THE MCLUHANS AND THE INNER SENSES

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By the time Marshall McLuhan (1911-1980) converted to the Catholic Church in 1937, faculty psychology – definitively treated in St. Thomas Aquinas’s commentaries of Aristotle – had been abandoned. Shaken by endless waves of technological revolution, McLuhan was confronted with the question of how different forms of media shape our senses & modes of perception. He believed that in an age of constant change and mass confusion, new sciences had to be invented to meet this task. Today it is known as “Media Ecology”. Marshall based his work on St. Thomas’s doctrine of an inner sensory power called the “common sense”, but nowhere does he have an explicit account of the other three inner senses accepted by St. Thomas: the imaginative power, the cogitative power, and the memorative power (each thought to be located in different parts of the brain). Without accounting for these inner senses, Marshall’s work treated various media as altering the balance and ratio only among the five exterior senses: with particular media mainly tending toward either a visual or audile-tactile bias. This oversight has left the question of what different technological environments do to the inner senses unanswered, and even unasked by any psychologist. Today many search for a way to make McLuhan relevant to our own technological revolutions, but we can’t hope for a fair or useful account unless we take his basic assumptions along with the deficiencies of his times. McLuhan has never been considered on his own terms, and today he is praised for reasons which would have baffled and annoyed him. We will start with the Catholic Church’s failed effort to revitalize St. Thomas Aquinas’s faculty psychology in the late 19th century, continue with McLuhan’s relationship with his various Thomist mentors as he adapted their assumptions to his own work, and finally discuss the meaning of McLuhan’s explorations in light of a fuller account of the inner senses as understood by St. Thomas Aquinas. In doing so, we hope to establish an adequate “anthropology” with which to contend with the problem of Media Ecology, accounting for human life and activity amidst rapidly changing media environments.

PSYCHOLOGY: CATHOLIC OR “MODERN”?

Let the universities already founded or to be founded by you illustrate and defend this doctrine and use it for the refutation of prevailing errors.
- Pope Leo XIII, Aeterni patris.

The late 1800’s saw the industrial revolution and the invention of the telegraph, but there was no scientific development more pervasive and fundamental than experimental psychology. In 1879 Dr. Wilhelm Wundt (1832-1920) – by some accounts, the first man to ever call himself a psychologist – opened the Institute for Experimental Psychology, the first laboratory of its kind at the University of Leipzig. That same year in response to prevailing scientific shifts, Pope Leo XIII issued the encyclical Aeterni patris, calling for Catholic teachers to “restore the golden wisdom of St. Thomas [ . . . ] for the advantage
of all the sciences,” to contend with Wundt’s developing technological field of “psychophysics”, facilitated by equipment and measurements. Over the following decades more labs patterned after Wundt’s initial effort began sprouting up in China, Japan, Russia, and the United States. In the midst of this Pope Leo XIII’s attempt to restore St. Thomas to his seat in science was met with overwhelming resistance, and ultimately failure.4

All across Europe, in England, France, and Germany, the response to Pope Leo’s initiative was led by the Jesuit order, and when it came to the crucial psychological topic of the inner senses, where what is “sensed” becomes what is “understood”, the Jesuits turned to their own interpreter of St. Thomas, Fr. Francisco Suarez (1548-1617).5 Where St. Thomas outlines four distinct inner sensory powers, Suarez and the Jesuits denied any “real” nor “formal” distinction among these faculties, reducing the four powers to just one power. Leo, aware of this general institutional inflexibility even within the Church, set out to make an institution of his own at great cost and effort: the Higher Institute

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*Fig. 105* Scheme of the hypothetical connections of the apperception center. SC sight center. HC hearing center. SCentral optic nerve fibers. H auditory nerve fibers. A, O sensory, L, B intermediary motor centers. MC direct motor center. M motor central fibers. AC Apperception Center. ss’, hh’ centrifugal orbits to the latter, I a, g f e t c. centrifugal connections of the same.

of Philosophy founded at the University of Leuven. There he hoped would be the “shining beacon of Thomist philosophy”:

Let the universities already founded or to be founded by you illustrate and defend this doctrine and use it for the refutation of prevailing errors. But, lest the false for the true or the corrupt for the pure be drunk in, be ye watchful that the doctrine of Thomas be drawn from his own fountains, or at least from those rivulets which, derived from the very fount, have thus far flowed, according to the established agreement of learned men, pure and clear; be careful to guard the minds of youth from those which are said to flow thence, but in reality are gathered from strange and unwholesome streams.6

But even this effort failed. In the school’s psychological manuals, if the inner senses are even mentioned, they are glanced over. Instead, much more attention and money went to the development of the Institute’s own version of Wundt’s psychophysics lab.

