

FACULTY PSYCHOLOGY: BIBLIOGRAPHY (SELECTED AND ANNOTATED)

ORIGINS: FROM ARISTOTLE TO AVERROES

In many ways, Aristotle “invented” psychology, or the study of the “psuche” (more commonly known as “psyche”), roughly the Greek term for what we call the “soul.” No other author has been suggested as an alternate and, despite the “disappearance” of his work for centuries after his death in 322BC, he became for philosophers and physicians alike the primary source of this understanding until the modern era. Many expanded on his work, amending it with their own theories and commenting on his surviving treatises.

Aristotle (2001) [c. 350 BC]. *On the Soul & On Memory and Recollection*. Translated by Joe Sachs. Green Lion Press. St. John’s College.

Aristotle marshalls all the previous arguments that had been put forward about the nature of “soul” (psyche), and lays the founding principles of psychology. The translation by Joe Sachs comes directly from the Greek into English, bypassing the Latin and going out of its way to “coin” new phrases for terms invented by Aristotle, such as “being-at-work-staying-itself” for the Greek neologism “entelechy.” When the University of Paris finally brought Aristotle into its curriculum, “De Anima” became required reading.

The Book of Wisdom. (100 BC).

Written in Greek by Alexandrian Jews in the 1st century BC, the Aristotelian “psyche”, with all of its embodied “energy” (a word invented by Aristotle) is a persistent theme throughout (Psyche: 1:4, 11; 2:22; 3:1, 13; 4:11, 4; 7:27; 8:19; 9:3, 15; 10:7; 11:26; 12:6; 14:5, 11, 26; 15:8, 11; 16:9, 14; 17:1, 8, 15; Energy: 7:17, 26; 13:4; 18:22). The word “apsuchoi”, or soul-less, appears nowhere else in scripture. (13:17; 14:29). It is used here in reference to idols, which have no real life of their own. Quotations from the Book of Wisdom appear constantly throughout the work of St. Thomas Aquinas.

Abu-Ali al-Husayn ibn-Abdallah Ibn-Sina (1959) [1027 AD]. *Avicenna's de anima (Arabic text), being the psychological part of Kitab al-Shifa' (Book of Healing)*. London Oxford University Press. No full translation available. For parts in English translation see *The Salvation*.

Avicenna’s *Book of Healing* was the fruit of centuries of effort culminating from the Baghdad “House of Wisdom”. What remained of Aristotle’s Greek was received and translated into Syriac, then Arabic. Avicenna’s work on Aristotle’s “On the Soul” appears in this much larger medical compendium, wherein teachings on interior sensory powers are commented upon and further developed.

Averroes (Ibn Rushd) of Cordoba, (2009) [c. 1160 AD] *Long Commentary on the De Anima of Aristotle*. Translated with Introduction and Notes by Richard C. Taylor; with Thérèse-Anne Druart, Subeditor. New Haven: Yale University Press.

Averroes wrote commentaries on every work of Aristotle that he had access to in 12th century Spain. The so-called “long commentary” is a line-by-line analysis of Aristotle’s original books *On the Soul*. In it is developed a controversial theory of a unitary & disembodied human intellect which was the topic of much dispute in the 13th century European Universities upon the works reception into Latin.

SUMMAE: FROM ALBERT TO POINSOT

During the 13th-century, as Aristotle’s work made it from Greek and Arabic into competent Latin translations, understanding of the psyche/soul and its faculties became widespread for the first time through the establishment of the Medieval University system, particularly in Paris. This understanding remained largely unchallenged until the 19th-century, surviving, albeit buffeted to be sure by the invention of the printing press &c.

St. Albertus Magnus O.P. (1968) [1254-1257]. *De anima*, ed. Clemens Stroick, vol. 7.1 of *Opera omnia*, ed. B. Geyer. Münster i. Westfalen: Aschendorff, 1968.

From the then-freshly-founded Dominican Order of Preachers, Saint Albert the Great was Saint Thomas Aquinas’s teacher. This is his own commentary on Aristotle’s book *On the Soul*, and in it, he outlines his own doctrine of the interior senses: in which he distinguishes five interior sensory powers. “Therefore let us take up again the two principles through which these powers are distinguished, by saying that the active, which is formal, is not perfected in the same way as the passive, which is recipient and retentive. Therefore, since there is a certain power which retains and receives the forms that were sensed before, it will be passive, perfected by the cold and dry in the complexion of the organ whose act it is.”

