

# Catholic Neurotheology

**Andrew B. Newberg**

Thomas Jefferson University, Philadelphia, Pennsylvania

**Mary Clare Smith**

Sisters of Notre Dame, Chardon, Ohio

Series in Philosophy of Religion



VERNON PRESS

Copyright © 2024 by the authors.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of Vernon Art and Science Inc.  
www.vernonpress.com

*In the Americas:*  
Vernon Press  
1000 N West Street, Suite 1200,  
Wilmington, Delaware 19801  
United States

*In the rest of the world:*  
Vernon Press  
C/Sancti Spiritu 17,  
Malaga, 29006  
Spain

Series in Philosophy of Religion

Library of Congress Control Number: 2024932849

ISBN: 978-1-64889-898-3

Also available: 979-8-8819-0022-9 [Paperback]

Product and company names mentioned in this work are the trademarks of their respective owners. While every care has been taken in preparing this work, neither the authors nor Vernon Art and Science Inc. may be held responsible for any loss or damage caused or alleged to be caused directly or indirectly by the information contained in it.

Every effort has been made to trace all copyright holders, but if any have been inadvertently overlooked the publisher will be pleased to include any necessary credits in any subsequent reprint or edition.

Excerpts from the English translation of the *Catechism of the Catholic Church* for use in the United States of America Copyright © 1994, United States Catholic Conference, Inc.,--Libreria Editrice Vaticana. Used with Permission. English translation of the *Catechism of the Catholic Church*: Modifications from the Editio Typica copyright © 1997, United States Conference of Catholic Bishops—Libreria Editrice Vaticana.

*Nihil obstat*: Reverend Gerald Bednar, JD, PhD  
*Censor deputatus*

*Imprimatur*: Most Reverend Edward C. Malesic, JCL  
Bishop of Cleveland

Given at Cleveland, Ohio, on February 1, 2024.

The *Nihil obstat* and *Imprimatur* are official declarations that a book or pamphlet is free of doctrinal or moral error. No implication is contained therein that those who have granted the *Nihil obstat* and *imprimatur* agree with the contents, opinions, or statements expressed.

Cover design by Vernon Press. Background image by Freepik.

# Table of Contents

<b>Acknowledgments</b>	v
<b>Author Note</b>	vii
Chapter 1 <b>Introduction to Catholic Neurotheology</b>	1
Chapter 2 <b>Neurotheological Investigations in Catholic Thought</b>	17
Chapter 3 <b>Epistemological Considerations and Faith</b>	45
Chapter 4 <b>Methodology in Neuroscience and Catholicism</b>	71
Chapter 5 <b>Free Will and the Brain</b>	93
Chapter 6 <b>The Body's Response to Religious Experience</b>	111
Chapter 7 <b>The Neurophysiology of Catholic Rituals</b>	125
Chapter 8 <b>The Neurophysiology of Catholic Practices</b>	159
Chapter 9 <b>Psychology and Catholicism</b>	179
Chapter 10 <b>Spirituality from a Neurotheological Perspective</b>	199
Chapter 11 <b>Mysticism, Catholicism, and the Brain</b>	231
Chapter 12 <b>Catholic Theological Implications</b>	263
Chapter 13 <b>Holiness, Grace, Soul, and the Brain</b>	283
Chapter 14 <b>Critique, Clarifications, and Future Directions</b>	305
<b>References</b>	331
<b>Index</b>	379



# Acknowledgments

We are grateful to the colleagues who have provided helpful advice, support, contributions, and suggestions for this book.

We wish primarily to thank our consultants: Reverend Gerald Bednar, Ph.D., JD; James Beauregard, Ph.D.; Reverend Steven Payne, OCD, Ph.D.; Reverend Juan Jose Sanguinetti, Ph.D.; Margarita Vega, Ph.D.; and Joel Johnson, Ph.D. They are also mentioned with their affiliations in our Author Note. The expertise and recommendations of our consultants have been invaluable. Any errors in this work are not attributable to our consultants or advisors.