This is the ground which we have chosen to situate the work of Marshall McLuhan. The Priest who facilitated McLuhan’s reception to the Catholic Church, Rev. Gerald B. Phelan (1892-1965) was caught up in this tension at all sides. He earned his doctorate at Leuven’s experimental psychology lab on “Feeling, Experience, and Its Modalities” just before heading to teach psychology at St. Michael’s at the University of Toronto.7 Yet beneath this, Phelan was also a Thomist and close friend and translator of both Etienne Gilson and Jacques Maritain, who got Toronto’s Institute of Medieval Studies it’s pontifical designation from Pius XII. Phelan helped Marshall publish his first essay on G. K. Chesterton in the Dalhousie Review, and helped secure teaching jobs at Catholic institutions like St. Louis University and St. Michael’s at Toronto.8

Marshall’s debt to Phelan was not just institutional, but intellectual: the “analogy of proper proportionality” as treated by Phelan was Marshall’s first inroad for engaging with St. Thomas.9 But from the outset, Marshall read Phelan through another ‘unorthodox’ but ardent and highly practical Thomist, James Joyce (1882-1941). At the heart of his interest laid a process of “arrest” and “retracing the stages of apprehension” of any form of beauty, as a formal cause.10

As part of Joyce’s training in Dublin he read England’s contribution to Pope Leo XIII’s larger Thomist effort: Psychology, written by Stonyhurst Jesuit Fr. Michael Maher. Joyce’s copy is annotated in-line throughout, complete with a custom index on the back page. In the section where the inner senses are dealt with, Fr. Maher SJ has left the matter to Suarez’s doctrine: that “there is no real nor formal distinction among the internal senses”. Next to this paragraph, the young Joyce has written in pencil: “?”.11

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THOMIST MENTORS

"Now, the public for whom one acts or writes, is necessarily the formal cause, whether in philosophy or theology or in the arts. Does this fact not explain why there is no theory of communication in philosophy since Plato? The study of 'content', is it not the efficient cause?"  
- Marshall McLuhan to Fritz Wilhelmsen

With the world of “Thomism” in disarray, McLuhan relied on the help of two friends. In the 1930s, he worked closely with Etienne Gilson’s star-pupil Bernard J. Muller-Thym (1910-1974). Muller-Thym was Marshall’s best man at his wedding, and godfather to Thomas Eric, his first-born. Marshall’s second Thomist collaborator came after his rise and fall from world fame in the 1970’s, the “last Thomist standing” among the Jungians and phenomenologists at the University of Dallas, Fritz Wilhelmsen (1923-1996) - who would help Thomas Eric earn his own doctorate there.

Muller-Thym helped Marshall to interpret Joyce as a faithful and even strict Thomist. Muller-Thym published an essay: *The Common Sense, Perfection of the Order of Pure Sensibility* which distinguishes this “common sense” - the internal sense responsible for the reception of all sensible forms - from the three other internal senses: the imaginative, memorative and cogitative powers, taking care to note that the work of “intelligibility” does not begin until after “sensibility” has been “perfected” (i.e. completed). Marshall’s filed copy is notated at key sections, he was particularly dazzled by the common sense’s seeming power of “sensory translation” - that by one sense “white” can be distinguished from “sweet”. As Muller-Thym affirms: “it is necessary that there be a sense which apprehends in the manner of ‘one’ that which in the external senses is many.”

For Marshall, Muller-Thym’s description of the sensus communis’ “synaesthetic” quality was completely bound up with different modes of poetry and had seemingly never been explored by anybody, let alone any critic of poetry. The historical neglect of St. Thomas’s common sense would later serve as the basis for his 1960 Report on Project on Understanding Media, and later the books which launched his public career: *The Gutenberg Galaxy: The Making of Typographic Man* (1962), and *Understanding Media: The Extensions of Man* (1964). The entire field of Media Ecology owes its origin to McLuhan’s application of Muller-Thym’s basic text. So rich was this account that even 70 years later Muller-Thym’s Godson Eric McLuhan would write:

For half a century now, it has been a commonplace of media studies that each technology extends one or another sense or faculty, according it a sort of hyperesthesia, which has then the effect of numbing the bodily sense extended and rearranging the interplay between the other senses - what we have been calling the *sensus communis*.  

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Marshall once wrote that his life in sharing rich metaphysical conversation with Muller-Thym "was like knowing James Joyce himself." For Marshall, it was Joyce's Catholic awareness of these Thomist doctrines which set his sensibility, and prowess for training the sensibility of his audience far above his modernist peers.

Joyce was aware that this doctrine (that sensation is imitation because the exterior forms are already in a new matter) is implicit in Aquinas. He made it explicit in *Stephen Hero* and the *Portrait*, and founded his entire poetic activity on these analogical proportions of the senses (emphasis added).