Aquinas O.P., St. Thomas (1267). *Quaestiones Disputatae De anima*. University of Paris.

Written during his stay teaching at Rome’s *studium* of Santa Sabina, St. Thomas draws out the controversies surrounding conflicting interpretations of Aristotle’s work *On the Soul*.

Aquinas O.P., St. Thomas (1268). *Sentencia libri De anima*. University of Paris.

Written during his stay teaching at Rome’s *studium* of Santa Sabina, *On the Soul* is the first of about a dozen of St. Thomas Aquinas’s line by line commentaries of Aristotle works.

Aquinas O.P., St. Thomas. (1270). *De unitate intellectus contra averroistas*. University of Paris.

St. Thomas was called to the University of Paris to deal with “Averroist” teachings of the intellect which were gaining popularity. This is a polemic work which weighs the arguments of the

“Averroists”, who claimed that men shared one intellect, against the text of Aristotle and other Peripatetics.

Aquinas O.P., St. Thomas. (1270). *Summa Theologiae*. Part I. Question 78. University of Paris.

Written during his second regency as magister at the University of Paris, St. Thomas asks the Question: Whether the interior senses are suitably distinguished? He settles on there being four interior sensory powers: the common sense, imaginative power, cogitative power, and memorative power — each with their own bodily organ (cells located in different parts of the brain) and object. In the “hylomorphic” sense of matter + form, it is the interior sensory powers which are considered “material,” whereas powers such as the intellect are thought of as “immaterial.”

Suarez S. J., Francisco. (1866) [1597]. *Disputationes metaphysicae in Opera omnia*. ed. D. M. Andre. vols XXV-XXVI. Paris: Vives.

Suarez S. J., Francisco. (1856) [1621]. *De anima in Opera omnia*. ed. D. M. Andre. vol III. Paris: Vives.

Jesuit commentator of Aquinas, Francisco Suarez’s printed books defined the philosophy of “post-medieval” Europe. His *Disputationes metaphysicae* supplanted Aristotle and Aquinas, his volumes found their way onto “the bookshelf of every intellectual in Europe” (Deely, *Four Ages* p. 500). Lacking Aristotle’s metaphysical basis, Suarez refuted any “real” or “formal” distinction among the interior senses. He concluded that “one interior sensory power” is adequate, no matter its many names. This later becomes crucial, since later Jesuits often resisted the use of Aquinas, preferring “their” Suarez as the new-and-improved version.

Poinsot, John. (1985) [1632]. *Tractatus de signis: The semiotic of John Poinsot*, John Deely (ed.) with Ralph A. Powell. Berkeley: University of California Press.

Poinsot (who took the name John of St. Thomas upon joining the Dominicans in 1612 or 1613) studied early under the Conimbricenses, then at Louvain, before being named to two successive chairs at the university in Alcalá. The *Tractatus de Signis* is John Deely’s interpretive re-arrangement of various questions and articles from the *Ars Logica* of the *Cursus Philosophicus*, published in 1632. Here, Poinsot brings the “protosemiotic” development to its culmination, with his identification of relation and the role of signs in human cognition. Within that context, important clarifications are made concerning the operations of the interior senses (to which as a whole Poinsot gives the name *phantasiari*), most especially their use of signs and relations simultaneous with their distinction from intellect. Among this he includes the insight that we may be moved by perceived objects which are not themselves real things, existing independently of their role in perception. He remains faithful to the distinctions drawn by Aquinas as to the various interior senses.

Wolfson, Harry Austryn (1935). “The Internal Senses in Latin, Arabic, and Hebrew” in *The Harvard Theological Review* Vol. 28, No. 2 (Apr., 1935), pp. 69-133.

A useful grammatical resource, Harry Austryn Wolfson completes a gargantuan task in making a glossary of the actual words used to describe the psychology of the interior senses in Hebrew, Arabic, and Latin.