Thanks are due also to my (ABN) colleagues, including Daniel Monti, M.D. and Nancy Wintering, M.S.W., and my wonderful mentors Abass Alavi, M.D. and Eugene d'Aquili, M.D., Ph.D. Dr. d'Aquili, who passed away 25 years ago, would have been particularly excited by this book since he was Catholic and loved all the Catholic rituals and ceremonies. We also want to thank the Sisters of Notre Dame, Linda Zagzebski, Ph.D., and Sofia Carozza, Ph.D. Finally, we owe thanks to Blanca Caro Duran, Maria Bajo Gutierrez, Argiris Legatos, and the rest of the staff at Vernon Press for their excellent work and the high academic standards they have maintained in the production of our book.



## Author Note

Andrew B. Newberg is a neuroscientist in the Department of Integrative Medicine and Nutritional Sciences, Thomas Jefferson University, Philadelphia, PA; Mary Clare Smith is a Sister of Notre Dame and counseling psychologist, Chardon, OH.

Consultants were: Gerald Bednar, former professor of systematic theology at St. Mary Seminary and Graduate School of Theology, Wickliffe, Ohio; James Beauregard, neuropsychologist and professor at Rivier University, Nashua, New Hampshire; Steven Payne, professor and president of the Carmelite Institute of North America at the Catholic University of America, Washington, DC; Juan José Sanguinetti, professor emeritus of philosophy, Pontifical University of the Holy Cross, Rome, and current professor at Austral University, Buenos Aires, Argentina; Margarita Vega, professor of philosophy at Dominican School of Philosophy and Theology, Berkeley, California; and Joel Johnson, professor of philosophy at Borromeo Seminary College and John Carroll University, Cleveland, Ohio. Andrew B. Newberg contributed to the neurotheological aspects of the study. Mary Clare Smith and the consultants contributed primarily to aspects related to Catholicism and psychology.

Correspondence concerning this book should be addressed to Andrew Newberg, e-mail: [Andrew.Newberg@jefferson.edu](mailto:Andrew.Newberg@jefferson.edu), and/or to Mary Clare Smith, [mcsmith8920@gmail.com](mailto:mcsmith8920@gmail.com).





# Abstract

The topic of “Neurotheology” has garnered increasing attention in the academic, religious, scientific, and popular worlds. Several books have been written addressing the relationship between the brain and religious experience, and numerous scholarly articles have been published on the topic. The popular press has also given significant attention to neurotheology, including major stories in *Newsweek*, *Time*, *The New Scientist*, *Readers Digest*, and *Popular Mechanics*. The scientific and religious communities have been highly interested in obtaining more information regarding neurotheology, how to approach this topic, and how science and religion can be integrated in some manner that preserves both.

However, there have been no extensive attempts at exploring more specifically how Catholic religious thought and experience may intersect with the brain and neuroscience. The purpose of *Catholic Neurotheology* is to engage this groundbreaking area fully. Topics are related to a neurotheological approach to the foundational beliefs that arise from Catholic learning from Scripture and Tradition, an exploration of the different elements of Catholicism, an exploration of specifically Catholic practices and rituals, and a review of Catholic mysticism. Specific Catholic scholars are considered in terms of the relationship between their ideas/teachings and different brain processes. *Catholic Neurotheology* engages these topics with the hope that readers, regardless of their background, will be able to understand the complexities and breadth of neurotheology from a Catholic perspective. More broadly, issues include a review of the neurosciences and neuroscientific techniques; religious and spiritual experiences; theological development and analysis; liturgy and ritual; epistemology, philosophy, and ethics; and social implications, all from a Catholic perspective.