This statement of the sensory order as a living reality spoke deeply to McLuhan's own sensibility of human thought as being necessarily and essentially embodied, with deep and wide bearings for the life of the Church and his Catholic faith. Unfortunately, this breakthrough for Marshall coincided with Muller-Thym, the brightest medieval scholar in North America having his academic career cut short. A dispute with Mortimer Adler caused Bernard J. Muller-Thym's abrupt and permanent exile from academia, vowing “never to return to that cyclotron again.” Maritain asked Muller-Thym to apologize in public according to Ignatian morals, and Gilson, his teacher, carried regret and sadness over it for the rest of his life. Marshall, however, continued reading Joyce in light of the *sensus communis*. His 1951 “Joyce, Aquinas, and the Poetic Process” cites a key passage in Joyce which inextricably links the sensible world to the world of beauty, through the cognitive faculties of the soul:

It is almost impossible to reconcile all tradition whereas it is by no means impossible to find the justification of every form of beauty that has ever been adored on earth by an examination of the mechanism of esthetic apprehension whether it be dressed in red, white, yellow, or black. [... ] The apprehensive faculty must be scrutinized in action.

Marshall did not fail to note that “it is impossible to exaggerate the importance of this last phase for an understanding of Joyce's art”, but with no one around to fill in the gaps, he was left to rely on Muller-Thym’s understanding of the *sensus communis* and Phelan’s account of the analogy of proper proportionality of the senses.

This earlier stage of McLuhan’s work, beginning to take shape in the 1940s, can be associated with the help of Muller-Thym. It was at this stage that McLuhan had gleaned the insights that would earn him world fame as an ‘oracle of the electric age’. A look at his correspondence in this period reveals Marshall as a man of action. He hoped that his unique talent to use everything new and
old at his disposal to provide clarity to a confused time, while at the same time happening to be a Catholic, would be an edification of the faith. But once his religion was made public, his secular reception waned. Over thirty years after his mentorship from Muller-Thym, Marshall would again revisit these topics explicitly in terms of “formal causality”. Marshall struck up correspondence with St. Thomas scholar Fritz Wilhelmsen at the University of Dallas, who had also studied with Fr. Phelan at the University of Notre Dame’s Medieval Institute. His reception inside the Church was also met with general neglect. In 1972, McLuhan was appointed to the Pontifical Council of Social Communications, but lamented that any comments he would have to give on their documents (such as *Communio et progressio*) would be a “sour note”. With all of the attention on him dissipated by the mid-1970s, it was Frederick D. Wilhelmsen - a lone Thomist increasingly surrounded by phenomenology at the University of Dallas - who provided a sense to Marshall that St. Thomas was indeed still relevant and that “action” was still possible. In what appears to be a type-written summary of a phone conversation, it is seen that McLuhan and Wilhelmsen outlined each of the inner sensory faculties according to St. Thomas, but for reasons which remain mysterious, they never broached it any further.\(^{26}\)

The nature of McLuhan and Wilhelmsen’s relationship was that of finding new ways for the insights of St. Thomas to encounter and correct the influx of phenomenology and Jungian psychology after the Second Vatican Council, a circumstance McLuhan called “the new occult”. Wilhelmsen complained about the state of affairs under Donald and Louise Cowan’s guidance at the University of Dallas, and McLuhan suggested that the answer lay in a radical reinvention of “formal causality”.

What McLuhan presented to Wilhemsen was outside the scope of what, at the time, was considered “orthodox” Thomism. Wilhemsen responded:

If – and here I swing radically towards your view – the entire content of any act of cognition and all cognition is communication – is formally specified by the phantasm [McLuhan’s written note on the paper: “=audience”] – i.e., the symbolic structure in which meaning has intentional being – and if the phantasm is simply short-hand for the world in which you are, your cultural ambience; and if the cultural ambience is the audience – the philosopher cannot talk in a void any more than the rest of humanity – and certainly the audience is the formal cause.\(^{27}\)

McLuhan suggested the “figure and ground” configuration as outlined by gestalt psychology for this total approach. The audience and the performer are taken in a figure-ground gestalt, one can not be understood minus the other. Further, McLuhan took the hidden ground — the environment or media’s subconscious action on the audience — to be the formal cause underlying any “mythic” figure.

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As Jungians and phenomenologists attempted to wrestle with mythos, McLuhan insisted that the *logos* of the media and their etymologies be taken into account:

> Since the phenomenologists have taken an increasing interest in language, they have also begun to pay more attention to the hidden ground in all structures, as witness Levi-Strauss. Without knowing it, they are phasing themselves out of the Hegelian tradition. I suggest that you might, by this back door, as it were, take over the whole field of philosophy for formal causality. You could even stop mentioning Aquinas! In other words, you would be doing what Aquinas would be doing if he were here today. He certainly would not be teaching Thomism.\(^28\)

Marshall insisted that they write a book together on formal causality – but for reasons that remain mysterious, their correspondence tapered off after they published an article together, with a comment from Fr. Joseph Owens CSSR.\(^29\) It was around this time that Marshall, enlisting the help of his son Eric, aimed to invent a new science which would account for the “phenomenology of the media”, the transformative and environmental factors which remained hidden from Jungian explorations. He suddenly aimed to revise his most popular book (Understanding Media) and his Cambridge doctoral thesis with this new understanding. This would take up the rest of McLuhan’s life before his stroke in 1979 which rendered him speechless.