FALSE START: FROM POPE LEO XIII TO GUARDINI

As what McLuhan called the “Gutenberg Galaxy” declined and electric-media technologies took over “structuring” society in the mid-19th century, the Aristotelean/Scholastic understanding of the psyche/soul came under increasing pressure and, for the first time since antiquity, was deliberately replaced by a new “experimental” approach. Catholics with a “classical” understanding withdrew from the discussion and shifted attention to topics like the “psychology of mysticism.” The birth of modern psychology often meant a complete “forgetting” of Faculty Psychology -- aided by the inability of those who understood it to keep that memory alive -- which had served in the West for more than two millennia. The modern approach was then deployed to generate such modern innovations as “psychological warfare” and its everyday corollary, mass-market advertising.

Pope Leo XIII (1879). *Aeterni patris*.

Responding to the rise of experimental psychologies in Italy (Rosmini, Tongiorgi), Pope Leo XIII, with the help of Cardinal Zigliara and his brother Giuseppe Pecci S.J., calls for the rebuilding of the forgotten philosophical psychology of St. Thomas Aquinas. This incredibly important & influential encyclical letter saw to the publishing of the Leonine Editions of St. Thomas Aquinas’s original works in Latin, and the building of schools & curricula across Europe (Italy, Belgium, England, Germany) based on Aquinas.

Maher S.J., Fr. Michael (1890). *Psychology*. Longmans, Green and Co. London: Stonyhurst College.

The only English-language scholastic manual of its times, published out of the Jesuit college Stonyhurst. Multiple editions & revisions would appear as late as the 1940s. In it, Maher traces modern psychologies in comparison with Catholic doctrine. When it comes to the crucial question of the interior senses, Maher sides with the Jesuit commentator of St. Thomas, Francisco Suarez, and writes “accepting Suarez’s doctrine that there is no real nor formal distinction among the interior senses.” Irish poet James Joyce would use this as the scholastic basis for his own works. The work was also reviewed & praised by American psychologist Charles Sanders Peirce.

Zigliara O.P., Card. Tommaso Maria. (1891). *Summa Philosophica, II Cosmologia, Psychologia et Theologia Naturalis*. Paris: Librairie Delhomme et Briguet. Ed. Gabriel Beauchesne.

The second book of Tommaso Zigliara’s scholastic manuals, written in Latin. Zigliara, who had helped with the promulgation of Pope Leo XIII’s *Aeterni patris* reiterates St. Thomas’s teaching on the interior senses. He dismisses Rosmini & Tongiorgi’s “sentimento fondamentale” in favor of St. Thomas.

Pesch S.J., Tilman (1896-1897). *Institutiones psychologicae secundum principia S. Thomae Aquinatis : usum scholasticum* / Freiburg Br. : Herder.

An extensive 2-volume “manual” largely taken from Aquinas. Alas, written in Latin and rarely cited in other works from the time. Apparently little noticed in the 20th-century.

Mercier, Cardinal Désiré Félicien François Joseph (1908) *Cours De Philosophie Vol III: Psychologie*. Louvain: Bibliothèque de l'Institut Supérieur de Philosophie.

Cardinal Mercier of Belgium was put in charge by the Jesuits at Louvain to undertake the Thomistic revival at a new academy called The Superior Institute of Philosophy. This is a French language scholastic manual on the topic of Psychology. When the topic of the subconscious interior senses is brought up, St. Thomas's crucial “cogitative power” is conflated with “instinct”, and much of the action is moved to a new topic invented by Mercier himself called “Criteriology.”

Dubray S.M., Rev. Charles (1909). *Faculties of the Soul*. In *The Catholic Encyclopedia*. New York: Robert Appleton Company.

The failure of Pope Leo XIII's effort to revive the philosophy of St. Thomas within the Church is preserved in this entry: “any attempt, however, to define with greater precision the meaning of faculties [of the soul], is sure to call forth vigorous protest.” As it was not seen as having to do with dogma, it was left up in the air. “That the faculty theory has no essential connection with Catholic dogma is sufficiently evidenced by the fact that it has found, and still finds, opponents as well as advocates among Catholic theologians and philosophers.” The question of distinction is brought up without any mention of form. “This shows that when a real distinction is admitted between the soul and its faculties, or between the faculties themselves, the meaning is not that of a distinction between substances or agents. In Scholastic terminology, distinction does not always mean separation nor even the possibility of separation. And the distinction between a substance and its qualities, attributes or modes, was called a real distinction.”

Pope Pius X (1910). *Oath Against Modernism (Sacrorum antistitum)*.