PAGES MISSING  
FROM THIS FREE SAMPLE

## References

- Abbott, W. M. (Ed.). (1966). Documents of Vatican II. New York: Herder and Herder.
- Abu, H. O., Ulbricht, C., Ding, E., Allison, J. J., Salmoirago-Blotcher, E., Goldberg, R. J., & Kiefer, C. I. (2018). Association of religiosity and spirituality with quality of life in patients with cardiovascular disease: A systematic review. *Quality of Life Research, 27*(11), 2777-2797. doi: 10.1007/s11136-018-1906-4.
- Acosta, M. (2015). Neuroteología. Es hoy la nueva teología natural? *Naturaleza y Libertad : Revista de estudios interdisciplinarios, 5*, 11-51.
- Adolphs, R., Glascher, J., & Tranel, D. (2018, January 16). Searching for the neural causes of behavior. *Proceedings of the National Academy of Sciences of the United States of America, 115*(3), 451-452. doi: 10.1073/pnas.1720442115.
- Afford, P. (2020, September). Using neuroscience to map the whole person: Peter Afford guides us through the systems that influence emotions, behavior, and personality. *Therapy Today, 31*(7), 1-7.
- Alcorta, C. S., & Sosis, R. (2005). Ritual, emotion, and sacred symbols: The evolution of religion as an adaptive complex. *Human Nature, 16*(4), 323-359. doi: 10.1007/s12110-005-1014-3.
- Alexander, A. (2020). (Review). *Theological neuroethics: Christian ethics meets the science of the human brain* by Neil Messer. *Journal of Moral Theology, 9*(2), 209-211.
- Alexander, A. R. (2018). *Mystical brain, divine consciousness: A theological appropriation of cognitive neuroscience*. (Unpublished doctoral dissertation. Fordham University, New York).
- Allen, C., & Trestman. (2020, Winter). Animal consciousness. In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy*. Retrieved from <https://plato.stanford.edu/archives/win2020/entries/consciousness-animal>.
- Allen, J. A. (2016). Bernard Lonergan's critique of knowing as taking a look. *Heythrop Journal, 57*(3), 451-460. doi: 10.1111/heyj.12147.
- Alston, W. (1991). *Perceiving God: The epistemology of religious experience*. Ithaca, NY: Cornell University Press.
- Amen, W. (2023). *The Daniel plan*. Retrieved from <https://www.danielplan.com/start>
- American Psychological Association. (2013). What role do religion and spirituality play in mental health? (Interview with K. I. Pargament). Retrieved from <https://www.apa.org>.
- Ammon, K., & Gandevia, S. C. (1990). Transcranial magnetic stimulation can influence the selection of motor programs. *Journal of Neurology, Neurosurgery, and Psychiatry, 53* (8), 705-707.
- Anderson, D. E. (2012). Neuroscience. In J. A. Lamm (ed.), *The Wiley-Blackwell Companion to Christian mysticism* (pp. 592-609). Hoboken, NJ: Wiley-Blackwell.