**LAWS OF MEDIA**

"*Since our reason has been given us to understand natural processes, why have men never considered the consequences of their own artefacts upon their own modes of self-awareness?*

- Marshall McLuhan to Jacques Maritain\(^30\)

Throughout his career, Marshall insisted that all media – speech, writing, telegraph, radio, television etc. – are embedded with certain “sensory biases” which were to be treated as what Aristotle had called “*formal causes*”, patterns of action which “shape and re-shape human perceptions.” As devout Catholics, Marshall & Eric noted special significance of the use of the Greek word “logos” in Aristotle's account of formal causality - as Eric would note in a much later essay *On Formal Cause*, being necessarily verbal: it requires humans.\(^31\) Marshall wrote to Wilhelmsen: “you may recall, Fritz, that it was the phonetic alphabet that first isolated the visual faculty from the other senses," and elsewhere: “classical rhetoric [i. e. the spoken word] includes the whole range of human faculties, especially as embodied in the Verbum and Logos.”\(^32\) He refused to reduce the scope of causality to value judgments about the media being a
“good thing” or “bad thing”, and instead asked what do they actually do to the structures of our souls, the shape of our sensory lives? An analogy for formal causality given by Aristotle is the shape of a seal and the shape impressed in wax. We participate in these forms, undergoing structural change at our own peril, and “we become what we behold” through our persistent use. This was the constant ground of his entire literary career: he wrote a book about the psychological effects of the printed word (The Gutenberg Galaxy: The Making of Typographic Man), his dissertation was about how the western world was made and transformed by the spoken & written word (The Classical Trivium), and his most well-known book was a catalogue of 33 different ‘media’ from highways, to newsprint, to television (Understanding Media: Extensions of Man). He wrote that each of these media or “languages” are “environments which are hidden from the young learner, and to which, like fish to water, he relates synesthetically, using all his faculties at once,” and as the child completes its formative years into puberty “the senses specialize via the channels of dominant technologies and weaponries.”

His mysterious phrase “the medium is the message” is spelled out very clearly in a 1960 report commissioned at the start of the Space Race: “this is what I have meant all along by saying the ‘medium is the message,’ for the medium determines the **modes of perception** and the **matrix of assumptions** within which objectives are set.” It’s not the media alone then that deserve our attention as some have assumed, but specifically their interplay with the human subconscious. McLuhan often borrowed the terms “figure” and “ground” from gestalt psychology to describe this opposition, but his language in the report is precise: by “modes of perception” he is again referring to St. Thomas Aquinas’s psychological doctrine of inner sensitive powers. These percepts are the ‘ground’ that both precede and are active in drawing out the ‘figures’ of any conceptual thought.

McLuhan always sought out these “grounds”, hidden only by human ignorance of their existence. He called himself a “grammarian”, concerned with the discovery of valid premises over any logical disputation on top of them. His study of the “training of sensibility” in Modernist & Symbolist poetry is one example of this, just as his depiction of advertising as a “magical institution” whose art is to implicate deeply held and unrecognized assumptions derived from their audience. In both cases, all the real action takes place not in the poem or ad itself but rather subliminally in the true sense of the word – that is, in the audience’s subconcious – with the ‘content’ serving as whatever bait suitable to ensure that process remains hidden. McLuhan held that none of these technological “environments” are self-evident but rather concealed as givens. They require guided exploration and careful study in order to reveal their nature. In that same 1960 report, McLuhan reduced all his recommendations to just this: “study the modes of the media, in order to hoick all assumptions out of the subliminal, non-verbal realm for scrutiny and for prediction and control of human purposes” – or put more simply: to literally “understand media” by rendering it intelligible. He encouraged his students to retrace the stages of
intellectual apprehension through the senses (i.e. limited to the exterior senses) in order to recognize the etymologies of our assumptions, instead of mistakenly ascribing the psychological boundaries determined by manmade environments to “the fates” or “the will of God”. He insisted, no, “we are doing it to ourselves”.

How do these technologies change our behaviors & attitudes beyond our ability to notice and anticipate them? How can a human being maintain their dignity undergoing these jarring shifts to their psyche, let alone keep any semblance of “free will”? The basis of his work was grounded in St. Thomas Aquinas’s doctrines of formal causality and the faculties of perception: through careful examination of our senses we can discover how these various man-made forms reshape our souls. With formal cause as a principle, technologies are not “neutral” but rather active forms that implicate the sensibility of their users as content. Any change in these modes is inevitably bound up with “revolutionary social and political consequences”, as new distinct forms of culture are built up suited to the structure of these new habits. Any “use” of any technology employs our bodies, organs, and senses in different configurations — each configuration producing different worlds valued by different measures.