Moral & dogmatic concerns over “modernism” further ensured that psychology would be pushed off the plate of Catholic education.

Guardini, Fr. Romano. (1914). *Gegensatz und Gegensätze : Entwurf eines Systems der Typenlehre*. Freiburg i. Br. : Caritas-Dr.

German theologian Fr. Romano Guardini developed his own metaphysical system stemming from questions of the souls operations, completely apart from Aristotle and St. Thomas Aquinas. Fr. Guardini would later serve as a well of intellectual heritage for future Popes Benedict XVI and Francis.

Marechal S.J., Fr. Joseph. (2004/1927). *Psychology of the Mystics*. Mineola, NY: Dover Publications.

Having withdrawn from engagement with modern psychology, Catholic scholars increasingly focussed on the psychology of “religious experiences.” For the first time in Church history, “mystics” (many of whom had earlier been investigated by the Inquisition) were elevated, with some of them becoming “Doctors of the Church.” Leading exponents of Neo-Thomism, such as Jacques Maritain, underpinned their religiosity with expectations of mystical transport. Any

hope for a return to Faculty Psychology was pushed even further away.

REDISCOVERY: FROM PEGHAIRE TO KEMPLE

The problems generated by modern psychology, precipitated by the loss of Faculty Psychology, including the explosion of contrary theories and failed therapeutic techniques, have reached almost unbearable levels, prompting an effort to retrieve the “lost” understanding of the psyche/soul. The “disenchantment of the world,” as described by Max Weber, in which understanding of the soul was largely lost, along with widespread alienation/disaffection across society, has only compounded these problems. It is now beginning to be recognized that the rich development of a “faculty psychology” focussed on the “inner senses” has become an urgent and even “existential” requirement under digital conditions. Once again, Aristotle and Aquinas are being studied for their psychological insights and psychic healing sensibilities.

Peghaire C.S.Sp., Fr. Julien (1942). *A Forgotten Sense, the Cogitative According to St. Thomas Aquinas*. In *The Modern Schoolman* 20 (4):210-229. St Louis University.

At the same time, Fr. Julien Peghaire of the Holy Ghost Fathers picked up on the topic of another forgotten interior sense, the cogitative power. His extended two-part article would lead to the publication of a monograph on the topic by George Klubertanz S.J., called “The Discursive Power”.

Muller-Thym, Bernard J. (1940). “The Common Sense, Perfection of the Order of Pure Sensibility,” in *The Thomist* 2: 315-43. St. Louis University.

Muller-Thym, the “star-pupil” of “orthodox Thomist” Etienne Gilson, and a key advisor to Marshall McLuhan during his years at St. Louis University, wrote this extended article on St. Thomas’s doctrine of the *sensus communis* as the term of the exterior senses. As the “Perfection of the Senses” (which means “completion”), it appears that this was the end-of-the-road for McLuhan, who structured his own approach to media around the “balance” of the exterior senses, up to and including the “Common Sense,” without exploring the more important “inner senses.”

McLuhan, Herbert Marshall (1942). *The Classical Trivium: The Place of Thomas Nashe in the Learning of His Times*. Dissertation. University of Cambridge.

Written at St. Louis University with the help of colleague & friend Bernard J. Muller-Thym, this dissertation on the history of Western learning was mailed by boat to Cambridge during World War II. In it, McLuhan paints the historical controversies in the world of letters as being between the primacy of “grammar” and “dialectics”, on the battlefield of rhetoric. With only a truncated understanding of the “sensory faculties,” McLuhan was unable to develop an adequate psychology to accompany his analysis of the Trivium.

McLuhan, Herbert Marshall (1951). "Joyce, Aquinas, and the Poetic Process" In *Renascence* 4 (1):3-11. Marquette University.

In this paper, McLuhan attempts to detect and trace the sensory doctrines of St. Thomas Aquinas in the poetics of James Joyce. This paper would serve as the foundation for Italian author Umberto Eco's dissertation on the same topic. The absence of the cogitative power in this work can be blamed on its absence from Maher's English manual, a resource Joyce used frequently.

Harvey, E. Ruth. (1975). *The Inward Wits: Psychological Theory in the Middle Ages and the Renaissance*. (Warburg Institute Surveys, Vol. 6.). London: The Warburg Institute.