- Anderson, E. (2013). Neuroscience. In J. A. Lemm (Ed.), *The Wiley-Blackwell companion to Christian mysticism* (pp. 592-609). West Sussex, U.K.: John Wiley & Sons.
- Andresen, J. (2001). *Religion in mind: Cognitive perspectives on religious belief, ritual, and experience*. Cambridge, U.K: Cambridge University Press.
- Anscombe, G. E. M. (1957/2000). *Intention* (2<sup>nd</sup> ed.). Cambridge, MS: Harvard University Press.
- Antonovsky, A. (1987). *Unraveling the mystery of health: How people manage stress and stay well*. San Francisco: Jossey-Boss.
- Aquinas, T. (1250s/2023). *On the principles of nature*. Retrieved from <https://www3.nd.edu/~afreddos/papers/Aquinas>
- Aquinas, T. (1259/1952). *De veritate: On truth*. Washington, DC: Henry Regnery Publishing.
- Aquinas, T. (1265/2019) *Summa contra gentiles. 4 vols.* (The Aquinas Institute, Ed.). Steubenville, OH: Emmaus Academic Publishing.
- Aquinas, T. (1948). *Summa theologica*. (Vols. 1-3). (Fathers of the English Dominican Province, Trans.). New York: Benziger Brothers.
- Aristotle, & McMahin, J. H. (1991). *The metaphysics*. Amherst, NY: Prometheus Publishing.
- Aristotle, & Reeve, C. D. C. (350 BC/2017). *De anima*. Indianapolis, IN: Hackett Publishing.
- Arraj, J. (1993) *Mysticism, metaphysics, and Maritain: On the road to the spiritual unconscious*. Chiloquin, OR: Inner Growth Books.
- Ashbrook, J. B., & Albright, C. R. (1997). *The humanizing brain: Where religion and neuroscience meet*. Cleveland, OH: Pilgrim Press.
- Aspren, E., & Taves, A. (2018). Explanation and the study of religion. In B. Stoddard (Ed.), *Method today: Redescribing approaches to the study of religion* (pp. 133-157). London, U.K.: Equinox.
- Assaf, Y., & Pasternak, O. (2008). Diffusion tensor imaging (DTI)-based white matter mapping in brain research: A review. *Journal of Molecular Neuroscience*, 34, 51-61. doi:10.1007/s12031-007-0029-0.
- Atran, S. (2002). *In gods we trust: The evolutionary landscape of religion*. Oxford, U.K.: Oxford University Press.
- Augustine, St. (400/2012). *De Trinitate: On the Trinity*. New York: New City Press.
- Austin, J. H. (1998). *Zen and the brain*. Cambridge, MA: MIT Press.
- Avila Institute. (2023). Retrieved from [Avila-institute.org/spiritual-formation](https://Avila-institute.org/spiritual-formation)
- Azari, N. (2006). Neuroimaging studies of religious experience: A critical review. In P. McNamara (Ed), *Where God and science meet: How brain and evolutionary studies alter our understanding of religion, vol. 3: The psychology of religious experience* (pp. 33-54). Westport, CT: Greenwood Press.
- Azari, N., Nickel, J., Niedeggen, M., Hefter, H., Tellman, L., Herzog, H., Seitz, R. J. (2001). Neural correlates of religious experience. *European Journal of Neuroscience*, 13, 1649-1652.
- Baesler, E. J., & Ladd, K. (2009). Exploring prayer contexts and health outcomes: From the chair to the pew. *Journal of Communication and Religion*, 32(2),

- 347-384. Retrieved from [https://digitalcommons.odu.edu/communication\\_fac\\_pubs](https://digitalcommons.odu.edu/communication_fac_pubs)
- Baglow, C. T. (2020). Faith and science: The foundation of a Catholic approach to science. McGrath Institute for Church Life. Notre Dame University. In C. T. Baglow (Ed.), *Faith, science, and reason: Theology on the cutting edge* (2<sup>nd</sup> ed.). Downers Grove, IL: Midwest Theological Forum.
- Barbour, I. (1990). *Religion in an age of science*. San Francisco, CA: HarperOne.
- Barbour, I. (1997). *Religion and science: Historical and contemporary issues*. New York: HarperCollins.
- Barbour, I. G. (2000). *Religion and science: Historical and contemporary issues*. New York: HarperCollins.
- Barnby, J. M., Bailey, N. W., Chambers, R., & Fitzgerald, P. B. (2015, November). How similar are the changes in neural activity resulting from mindfulness practice in contrast to spiritual practice? *Consciousness and Cognition*, 36, 219-232.
- Barrett, J. L. (2017). Cognitive science of religion and Christian faith: How may they be brought together? *Perspectives on Science and Christian Faith*, 69(1), 3-12.
- Barrett, N. F. (2011). [Review of the book Principles of Neurotheology by Andrew Newberg]. *Ars Disputandi*, 11, 133-136. Retrieved from <http://www.ArsDisputandi.org>
- Basilian Fathers: Our charism. (2023). Retrieved from [https://basilian.org/en/Basilian:Byzantine\\_rite\\_monasticism](https://basilian.org/en/Basilian:Byzantine_rite_monasticism).
- Battro, A. M., Dehaene, S., Sorondo, M. S., Singer, W. J. (Eds.). (2013). *Neurosciences and the human person: New perspectives on human activities*. Vatican, Rome: Pontifical Academy of Sciences.
- Beauregard, J. (2019). *Philosophical neuroethics: A personalist approach. Vol. 1: Foundations*. Wilmington, DE: Vernon Press.
- Beauregard, J. (2023). *Philosophical neuroethics: A personalist approach. Vol. 2. Practical neuroethics*. Wilmington, DE: Vernon Press.
- Beauregard, M. (2007). Mind does really matter: Evidence from neuroimaging studies of emotional self-regulation, psychotherapy, and placebo effect. *Progress in Neurobiology*, 81, 218-236.
- Beauregard, M., & O'Leary, D. (2008). *The spiritual brain: A neuroscientist's case for the existence of the soul*. Chapters 7-10. New York: HarperCollins.
- Beauregard, M., & Paquette, V. (2006). Neural correlates of a mystical experience in Carmelite nuns. *Neuroscience Letters*, 405(3), 186-190.
- Beck, A. T. (1979). *Cognitive therapy and emotional disorders*. New York: Plume. Penguin Books.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1967/1987). *Cognitive therapy of depression*. New York: Guilford Press.
- Bellah, R. N. (1986, February 21). Habits of the heart: Implications for religion. Lecture 5: St. Mark's Catholic Church, Isla Vista, California. Retrieved from [http://www.robertbellah.com/lectures\\_5.htm](http://www.robertbellah.com/lectures_5.htm)

