that we are already in a new paradigm brought about by ubiquitous digital technology.

Our intended impact is to stir further investigation into topics which have been largely ignored or forgotten, and to revitalize these fields of social science with a heightened awareness and ability to meet challenges humanity has never faced before.

OUR STUDY OF THE INNER SENSES

Shortly after CSDL was formed, we began to anticipate those areas needing further research. Psychology quickly became our focus. Its history, its motivations and its progress/failures all drew our attention. Marshall McLuhan, whose insights into the operations of technology on the human psyche guided our initial approach, also seemed to lack a firm basis in modern (or ancient) psychological theory/practice. It was decided that a “breakthrough” was needed and we discovered that this required stepping outside the modern framework. We began to look for what had been “forgotten” about psychology and discovered that it was provided by Thomas Aquinas. Aquinas is typically thought of as a “theologian” (or, perhaps, a philosopher), but, alas, such modern disciplinary boundaries made little sense in 13th-century Paris. Indeed, until it became “experimental” in the 19th-century, psychology was typically considered as a branch of “philosophy” (indeed, Harvard didn't separate these into their own departments until 1933). What sets Aquinas apart from many of his contemporaries was his careful consideration of recently “discovered” contributions from 4th-century BC Aristotle. Aristotle had “invented” psychology with his *Peri Psyche* (known more commonly by its Latin title, *De Anima*), which had stimulated much discussion over the ensuing centuries, notably by Hebrew scholar Maimonides and Islamic scholars Avicenna and Averroes. Like Aquinas, they all had incorporated Aristotle into their work, often writing commentaries themselves. As it turns out, Whitehead's statement that “all Western philosophy is a footnote to Plato” was wrong.

In many ways, Aquinas had become the culmination of 1000+ years of psychological investigation – some philosophical and some medical. But, since Aquinas is not widely studied today (with the exception of small pockets of Catholic scholars), we wondered where the Center would find the expertise required. Starting in 2016 (and continuing for the next two years), the Center participated in one of the only Aquinas “study groups” around, organized by neo-Thomist scholar Peter Redpath. It was there that we met Mark Barker, whose essay replicating his 2016 presentation at what we called a summertime “Aquinas-Fest” is published for the first time in this issue. Along the way, many others were consulted. The writings of Thomist semiotician John Deely

contributed much to our understanding of how “signs” first became a carefully understood topic in what he called the “Latin Age.” His protege, Brian Kemple, added a great deal and helped to ensure us that we were on the right track. Literature searches turned up (mostly) obscure scholars writing about the “inner senses” in the 20th-century (one of whom, Julien Peghaire, is reprinted in this volume). Latin treatments from the 19th-century were interrogated. Investigations were launched into how-and-why the Catholic Church neglected to bring Aquinas's understanding forward. Controversies dating to the 16th-century were explored. The Warburg Institute contributed Ruth Harvey's 1975 monograph *The Inward Wits* (excerpted in this issue). Most recently, we have gotten in touch with a group of Spanish scholars who have kept this research alive, as reflected in the essay by Fr. Juan Jose Sanquineti in this volume.

We sincerely hope the collection of essays in our *Ecology of the Inner Senses* captures the breadth and depth of this ongoing and vital research.

FUTURE RESEARCH

“Faculty Psychology” is just the beginning. Following the tripartite organization of what is called “Catholic Social Teaching” – begun in earnest by the Church in parallel with the “experimental” turn in psychology in the late-19th century – the Center's research efforts have two more significant areas to explore. Divided into Human Dignity, Subsidiarity, and Solidarity, CSDL's social scientific research also has three primary components. Psychology allows us to consider the faculties/operation of the human psyche (aka “soul”), which is the foundation of Human Dignity. Subsidiarity will be the basis of our work on the second volume of *Dianoetikon*, tentatively titled “Digital Distributism” (after a phrase coined by Douglas Rushkoff).³ Solidarity will then be tackled in the context of Three Spheres: East, West, and Digital – a topic about which the Center has unique expertise.

Subsidiarity, familiar to many people as a result of E.F. Schumacher's 1973 study,⁴ is the principle that matters ought to be handled by the smallest, lowest or least centralized competent authority. We are convinced that the Digital Paradigm's effects in political economics will be profoundly “de-centralizing.” Not that “digital” is fundamentally opposed to hierarchies or compelled to “flatten” all social structures but that it will be the technology which promotes the expansion of “competent authority.” Moreover, unlike the previous fantasy-dominated paradigm (driven largely by television and its offshoots like “social media”), digital will promote human responsibility in the face of robots taking over many human activities. We suspect that this radical rethinking of our responsibilities – personal, communal, and spiritual – will become the most notable feature of the Digital Paradigm.