Ruth Harvey, a once-student of Frances Yates, wrote this monograph for The Warburg Institute. In it, she draws out the forgotten history of the interior senses: or as they had become known in Elizabethan England, "the inward wits." She traces their use through English poetry (Stephen Hawes, Shakespeare), and outlines their historical roots from Arabic & Latin commentators of Aristotle.

Caruthers, Mary. (1990). *The Book of Memory: A Study of Memory in Medieval Culture*. Cambridge: Cambridge University Press.

Of the four "inner senses" described by Aquinas, perhaps the most neglected is memory. In an environment where "creativity" and "innovation" is prized, memory often appears to be forgotten. In fact, without a robust understanding of the role played by memory in perception, the "ecology of the inner senses" becomes radically imbalanced and the grounding of behavior and attitudes unhinged.

Gasson, J. A. and Arnold, Magda B. (1963). "The Internal Senses: Functions or Powers?, Part 1 & Part 2" in *The Thomist*. 26 1: 1-34. Washington DC: The Catholic University of America Press.

According to the historian of psychology, Robert Kugelmann (University of Dallas), one of the few modern psychologists who even attempted to develop a "Faculty Psychology," following the Thomist orientation, was Magna Arnold. She is particularly known for her extensive treatment the faculties of "Emotion" and "Memory." Today she is mostly remembered as pioneering "feminist psychologist" and a recent PhD dissertation relates how her knowledge of Thomas likely came from a Jesuit priest, J. A. Gasson S. J., with whom she developed an "intimate" relationship.

Arnold, Magda B. (1984). *Memory and the Brain*. Hillsdale, New Jersey: Lawrence Erlbaum Associates.

Magna Arnold's last work focuses on the crucial faculty of memory. This is the "inner sense" that anchors the "phantasms" to which the Passive Intellect must return in order to generate perceptions. She divides the work into "Psychological Aspects" and "Neurophysiological Aspects," outdating the medieval notions of the relationships with brain anatomy.

Kugelmann, Robert (2011). *Psychology and Catholicism: Contested Boundaries*. Cambridge University Press.

An historical account of the relationship between psychology and the Catholic Church. It particularly deals with the rise of experimental psychologies (of Wundt, Fechner, Freud, Jung, and others) and their clash with an anti-modern Church that gradually subsumed much of the premises. Overwhelmingly, when Catholics adopt various psychological approaches, they separate the “science” involved from their own “faith.” In the process, the core understanding of the soul and its faculties -- as reflected in Thomas & al -- is lost.

Deely, John (2001). *Four Ages of Understanding*. Toronto: University of Toronto Press.

Deely, John (1971). “Animal Intelligence and Concept-Formation” in *The Thomist*. 35. (1):43-93. Houston, Texas: University of St. Thomas.

Deely’s *Four Ages* is sweeping purview of the history of western philosophy, from ancient to present. With his focus on signs & relations, much attention is given by Deely to human perception. In his article in *The Thomist*, Deely draws out St. Thomas Aquinas’s statements on embodied perception, in human beings but particularly in non-human animals. He dismisses Peter Geach’s work on Aquinas as “caricature” or “parody”, and further rejects the suggestion that “instinct” could be an adequate explanation for animal concept-formation, seeking instead the perceptual roots which precede abstraction of any kind.

Ripperger F.S.S.P., Fr. Chad (2001). *Introduction to the Science of Mental Health*. Sensus Traditionis Press.

Father Ripperger’s “magnum opus,” in three Parts, begins with perhaps the only modern attempt to compile all of Thomas’s commentary on the psychological faculties. His Chapters 3 & 4 (Part 1) are titled “The Cognitive Faculties” (Sections I & II) and run for 52 pages of often dense citation. The section titled “The Four Interior Senses or the Passive Intellect” begins to draw out aspects of the crucial relationship between these faculties and the more commonly referenced “Agent” and “Possible” Intellects.

Barker, Mark (2007). *The Cogitative Power: Objects and Terminology*. Dissertation. Houston, Texas: University of St. Thomas.

Barker has devoted his academic career to the crucial “Cogitative Power,” which is the faculty that “perfects” the interior senses. His privately circulated PhD is now in preparation for elaborated publication.