- Benedict XVI, Pope. (2007). *Spe Salvi*. Encyclical Letter on Christian Hope. Retrieved from [https://www.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf\\_ben-xvi\\_enc\\_20071130\\_spe-salvi.html](https://www.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20071130_spe-salvi.html)
- Benedict XVI, Pope. (2012, November 8). Address of His Holiness Pope Benedict XVI to members of the Pontifical Academy of Sciences on the occasion of the plenary assembly. Retrieved from [www.vatican.va/content/benedict-xvi/en/speeches/2012/november/documents/hf\\_ben-xvi\\_spe\\_20121108\\_academy-sciences.htm](http://www.vatican.va/content/benedict-xvi/en/speeches/2012/november/documents/hf_ben-xvi_spe_20121108_academy-sciences.htm)
- Bennet, P. (2019a). "Landscape plotted and pieced": Exploring the contours of engagement between (neuro)science and theology. *Zygon: Journal of Religion and Science*, 54, 86-106.
- Bennet, P. (2019b). "Things counter, original, spare, strange:" Developing a postfoundational transversal model for science/religion dialogue." *Zygon: Journal of Religion and Science*, 54, 107-128.
- Bennet, P. (2019c). "All trades, their gear, and tackle and trim:" Theology, cognitive neuroscience, and psychoneuroimmunology in transversal dialogue. *Zygon: Journal of Religion and Science*, 54, 129-148.
- Bennett, M. R., & Hacker, P. M. S. (2003). *Philosophical foundations of neuroscience* (1st ed.). Malden, MA: Blackwell.
- Berger, P. L., & Luckmann, T. (1966/1975). *The social construction of reality*. London, U.K.: Penguin.
- Bergman, R. (2008). Teaching justice after MacIntyre: Toward a Catholic philosophy of moral education. *Catholic Education: A Journal of Inquiry and Practice*, 12(1), 7-24.
- Bering, J. (2011). *The belief instinct: The psychology of souls, destiny, and the meaning of life*. New York: W. W. Norton.
- Bianchini, D. A. (2015, December 7). What are the differences between religious orders? Retrieved from [www.religious-vocation.com](http://www.religious-vocation.com).
- Bilder, R. Howe, A., & Saab, F. (2013). Multilevel models from biology to psychology: Mission impossible? *Journal of Abnormal Psychology*, 122(3), 917-927.
- Bingaman, K. A. (2013). The promise of neuroplasticity for pastoral care and counseling. *Pastoral Psychology*, 62(5), 549-560. doi: 10.1007/s11089-013-0513-0.
- Black, D. S., & Slavich, G. M. (2016). Mindfulness meditation and the immune system: A systematized research of randomized controlled trials. *Annals of the New York Academy of Sciences*, 1373(1), 13-24. doi: 10.1111/nyas.12998.
- Bloch, M. (1989). *Ritual, history, and power*. London, U.K.: Athlone Press.
- Blommestijn, H., Huls, J., & Waaijman, K. (2000). *The footprints of love: John of the Cross as guide in the wilderness*. (Trans. J. Vriend). Leuven, Belgium: Peeters.
- Boccia, M., Piccardi, L., & Guarriglia, P. (2015). The meditative mind: A comprehensive meta-analysis of MRI studies. *BioMed research international*, 2015.
- Boston University Medical Center. (2021, April 21) Association versus causation. Module 1: Population health. Retrieved from <https://sphweb.bumc.bu.edu/otlt/>