In 1985, Neil Postman, a professor at NYU and protege of Marshall McLuhan, published his *Amusing Ourselves to Death: Public Discourse in the Age of Show Business*. His thesis was a version of McLuhan's promotion of Gestalt

psychology's notions of "figure" and "ground." The underlying structures of how we experience reality are rarely investigated, since for many they appear to be dangerous and, overwhelmingly, beyond anyone's ability to claim responsibility. So we entertain ourselves. To death. This unwillingness to consider the ground characteristics of our lives was captured by McLuhan when, writing to the philosopher Jacques Maritain in 1969, he observed, "There is a deep-seated repugnance in the human breast against understanding the processes in which we are involved. Such understanding implies far too much responsibility for our actions."⁵ As we rethink our responsibilities in a digital world, our psychology will shift correspondingly.

Solidarity, like so much else, has become severely distorted in the previous paradigm, along with the responsibilities it implies. Television generated an environment in which people were encouraged to "Act Local: Think Global." "Saving the world" – which, to be fair, is a responsibility quite remote from most people's lives – has become a meme/slogan/jingle with massive negative consequences. Responsibilities at this level are not evenly distributed. Expecting people to live their lives as-if they must "do something" about what they cannot possibly affect, distorts our whole sense of being responsible for what is, in fact, within our grasp. As the slogan of the television-series "Heroes" (2006-2010), "Save the cheerleader; save the world," and much recent Hollywood production underscores, we are all expected to fantasize about being "super-heroes." Recycle to "save the environment" (when, of course, it does nothing of the sort). This is not an honest approach to solidarity. This is not the path towards taking responsibility for our own actions.

Humanity is facing an unprecedented threat. Astrophysicist Stephen Hawking summarized our situation as an impending invasion of a "superior alien civilization," to which our reaction is "OK, call us when you get here – we'll leave the lights on."⁶ Norbert Wiener, the mathematician who coined the term "cybernetics" in the 1940s, was asked in one of his final interviews, "Dr. Wiener, is there a danger that machines – that is, computers – will someday get the upper hand over men?" His reply was "There is, definitely, that danger if we don't take a realistic attitude . . . The machines are there to be used by man, and if man prefers to leave the whole matter of the mode of their employment to the machine, by overworship of the machine or unwillingness to make decisions – whether you call it laziness or cowardice – then we're in for trouble."⁷ Our view is that these "attitudes" cannot be changed without a radical paradigm shift. We believe that the Digital Paradigm has already begun that attitude change, admittedly a "pattern" often difficult to recognize in the welter of disorienting "information" we consume daily.

CONTENTS OF “ECOLOGY OF THE INNER SENSES”

“Ecology of the Inner Senses” begins with three essays, each authored by an editor of the issue. The first essay, entitled “The Inner Senses and Human Engineering,” is by CSDL President Mark Stahlman. Focused on recent paradigm shifts in the human sciences, the essay sketches out some of the major institutions, actors, and relationships involved in the abandonment of the traditional western conception of human psychology (based on Aristotle’s “On the Soul”) for a conception that seeks, not so much to understand the human psyche as a *soul*, but rather to engineer it as a *mechanism*. Appropriately, Stahlman begins his essay by invoking the (in)famous Macy Cybernetics Conferences, from 1946 to 1953, where the new science of “communication and control” would embolden the anthropologist Margaret Mead and social scientist Lawrence K. Frank to imagine environmental conditions from which a new kind of human could be moulded. Essential to this effort, Stahlman notes, was the practice of “psychological warfare.” As one of the primary “weapons” of the Cold War, the effort to manipulate human behaviour and attitudes permeated western research and industry, forming the basis of the emerging disciplines of “social psychology” and “communications research,” along with the instrumentalization of these fields in the persuasive techniques of radio and television advertising. While reaching a high point in the television age, the scientific paradigm behind “psychological warfare” has its origins, Stahlman notes, in the nineteenth century development of “experimental psychology” evinced in the psychological empiricism of the widely influential German professor Franz Brentano and, more importantly, in the physiological approach to human psychology undertaken by Wilhelm Wundt in his Leipzig laboratory. Within the emerging “digital sphere” of human society, however, the drive to create artificial general intelligence (AGI), Stahlman asserts, brings previous efforts in experimental and cognitive psychology to a point of crisis – that is, a point where humans themselves may be replaced by robots. At the same time, it is in this new digital paradigm – supplanting the older “electric paradigm” of broadcast illusions – that humans may discover the essential difference between the human soul and the programmed machine, prompting the recovery of the psychological wisdom that western learning has for too long forgotten.