Tellkamp, Jörg Alejandro; Lopez-Farjeat, Luis Xavier (2013). *Philosophical Psychology in Arabic Thought and the Latin Aristotelianism of the 13th Century*. Paris: Library Philosophique J. Vrin

A collection of papers from various scholars & researches on the finer points of the reception of Aristotelian psychology in medieval Europe.

Pope Francis (2015). *Laudato si'*.

Pope Francis begins the third chapter “The Human Roots of the Ecological Crisis” with a central problem concerning human understanding: “it would hardly be helpful to describe symptoms without acknowledging the human origins of the ecological crisis. A certain way of understanding human life and activity has gone awry, to the serious detriment of the world around us. Should we not pause and consider this? At this stage, I propose that we focus on the dominant technocratic paradigm and the place of human beings and of human action in the world.” In this chapter, Pope Francis cites Fr. Romano Guardini’s “The End of the Modern World” six times.

Lisska, Anthony J. (2016). *Aquinas’s Theory of Perception: An Analytic Reconstruction*. New York: Oxford University Press.

Lisska’s monograph reconstructs St. Thomas’s writings on the interior sensory faculties from an “analytic approach”, and sets their real & formal basis against that of “representationalists” such as Suarez, and in turn - Hume, Descartes &al. He claims a “striking structural similarity” between St. Thomas’s interior senses and the “direct perception” proposed by J. J. Gibson and Thomas Reid, while the heart of their striking differences lays outside the scope of the study.

Kemple, Brian (2017). *Ens Primum Cognitum in Thomas Aquinas and the Tradition*. Brill | Rodopi. Houston: University of St. Thomas.

Kemple completed his PhD under the supervision of John Deely, the highly respected founder of the Semiotic Association of America and medieval (or, as he preferred to call it, “Latin Age”) scholar. Kemple now runs Continuum Insights, which is conducting an online seminar in “Thomist Psychology” for its clients.

SUBCONSCIOUS RETRIEVED: FROM JAYNES TO GIGERENZER

Stepping away from the embarrassingly unsuccessful effort to solve the “hard problem of consciousness,” many have begun to look elsewhere. Neuroscience richly illustrates that naive notions of “free will” cannot be sustained and “philosophy of mind” has begun to examine the inner workings beneath the veneer of awareness. Efforts to “model” humans on computers, with “direct perception” and control-oriented “programs,” appear to have taken AI research into a fruitless brute-force cul-de-sac. It is becoming increasingly clear that the brain is not “cybernetic” and the “mind” is not digital. A complete rethinking of the human psyche/soul is now required, retrieving our earliest sources, starting with perception and the exploration of subconscious pattern-recognition.

Jaynes, Julian (1976). *The Origins of Consciousness in the Breakdown of the Bicameral Mind*. Boston: Houghton Mifflin Company.

Jaynes, a brilliant renegade, posited that “consciousness” was a recent phenomenon, only developing in the first millenium BC, and not the original condition of human mentality. This was

a bombshell in the world of psychological investigation and beyond, bringing relentless criticism and forcing Jaynes to defend his claims. As a result, the promised Book IV never appeared, leaving Jaynes with the sense of being trapped in “academic prison.” While suggesting various mechanisms in “Origins,” at the end of his life he shifted towards literacy as the driver of conscious awareness, crediting Marshall McLuhan for the key insights.

Donald, Merlin (1991). *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition*. Cambridge, MA: Harvard University Press.

Donald, an evolutionary neuroscientist, picked up where Jaynes had left off, building on both “Origins” as well as his early education in “media literacy,” itself a Canadian reaction to the work of Marshall McLuhan. Unlike Jaynes, however, Donald career was successful, taking him to the chairmanship of the Psychology Dept. at Case Western. While Jaynes had concentrated exclusively on the “recent” transition in mentality, Donald extended this back to the origins of Homo Sapiens, positing earlier mental frameworks, including “episodic,” “mimetic” and “mythic” (roughly what Jaynes had meant by “bicameral.”) His term for “conscious” mentality was “theoretic” and he grounded the analysis in the role of “external symbolic storage” (explicitly introducing technological environments into the discussion.)

McGilchrist, Ian (2009). *The Master and His Emissary: The Divided Brain and the Making of the Western World*. New Haven: Yale University Press.