- MPH-Modules/PH717-QuantCore/PH717-Module1A-Populations/PH717-Module1A-Populations6.html
- Bourgignon, E. (Ed.). (1973). *Religion, altered states of consciousness, and social change*. Columbus, OH: Ohio State University Press.
- Bourgignon, E. (Ed.). Possession. San Francisco, CA: Chandler and Sharpe.
- Bouyer, P. (2003). Religious thought and behavior as by-products of brain function. *Trends in Cognitive Sciences*, 7(3), 119-124.
- Brandt, P.-Y., Clément, F., & Manning, R. R. (2010). Neurotheology: Challenges and opportunities. *Schweitzer Archiv für Neurologie und Psychiatrie*, 161, 305-309. Retrieved from <http://www.sanp.ch>
- Brown, J. W. (2015). *Microgenetic theory and process thought*. Bedfordshire, U.K.: Andrews, U.K., Ltd.
- Brown, W. S., Murphy, N., & Malony, H. N. (Eds.). (1998). *Whatever happened to the soul? Scientific and theological portraits of human nature*. Minneapolis, MN: Fortress.
- Brueggemann, W. (2007, December 25). Wired to believe. [Review of the book *Alone in the world: Human uniqueness in science and theology*, by J. W. van Huyssteen]. *Christian Century*, 26, 28-30.
- Brugger, C. (2009). Psychology and Christian anthropology. *Edification: Journal of the Christian Association of Psychology Studies*, 3, 5-18.
- Buber, M. (1923). *I and thou*. Eastford, CT: Martino Publishing.
- Buckley, M. J. (1980). Within the holy mystery. In L. O'Donovan (Ed.), *A world of grace* (pp. 31-49). New York: Seabury Press.
- Bulkeley, K. (2005). *Soul, psyche, brain: New directions in the study of religion and brain-mind science*. New York: Palgrave Macmillan.
- Bunge, M. (1979/2008). *Causality and modern science*. 4th ed. Philadelphia, PA: Routledge.
- Burgos, J. M. (2021). *Personalist anthropology: A philosophical guide to life*. Wilmington, DE: Vernon Press.
- Burkhart, J. J. "Sensus Fidelium." (2023, February 23). *New Catholic encyclopedia*. Retrieved from <https://www.encyclopedia.com>
- Burns, C. P. E. (2005). Cognitive science and Christian theology. In K. Bulkeley (Ed.), *Soul, psyche, brain: New directions in the study of religion and brain-mind science*. New York: Springer.
- Butera, G. (2011). Second Harvest: Further reflections on the promise of the Thomistic psychology. *Philosophy, Psychiatry, and Psychology*, 17(4), 317-346. doi: 10.1353/ppp.2010.0029.
- Butera, G. (2011). Thomas Aquinas and cognitive therapy: An exploration of the promise of the Thomistic psychology. *Philosophy, Psychiatry, and Psychology*, 17(4), 347-366. doi: 10.1353/ppp.2010.0023.
- Butler, P. M., McNamara, P., Ghofani, J., Durso, R. (2011). Disease-associated differences in religious cognition in patients with Parkinson's Disease. *Journal of Clinical and Experimental Neuropsychology*, 33(8), 917-928. doi: 10.1080/13803395.2011.575768.
- Buzsaki, G. (2006). *Rhythms of the brain*. New York: Oxford University Press.