The wealth of discovery from accounting for the common sense’s reception of sensible forms led Marshall to think in terms of a dichotomy of human sensibility. This, after all, appeared to be what Joyce had lifted from St. Thomas. When he began to pull on this thread, all of his discoveries pointed to behaviors & attitudes as being shaped by patterns concealed within the structures embedded within different forms of human communication. Speech, for instance, presented an all-encompassing audile-tactile world that produced men with audile-tactile biases; while the written word contained speech but transformed it - producing a highly visual world that produced men with visual biases in the process. The sensory world of the audile-tactile or “tribal” man was said to be shaped by the properties of “acoustic space”: all-at-once, multisensuous, resonant, multi-locational, discontinuous, abrupt, every point becomes its own center; that is, center everywhere, margins nowhere. He lives by the interval. The world of the visual or “literate” man was said to be characterized by properties of “visual space”: sequential, univocal, lineal, planar, connected, orderly, a place for everything and everything in its place; along with it the creation of a wholly private identity. He lives by detachment and abstraction.

Analogy then is etymologically a “re-wording” or “re-verbing” that led Marshall to relate it to the world of acoustic sensation. Logic, however, was only made possible by the alphabet’s production of a highly ‘visual bias’. In his final interview, he said to Bruce Powers:

Have you noticed that one cannot visualize geometric figures except in a void [i.e. there are no actual circles or triangles in the world of things]? This characteristic is an essential clue to
understanding Euclidean space. It is not the whole of nature, it is an abstraction, an imaginative invention.\textsuperscript{47}

The magnum opus of this effort is the posthumously published book \textit{Laws of Media}, which Marshall co-authored with his son Eric. Relating to his time with Wilhelmsen, it was originally meant to be titled “the phenomenology of the media”. In this, Marshall uses these “visual” and “acoustic” subconscious modes of being to counter the phenomenologists (like Heidegger) and Jungian psychologists who had been increasingly replacing any understanding of faculties.\textsuperscript{48} When it came to the question of how these different sensibilities play out in human neurology, Marshall pointed to the bicameral split of left-brain (which he termed ‘visual’) and right-brain (which he termed ‘acoustic’). There is no treatment of the inner senses here at all.\textsuperscript{49}

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\textbf{Enhance} & \textbf{Reverse} \\
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In 1979, before a stroke rendered Marshall speechless, he constructed two “tetrads” in this book, which were heuristics to get at the total structural effect of any human artefact. “Computer”, he writes, retrieves “perfect memory, total and exact” - while Television, flips into the “inner trip”.\textsuperscript{50} Marshall himself adopted an “acoustic” mode, and saw it necessary to deal with all the media at once “or else pay the price of irrelevance and unreality.” Further, in terms we may recognize within the scope of his understanding of the common sense:

He must deal with each medium as it affects all of our senses, not as it makes one impression on one sense. Because any medium which singles out one sense, writing or radio for
example, by that very fact causes an exceptional disturbance among the other senses.

Marshall is here writing about the exterior senses alone, as they interface with the sensus communis. Radio would present auditory impressions in high-definition, leaving any visual “completion” up to the listener.

Nothing could be more unrealistic than to suppose that the programming for such media could affect their power to re-pattern the sense ratios of our beings. It is this ratio among our senses which is violently disturbed by media technology. And any upset in our sense-ratios alters the matrix of thought and concept and value. [...] I hope to show how this ratio is altered by various media and why, therefore, the medium is the message or sum-total of effects.

This is his way of saying: whatever you say over the radio will be presented under the sensory configurations of radio. There is no changing the sensory impact of that form of communication without changing the medium itself.

And just as our individual experiences of our individual senses get processed by some sort of inner common sense which gives unity to the diversity of our senses, so with the media as extensions of our senses. These cooperative technological extensions of ourselves undergo a social or communal processing which gives them unity, and which ensures also that they will always be changing their forms as they continue to inter-penetrate and to ‘translate’ into one another.51

In a word, we can say that Marshall wound up very accurately surveying and cataloguing a history of imagination, audile imagination, visual imagination, by searching through the writings of poets. Joyce, St. Thomas, Shakespeare, Milton, Donne, Eliot, and the living reality of the everyday people of his times — especially as their sensibilities and assumptions serve as the formal cause for advertisements. For McLuhan and St. Thomas, the intellect makes all humans poets. But through McLuhan’s discussion of the “interior landscape” and “the training of sensibility” he made himself out to be a fierce advocate for the sensitive faculties of the soul (percepts) as being a necessary condition for the work of the intellectual faculties (concepts).

The basis of McLuhan’s emphasis on the senses came from St. Thomas Aquinas’s commentaries of Aristotle’s psychological works. But with St. Thomas, five external senses are drawn from the “sensible” to the “intelligible” explicitly with the aid of four inner senses — with its organ proposed to be three different “ventricles” or “cells” in the front, middle, and back of the brain. Marshall’s studies, proposals, and experiments ended at the “common sense” — the first inner sense, and the “term” of the “exterior sensorium”. We hope
with a fuller account of the imaginative, cogitative, and memorative powers, more can be done to lift up the effects of media on our subconscious into the verbal realm for study and open discussion.