It is this recovery that provides the basis for the second essay in this issue, written by CSDL fellow, and culture and communications lecturer at the University of Toronto, Adam Pugen. Entitled “Psychology Beyond Technocracy: Marshall McLuhan, Magda Arnold, and The Meaning Crisis,” this paper identifies the dynamic modes of awareness of emergent intellectual communities online as evidence of a fundamental shift in human attitudes engendered by digital communication. Specifically, Pugen takes the social media outreach of Toronto psychology professors Jordan Peterson and John Vervaeke as providing some of the clearest and most influential articulations of the pressing existential issues around which these online communities circulate. Pugen notes, however, that, while treating what Vervaeke has popularly labeled the “meaning crisis” in

western sensibility, both Peterson and Vervaeke lack the tools to properly understand and address this crisis. Rooted in the psychological biases of the “discarnate” electric media environment, both Peterson’s and Vervaeke’s intellectual approaches, Pugen asserts, perpetuate the “formal cause” of the very meaning crisis they aim to remedy. In contrast, the media scholarship of Marshall McLuhan and the psychological theory of Magda Arnold are offered by Pugen as more compelling sources due to their retrieval of the embodied *intellectual soul* as conveyed by Aristotelian-Thomist philosophy. Explicating Arnold’s incorporation of Thomas Aquinas’ discussion of the “cogitative sense” in her psychology of the emotions, Pugen uses Arnold’s work to shed light on McLuhan’s theory of media environments in order to contextualize the “meaning crisis” in relation to the distinct psychic attitudes shaped by electric and digital technologies.

In “The McLuhans and the Inner Senses,” the work of Marshall and Eric McLuhan is examined in terms of its engagement with Thomist faculty psychology. Written by Peter Berkman, a CSDL fellow specializing in Marshall McLuhan and the medieval trivium, this essay asserts that McLuhan’s knowledge of the psychological doctrine of Thomas Aquinas was constrained due to the environment in which McLuhan’s learning occurred. Specifically, Berkman notes, the people upon whom McLuhan relied for Thomist instruction – namely, Fr. Gerald Phelan, the president of Toronto’s Pontifical Institute for Medieval Studies, and Bernard Muller-Thym, the pupil of renowned Thomist Etienne Gilson – inherited a version of Thomism which, due in large part to the interpretation of the Jesuit scholastic Francisco Suarez, downplayed the role of the “inner senses” in Aquinas’ faculty psychology. As a result, Berkman concludes, McLuhan based his exegesis of media effects on the ratios constructed by the “sensus communis” (the first inner sense in Thomist psychology), while largely ignoring the remaining inner senses of “imagination,” “cogitation,” and “memory.”

It is this explanatory gap inherited by neo-Thomism that Fr. Julien Peghaire aims to remedy in his article “A Forgotten Sense: The Cogitative Power.” Originally published in 1943, Peghaire’s essay is an in-depth study of the *vis cogitativa*, a sensory power which has been obscured for centuries by the physicalist bent of experimental psychology. In contrast to modern scientific positivism, the metaphysical orientation of the Arab and Latin scholastics, Peghaire recounts, was not averse to explanations of animal and human perception that required the action of the immaterial, or *intentiones non sensatae*. Indeed, in order to explain the cognitive phenomenon, whereby different animal species recognize what is useful and harmful to themselves, the scholastics commenting on the texts of Aristotle concluded that there had to be an “estimative” sense in non-human animals. It was this “inner sense” – inherent to the animal soul – that supplied instinctual knowledge of the useful and the harmful, which could not be gathered merely from the external senses. Transposed to the human soul – dignified as it is by the power of intellection

united to a material body – the animal *vis aestimativa* (estimative power) became, for the scholastics, the human *vis cogitativa* (the cogitative power).

Distinct from, although functioning in concert with, the other internal senses of *sensus communis*, imagination, and memory, the cogitative power, according to the doctrine of Thomas Aquinas, possesses a number of closely related roles in human perception. Firstly, as an analog to the animal estimative power, the cogitative power (also called the “particular reason”) apprehends what is useful and harmful in perceptual objects not merely through an inborn instinct but also through a comparison (*collatio*), informed by reason, of particular cognitive objects or “intentions.” Moreover, while the estimative power allows animals to perceive objects as really existing individuals to pursue, flee from, or ignore, the cogitative power allows humans to perceive the concrete individual not only in terms of its immediate value or harm, but also in terms of its instantiation of a “common nature” or universal, such as *human* or *tree*. It is this function of the cogitative to serve as a bridge between the particular data of the senses and the universal concepts of the intellect that allows the cogitative both to prepare the “phantasms” retained by the imagination to be intellectually apprehended as universals, and to conduct abstract understanding back down to its relationship and application to concrete singulars. Since the intellectual virtue of prudence depends upon the application of universal moral principles to concrete situations, the cogitative, Peghaire notes, is vital to the exercise of this virtue, making the cogitative power key to practical human life.