McGilchrist, a psychiatrist and neuroimaging researcher, claims to have taken 20+ years to complete this book, winning him widespread acclaim. Brain anatomy is hemispherically left/right, which has stimulated endless speculation about potential functional specialization. He demonstrates that most naive notions, typically assigning “logic” to the “left-brain” and “poetry” to the “right-brain,” is incorrect. In fact, localization is far more complicated and both hemispheres carry out most brain functions, although they appear to generate different “takes” on our experiences. Nonetheless, he does conclude that a leftward “dominance,” aligned with characteristic communications technologies, could help to explain some distinctive features of Western civilization.

Rock, Irwin (1983). *The Logic of Perception*. Cambridge, MA: The MIT Press.

Expanding on the work of Gestalt psychology and its interest in perceptual theory, Rock conducted his own extensive experimentation and concluded that there must be a subconscious “intelligence” involved. This contradicts the widely held views proposed by J. J. Gibson (as well as Rock’s earlier views), often described as the “direct” or “stimulus” theory of perception. While apparently unaware of the earlier notions of “faculties,” Rock posits the operation of an “unconscious inference” which should be considered as Faculty Psychology is rediscovered.

Gregory, Richard L. (2009). *Seeing Through Illusion*. Oxford: Oxford University Press.

Gregory was a psychologist of perception, with a particular interest in optical illusions, also a mainstay of the earlier Gestalt approach. As he and many others have demonstrated, any notion of external sensation being “directly” perceived is contradicted by our inability to simply resolve these illusions. The “inner senses” of Faculty Psychology present an opportunity to better understand these processes.

Robinson, Daniel N. (2008). *Consciousness and Mental Life*. New York: Columbia University Press.

Robinson provides a rare historic overview of the predecessors to modern “cognitive science,” asking the question what this presumed “revolution” actually overturned. He correctly wonders, “Is the revolution one of discovery or retreat?” In the process, beginning with Aristotle, he suggests that a “developed or revived respect for a much maligned ‘folk psychology’” is now needed, in the face of a triumphant (and, thus, surely deluded) “scientism.”

Wegner, Daniel M. (2002). *The Illusion of Conscious Will*. Cambridge, MA: The MIT Press.

As certain as philosophers like to think their own thoughts might be, the thorny topic of “free will” has fallen on hard times. As Wegner puts it, “Do we consciously cause what we do, or do our actions happen to us?” Illusions apparently go even deeper than simple perceptions. Fully expanded, we need to understand the wider environmental consequences of our behaviors and attitudes. Rather than being the open-ended chance to “construct the world” according to our whims, it seems far more plausible that the world “constructs” us instead.

Norretranders, Tor (1998, Danish original, 1991). *The User Illusion: Cutting Consciousness Down to Size*. New York: The Penquin Press.

Norretranders begins by noting that “Consciousness plays a far smaller role in human life than Western culture has tended to believe,” expanding on the comprehensive doubts raised by neuroscience about how we understand ourselves. In part building on the work of Jaynes & al, he goes further in his scepticism about previous certainties to state “it has become increasingly clear since 1930 that the basis of objectivity is itself subjective.”

Gigerenzer, Gerd (2007). *Gut Feelings: The Intelligence of the Unconscious*. New York: The Penquin Press.

Gigerenzer used to direct the Center for Adaptive Behavior at the Max Planck Institute for Human Development. This popularization of the work at his Center is, in some ways, a rejoinder to Malcolm Gladwell who tackled the same topic in his 2005 *Blink: The Power of Thinking Without Thinking*, based in part on Gigerenzer’s and his group’s research. His approach is to construct “rules of thumb” which might be thought of as “learned instincts,” as the actual subconscious substrata of day-to-day decision making.

Pearl, Judea and MacKensie, Dana (2018). *The Book of Why: The New Science of Cause and Effect*. New York: Basic Books.

Judea Pearl, a senior AI researcher, illustrates the fundamental problems faced by those attempting to “model” humans as a result of their inability to deal with causality. During the 20th-century, the already tattered four-fold Aristotelian classification was discarded in favor of statistical approaches, reflecting the impact of an electric media-environment. Causality is intimately related to the “inner senses,” which is where they are initially perceived. Without a Faculty Psychology, causality slips away and, without that understanding, the opportunity for significant scientific insight is jeopardized.