**CONCLUSION**

As we undergo yet another technological revolution in the form of the digital environment, we have the opportunity to pick up where Marshall and Eric McLuhan left off. It was near the end of his life that Marshall began to see the missing pieces of the puzzle. We are here retrieving, just as the McLuhan’s attempted, an account of the human soul which has not been considered in its full depth since the Middle Ages.

Even such a brief walk on this trail reveals that there is a vast and intricate history to what we today call “sense-making”. As schools, businesses, governments, and Churches rush to “make sense” in an age of rapid change — using tools of digital media, most likely — we should be aware of the opportunity at hand to avail ourselves to uniquely human tools of understanding developed since at least St. Thomas, which were long-suppressed precisely by a dominant technocratic paradigm.

**Notes**

1. What separated Wundt’s work from his predecessors in modern psychology (e.g. Vives, Wolff) is an integration with mathematical formulae inherited from Gustav Fechner, meant to detect and measure thresholds of discernment among the exterior senses. He presented an “Apperception Schema” of sensory stimulus, motor functions, and reaction times - with measurements provided by chronometers, kymographs and other tools to aid in collecting sensory input.

2. Issued August 4th 1879, the aim of the encyclical Aeterni patris was to advance the revival of scholastic philosophy - namely that of St. Thomas Aquinas. Cardinal Tomassao Zigliara, a Dominican professor at the College of Saint Thomas, was the main expert tapped by Pope Leo XIII. He soon authored a Thomist manual titled Psychologia in Latin - arguably the most faithful representation. In it, he dealt explicitly with psychological innovations from Fr. Rosmini and Suarezian Fr. Tongiorgi of a "sensus fundamentalis".

3. Addressing the new psychophysics was so crucial to Pope Leo XIII’s mission that before Leuven’s Higher Institute was founded, he sent its future head Fr. Desire Mercier in disguise to study at Wundt’s Experimental Psychology lab in Leipzig. Mercier also sent his chair of psychology Armand Thiery who actually earned a Ph.D under Wundt. Pope Leo XIII wrote that the chair of this new school "must have studied the philosophy of the Middle Ages in the sources and not in the textbooks; he must also know the philosophy of Kant, he will have to follow the development of the sciences, of psychophysics, of cellular microscopy".

4. Pope Leo XIII had anticipated that the attempted revival of scholastic philosophy would be met with clerical resistance. Even after sending a nuncio to Brussels to
smooth things over between the school and the Jesuits, a request for a special course in Thomist philosophy was met with evasive replies. On Christmas Day 1880, he wrote Cardinal Deschamps tasking him to be the special chair of Thomistic Philosophy in an elective course at Leuven. The Belgian Bishops did not respond enthusiastically, as a bitter struggle with the government over religious education in primary schools had taxed their resources and made them reluctant to appear as agents of a foreign power in Rome. Cardinal Deschamps refused, and the Belgians suggested Monsignor Alois van Weddening in his place, but he too was dismissed for personal reasons on account of his being court chaplain to King Leopold II. In frustration, Pope Leo XIII sent, at his own expense, an able young Dominican bishop Hyacinthe Rossi to Belgium. A telegram stopped the Dominican, who got no further than Trent on his way north.

Van Weddening then suggested the 30 year old Father Mercier should be appointed. The Belgian bishops concurred. The Vatican called for Mercier to Naples where he was to meet with Cardinal Zigliari and others. Pope Leo XIII asked: "Do you love St. Thomas?" The young Fr. Mercier replied: "Very much, Your Holiness. I believe I can answer that I have loved him in my past teaching. I can certainly answer with confidence that I love him now and will do so in the future."

5. Everywhere but the Higher Institute and the Angelicum, the scholastic revival was led by the Jesuits. In England, Michael Maher's manual Psychology defers to Suarez. The same is true in German manuals. Even Fr. Mercier's own "Psychology" fails to account for the cogitative power's relationship with the intellect.

6. The Higher Institute of Leuven and the Angelicum are examples of the schools founded to defend this doctrine - the measure of their failure is their inability to teach the inner senses in the appropriate depth.

7. Phelan's 1925 dissertation was completed under Dr. Albert Michotte, who had studied both with Wilhelm Wundt and with Oswald Kulpe, the predecessor of Gestalt psychology. Phelan's dissertation contains no references to the faculties of the soul. Fr. Fulton Sheen studied alongside Fr. Phelan, the title of his dissertation being "God and Intelligence in Modern Philosophy". Sheen describes the faculties and gets as far as the sensus communis before skipping over the inner senses straight to the intellect. G. K. Chesterton wrote the introduction to Longman's publication in 1925.


9. St. Thomas and Analogy (Aquinas Lecture 5). Marquette University Press. 1941. Eric McLuhan "heartily recommended" it to me, and Marshall's copy is annotated. "The importance of analogy in the philosophy of St. Thomas literally cannot be overestimated. There is not a problem either in the order of being, or in the order of knowing, or in the order of predicating, which does not depend for its ultimate solution on the principle of analogy. Not a question can be asked either in speculative or practical philosophy which does not require for its final answer an understanding of analogy."