The following contribution presents selections from University of Toronto medievalist E. Ruth Harvey’s 1975 study “The Inward Wits: Psychological Theory in the Middle Ages and the Renaissance.” Harvey’s discussion is particularly noteworthy due to its tracing of the doctrine of the inner senses (or “inward wits”) within the context of medieval medicine. In the 10th century treatise *The Royal Book* written by the Persian court physician Haly Abbas and translated into Latin in the 12th century as *Regalis dispositio*, Harvey finds an exemplary instance of the medieval medical concern to foster a working harmony between body and soul in the “hybrid” human disposition. Correlating bodily functions and organs to the hierarchical formation of three levels of “spirit” – the natural spirit (liver and veins), vital spirit (heart, arteries, respiration, and passions), and animal spirit (brain and nervous system) – Haly holds that it is *mens*, the highest power of the animal spirit, which comprises *phantasia*, *cogitatio*, and *memoria*, each of whose impairment is implicated in distinct bodily and mental conditions. Haly’s account, Harvey notes, represents the model of human physiology accepted by medieval learning; descriptions of the inner senses of *phantasia*, *cogitatio*, and *memoria* (along with the Aristotelian *sensus communis*), would be taken up, refined, and debated upon, by the Arabian philosopher Avicenna and, later, Thomas Aquinas, the latter of whom would accept much of Avicenna’s commentary, but reject his dissociation of the *intellectus agens* from material perception.

“The Common Sense, Perfection of the Order of Pure Sensibility” was written in 1940 by Marshall McLuhan’s close friend and Thomist mentor Bernard J.

Muller Thym. In this article, Muller Thym differentiates the common sense from the other internal senses in Thomist psychology by arguing that, unlike imagination, cogitation, and memory, the common sense participates neither in the *ratio* (discursive reasoning) nor in the *intellectus* (intellective seeing) of human apprehension. Contrary to what Aquinas' teacher Albertus Magnus taught, the object of the common sense, Muller Thym asserts, is not the so-called "common sensibles" (such as movement, shape, and number), but rather the unified apprehension or "perfection" of the objects of the external senses. Just as the intellect is the terminus of the phantasms of the imagination, the common sense is the terminus of the proper sensibles of the external senses.

"The Cogitative Power: Aquinas' Development of His Predecessor's Views" is an original contribution by Mark J. Barker, a philosophy professor at the Notre Dame Seminary in New Orleans. Examining the Aristotelian commentaries of Avicenna, Averroes, and Aquinas, Barker details how Aristotle's "deliberative imagination," "passive intellect," and "particular reason" were formulated by these later commentators as the inner sense of the "cogitative power" occupying the middle ventricle of the brain. Integrating Avicenna's notion of the animal "estimative power" with Averroes' discussion of the human "cogitative power," Aquinas emphasized the key role of cogitation – as the embodied medium for apprehending singulars – to all intellectual operations of the human being. Barker lists six functions of the cogitative power, as specified by Aquinas. The more "sense-related" functions Barker defines as the perception of (1) the useful and the harmful and of (2) the particular individual. The more "intellect-related" functions Barker defines as (3) preparing phantasms for abstraction, (4) serving as an instrument for the intellect's indirect apprehension of the singular, (5) producing the minor premise of the Aristotelian "practical syllogism," and (6) reasoning from one particular to another.

In "The Interior Sensorium in Media Ecology: Justification for Study," professor of communications at the University of Texas Dennis D. Cali takes a different perspective on the topic of the inner senses. Noting the traditional media ecological study of the impact of media environments on sensory perception and consciousness, Cali looks to Eric McLuhan's discussion of the four senses of scripture in medieval exegesis as a potential launching pad for an investigation of the "interior sensorium" informed by mystical philosophy. Cali offers four justifications for a media ecological study of the interior sensorium: he proposes that such a study may (1) enrich our knowledge of human consciousness, (2) combat deterministic theories of media through identifying areas of human sensibility potentially unaffected by external sensation, (3) increase philosophical understanding of the human person as a mind-body unit, and (4) promote a holistic theory of knowledge, beyond such historically foundational dualisms as subject-object, inner-outer, mind-reality.