11. Courtesy of the James Joyce Collection at the Harry Ransom Center. Austin Texas.

12. Correspondence between McLuhan and Wilhelmsen courtesy of the National Archives Canada. No published biography has an account of McLuhan and Wilhelmsen's relationship.

13. Muller-Thym was called "the most brilliant young medievalist in America" by Etienne Gilson in 1936. Fr. Phelan was the nihil obstat on his dissertation: The
Establishment of the University of Being in the Doctrine of Meister Eckhart of Hochheim.

14. Ibid.

15. Courtesy of Marshall’s handwritten notes at the University of Toronto’s Fisher Library.

16. Ibid.

17. As his Ford Foundation-funded journal EXPLORATIONS ended in 1957, McLuhan was contacted by Harry Skornia of the National Association of Educational Broadcasters about an upcoming project. That next year, the NAEB received a Title VII grant from the National Defense Education Act to come up with a new media syllabus for middle school students, and McLuhan was selected to produce the report. Dubbed "project 69", McLuhan embarked on tours meeting with business executives and heads of public schools. In 1960 as he was preparing his findings for publication, McLuhan rekindled correspondence with Muller-Thym and enclosed his own "media charts".

18. See Cameron McEwen’s reports on this topic on his blog mccluhansnewsciences.com, under the tag "Report on Project in Understanding New Media".

A letter from McLuhan to Samuel Becker, chair of the NAEB 1959: "I think my Gutenberg book will offer a sufficient quantity and continuity of testimony on the effects of the forms of writing and printing to make this completely convincing, because one has only to consult the changes in the arts of poetry, and prose, and painting under the impact of various developments in print technology, to trace the exact lines of force which that technology exerts. This raises a very basic question about media research. I mean the factor of translation from one language into another as revealing the properties of both."


Here, Eric is introducing a quote from And There Was Light, the autobiography of Jacques Lusseyran - a blind French resistance member against the Nazi party, who lost his vision in a childhood accident. The entire quote is worth including here, as Marshall often employed it to those who attempted to "conceptualize" his work.

“When I came across the myth of objectivity in certain modern thinkers, it made me angry. So there was only one world for these people, the same for everyone. And all the other worlds were to be counted as illusions left over from the past. Or why not call them by their name- hallucinations? I had learned to my cost how wrong they were.

From my own experience I knew very well that it was enough to take from a man a memory here, an association there, to deprive him of hearing or sight, for the world to undergo immediate transformation, and for another world, entirely different but entirely coherent, to be born. Another world? Not really. The same world, rather, but seen from another angle, and counted in entirely new measures. When this happened, all the hierarchies they called objective were turned upside down, scattered to the four winds, not even like theories but like whims.

The psychologists more than all the rest - there were a few exceptions, Bergson among them - seemed to me not to come within miles of the heart of the matter, the inner life. They took it as their subject but did not talk about it. They were as embarrassed in its presence as a hen finding out that she has hatched a duckling. Of course, I was more uneasy than they were when it came to talking about it, but not when it came to living it. I was only sixteen years old, and I felt it was up to them to tell me. Yet they told me nothing" (Lusseyran, 1963).
20. To Bernard and Mary Muller-Thym (June 11, 1974).


22. The quote comes from Richard Kostelanetz's profile of Muller-Thym in his 1969 collection Master Minds: Portraits of Contemporary Artists and Intellectuals. In January 1941, Muller-Thym was pressured by Jacques Maritain to apologize to Mortimer Adler in an issue of The Modern Schoolman. In the previous issue (Nov 1940), Muller-Thym had written a critique of Adler's "Problem's For Thomists" series which had just begun in another quarterly, The Thomist. Muller-Thym takes issue with Adler's understanding of "species".

"He has been willing to throw out the Posterior Analytics, to revise St. Thomas’s doctrine of matter and form (which, in some strange way, he does not understand will destroy all the doctrine of being and of act and potency), to consider the present issue not to have been clearly understood by either Aristotle or St. Thomas because both of them tend to let logical considerations too much obtrude - indeed no purge is too drastic; the one thing Professor Adler has refused to do is ever to reconsider his own position, to submit himself to that discipline without which no man becomes a philosopher."

23. Maritain issued his own reply: (Concerning a "Critical Review"), The Thomist. Volume 3. No. 1. Jan 1941. It begins with a quote from St. Ignatius of Loyola implying that Muller-Thym was not a "good Christian" for critiquing Adler's work in this way.

"It must be presupposed that every good Christian should be readier to excuse than to condemn a proposition advanced by his neighbour; and if he cannot justify it, let him enquire into the meaning of the author: if the latter be in error, correct him lovingly; should that not suffice, then let him employ every suitable means, so that his neighbour, rightly understanding it, may be saved from error." - St. Ignatius Loyola

Maritain himself continues:

"It is regrettable that Mr. Muller-Thym did not follow the rules of interpretation outlined by St. Ignatius, who advises us in such cases to have regard to the thought rather than the words; and that he did not try to surmount the obstacles created by the words in the present discussion. [...] Mr. Muller-Thym will regret the injustice he has done today. It seems to me an urgent matter to be on guard against those practices of controversy which, if they are allowed to become established, would ruin and render sterile the Thomist renaissance of today just as they ruined and rendered sterile Scholasticism of the fourteenth and fifteenth century."

Muller-Thym promptly quit teaching philosophy and left for New York City to train WAVES for the Navy. He then followed up with a career in a management consultancy (initially at McKinsey & Co) before going freelance. He taught management seminars at Columbia University and briefly held a faculty position at MIT, but never taught philosophy per se again.

"I was touched and a little astonished too at your request to publish the dissertation on Eckhart and on Albert the Great. I imagine you must be referring to the four or five lectures I gave in 1938 after I had completed the work for the doctorate and was giving the additional lectures for the licentiate in mediaeval studies. [...] It is touching to read your statement, 'they are still ahead of the present historical situation'" (Muller-Thym to Gilson, Jan 27 1956).

24. Ibid.
25. Here, despite the detective work given to retracing the exterior senses, is McLuhan's most glaring omission of the action of St. Thomas's inner sensory faculties, basically in Joyce. This essay would be cited by Umberto Eco in his own dissertation. The "poetic process" is the action of the agent intellect, which in St. Thomas is facilitated by the "conversio ad phantasmata" through its touching upon the intentions of the vis cogitativa.

26. An attempt to reach out to the Wilhelmsen estate was not answered.


   Comment: Effects Precede Causes. (pp. 19-21). Fr. Joseph Owens CSSR.
   Comment: Through a Rearview Mirror-Darkly. (pp. 22-27). Frederick D. Wilhelmsen.


   "Because the tetrads apply exclusively to human utterances and artifacts, it follows that formal cause is uniquely and particularly human. That is, and I believe this to be crucial, absent human agency or intellect there is no formal cause at all. Certainly all of the elements of the tetrad, the four processes, are both formal and causal. And conformal. And I have elsewhere discussed the tetrad's identity with logos and definition."


"These kinds of psychic oscillation resulting from large environmental change are no longer necessary, any more than the plague. Psychic diseases can now be treated for what they are, namely manifestations of the response to man-made technologies. Environmental noise and disturbance can be controlled as readily as the unhygienic conditions that prevailed until recent times. The psychic effects of TV are no more necessary than the physical effects of polluted drinking water. As long as people persist in ignoring the subliminal and hidden effects of media on psyche and society, they will attribute these things to the 'will of God.'"

43. "Liturgy and the Microphone," in The Medium and the Light: Reflections on Religion and Media. Wipf & Stock. (1999) "The ordinary and development attitude towards innovation assumes that there is a technological imperative: 'If it *can* be done, it *has to be* done'; so that the emergence of any new means *must* be introduced, for the creation of no matter what new ends, regardless of the consequences. Lineal and revolutionary ideas of development naturally derive from visual culture, which is no longer the form of the electric and acoustic age. What had been seen as inevitable, in visual and lineal terms of development, appears to the electronic man as merely one of many possible programs."


48. McLuhan devotes the title chapter of Laws of Media to an analysis of Jung's "archetypes" as a disembodied faculty or power of the soul: "Jung and his disciples have been careful to insist that the archetype is to be distinguished from its expression. Strictly speaking, a Jungian archetype is a power of capacity of the psyche. Nevertheless, even in Jung's writings the term is used with interchangeable senses. In Psyche and Symbol Jung declares that 'the archetype is an element of our psychic structure and thus a vital and necessary component in our psychic economy. It represents or personifies certain instinctive data of the dark primitive psyche: the real, the invisible roots of consciousness.' Jung is careful to remind literary critics to consider the archetype as a primordial symbol. [...]"

49. Chapter two in Laws of Media is devoted to treating behavioral scientist Robert Trotter's chart of cerebral hemispheres. This marks the first time McLuhan ever attempted a neuroscientific study based on differences among sensory ratios. Trotter was the editor of Science News, where he also wrote on topics such as transcendental meditation.
McLuhan uses this chapter to analogize the biases of "acoustic" simultaneity and "visual" lineality in the brain with "right-hemisphere" and "left-hemisphere" respectively.

50. The full tetrads read as such:

**Computer**

Enhances
Speeds of calculation & retrieval

Retrieves
Perfect memory - total & exact

Reverses into
Anarchy via the overlay of bureaucracy

Obsolesces
Sequence, approximation, perception, the present

**Television**

Enhances
The multisensous, using the eye as hand and ear

Retrieves
The occult

Reverses into
Inner trip: exchange of inner and outer

Obsolesces
Radio, movie, point of view


**References**


*Dianoetikon* 1 (2020): 49-68


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