Concluding this issue's selection of articles is an English translation of a 2015 essay written by Juan Jose Carlos Sanguineti, who researches the philosophy of neuroscience at the Pontificia Università della Santa Croce. Entitled "The Cogitative in Cornelio Fabro: For a Non-Dualist Philosophy of Perception,"

Sanguineti's paper recapitulates many of the themes of this issue. Contrasting the scholastic account of the cogitative with modern idealist accounts of perception influenced by rationalism and empiricism, Sanguineti emphasizes the cogitative power as a holistic faculty, which integrates intellectual and sensitive potencies in the human perception of the real. From the perspective of contemporary neuroscience and philosophy, Sanguineti notes that the preconscious functions of the cogitative can be identified in mirror neurons and cortical and subcortical motivation pathways. Further, Sanguineti sees in the work of phenomenologist Maurice Merleau-Ponty and psychologist James J. Gibson helpful corroborations of, and contributions to, the non-reductivist doctrine of the cogitative. However, in appreciating the subtle and broad scope of the cogitative, Sanguineti concludes, the Aristotelian interplay of matter and form and the Thomist doctrine of participation of the lower in the higher provides a necessary intellectual ground.

The issue concludes with an annotated bibliography of faculty psychology, including material on its intellectual origins from Aristotle to Averroes, its refinement from St. Albertus Magnus to John Poincaré, its misguided retrieval in the late 19th and early 20th centuries, and its more rigorous study in recent times.

WHO ARE WE?

The Center is a unique organization. It was started based on work done for the Pentagon's Office of Net Assessment (ONA), as founded and run by Andrew Marshall from 1973 until his retirement in 2015. Marshall's career stretched back to the early RAND Corporation, where he and his colleague Herman Kahn (later to launch the Hudson Institute) pondered the possibilities of a WWII conflagration and how to prevent it from happening. Under Marshall, ONA had the responsibility to advise the Dept. of Defense by taking an all-things-considered approach (thus, "net" assessment), particularly regarding the Soviet Union and its capabilities/motivations. Among the various conclusions reached on the then-threatening Cold War, ONA repeatedly proved itself superior to others, including the CIA.

The founders of CSDL include Mark Stahlman and Phil Midland. Stahlman is a retired Wall Street analyst/strategist/banker, who brought AOL public in 1992. His success was based on recognizing patterns many others did not perceive. Midland is a retired Naval Intelligence officer, trained to observe and understand patterns that eluded others, himself a student of Samuel Huntington and long-time collaborator with Marshall at ONA on East Asia. Stahlman brings the "digital" credentials, whereas Midland brings the "east" expertise. We believe that bringing this knowledge and experience together, also involving dozens of domain experts across other key topics, very likely has never been done before.

The Center will be expanding its reach over the next few years and publishing *Dianoetikon* is an important step in that direction. We intend to start a "graduate school" to help train the sensibilities of future digital leaders. We

are also expanding into a “geopolitical expert network” for briefings/consultation with corporate and government executives. Our goal will be to sensitize more people to the methodologies of anticipation needed to “see around corners.” We are convinced that “future” has already arrived and the capability to perceive it is not yet “evenly distributed.” We are taking responsibility for doing something about that. Our study of the Inner Senses was designed to help cultivate the habits needed for this expanded form of perception. We welcome your help.

Notes

1. Marshall McLuhan, Quentin Fiore, and Jerome Agel, *War and Peace in the Global Village* (New York: Bantam Books, 1968).
2. Francis, *Laudato si'*, sec. 118
3. Douglas Rushkoff, *Throwing Rocks at the Google Bus: How Growth Became the Enemy of Prosperity* (New York: Portfolio/Penguin, 2016), 224.
4. E.F. Schumacher, *Small is Beautiful: A Study of Economics as if People Mattered* (London: Vintage Books 2011).
5. Marshall McLuhan, Matie Molinaro, Corinne McLuhan, and William Toye, *Letters of Marshall McLuhan* (Toronto: Oxford University Press, 1987), 370.
6. Stephen Hawking, Stuart Russell, Max Tegmark, and Frank Wilczek, “Stephen Hawking: ‘Transcendence looks at the implications of artificial intelligence – but are we taking AI seriously enough?’” *Independent*, October 23, 2017, <https://www.independent.co.uk/news/science/stephen-hawking-transcendence-looks-implications-artificial-intelligence-are-we-taking-ai-seriously-enough-9313474.html>
7. Norbert Wiener, “Machines Smarter Than Men? Interview with Dr. Norbert Wiener, Noted Scientist,” interview by Joshua Lederberg, *U.S. News and World Report*, (24 February 1964): 84.

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