- Byrne, P. H. (2021). Notre Dame Philosophical Reviews. [Review of the book *Authenticity as self transcendence: The enduring insights of Bernard Lonergan* by M. H. McCarthy]. Retrieved from <https://ndpr.ne.edu/reviews/authenticity-as-self-transcendence-the-enduring-insights-ofbernard-lonergan>
- Cacioppo, J. T., Gardner, W. L., & Berntson, G. G. (2002). The affect system has parallel and integrative processing components: Form follows function. In J. T. Cacioppo, G. G. Berntson, R. Adolphs, et al., (Eds.), *Foundations in Social Neuroscience* (pp. 493-522). Cambridge, MA: MIT Press.
- Cahn, B. R., & Polich, J. (1999). Meditation states and traits: EEG, ERP, and neuroimaging studies. *Psychological Bulletin*, 132, 180-211.
- Candelario, D. A. (2009). George Tyrrell and Karl Rahner: A dialogue on revelation. *Heythrop Journal*, 50(1), 44-57. doi: 10.1111/j.1468-2265.2008.00416.x.
- Caponi, F. J. (2007). A speechless grace: Karl Rahner on religious language. *International Journal of Systematic Theology*, 9(2), 200-222. doi: 10.1111/j.1468-2400.2007.00253.x.
- Cappas, N. M., Andres-Hymen, R., & Davidson, H. (2005). What psychotherapists can begin to learn from neuroscience: Seven principles of brain-based psychotherapy. *Psychotherapy: Theory, Research, Practice, Training*, 42, 374-383.
- Capra, F., Steindl-Rast, D., & Matus, T. (1992). *Belonging to the universe: New Thinking about God and nature*. New York: Penguin Books.
- Carlson, N. R. (2007). *Physiology of behavior*. (9<sup>th</sup> ed.). Boston, MA: Allyn and Bacon.
- Carmelite Sisters of the Most Sacred Heart of Los Angeles. (2013, June 10). Meditation and contemplation—What is the difference? Retrieved from <https://carmelitesistersocd.com/2013/meditation-contemplation/>
- Carr, L. Iacoboni, M., Dubeau-M.-C., & Lenzi, G. L. (2003, April 7). Neural mechanisms of empathy in humans: A relay from neural systems for imitation to limbic areas. *Biological Sciences*, 100(9), 5497-5502. Retrieved from <https://doi.org/10.1073/pnas.0935845100>.
- Cassibba, R., Granqvist, P., Costantini, A., & Gatto, S. (2008). Attachment and God representations among lay Catholics, priests, and religious: A matched comparison study based on the adult attachment interview. *Developmental Psychology*, 44(6), 1753–1763.
- Catholic Church. (1995). *Catechism of the Catholic Church*. New York: Image, Doubleday.
- Catholic Culture. (2023). *Fr. John Hardon's Modern Catholic dictionary*. Retrieved from [www.catholicculture.org/culture/library/dictionary/index.cfm?id=36024](http://www.catholicculture.org/culture/library/dictionary/index.cfm?id=36024)
- Chalmers, D. (1995). Facing up to the problem of consciousness. *Journal of Consciousness Studies*, 2(3), 200-219.
- Chang, H. (2012). *Is water H2O? Evidence, realism, and pluralism*. Boston Studies in the Philosophy of Science, 293. Dordrecht: Springer Netherlands.
- Charis Doctrinal Commission. (2021, July 28). What is the difference between mystical experiences and charismatic manifestations? Catholic Charismatic Renewal International Service. Retrieved from <https://www.charis.international/>



- en/what-is-the-difference-between-mystical-experiences-and-charismatic-manifestations.
- Chaves, M., Konieczny, M. E., Beyerlein, K., & Barman, E. (1999). The national congregations' study: Background, methods, and selected results. *Journal for the Scientific Study of Religion*, 38, 458-476.
- Chen, Y., Kim, E. S., & VanderWeele, T. J. (2020, December). Religious-service attendance and subsequent health and well-being throughout adulthood: Evidence from three prospective cohorts. *International Journal of Epidemiology*, 49(6), 2030–2040. doi: 10.1093/ije/dyaa120.
- Cherniak, Mikulincer, Shaver, & Grandqvist. (2021). Attachment theory and religion. Elsevier. Retrieved from [www.sciencedirect.com/science/article/pii/S2352250X2030172X](http://www.sciencedirect.com/science/article/pii/S2352250X2030172X)
- Christensen, J., et al. (2014). Roman Catholic beliefs produce characteristic neural responses to moral dilemmas. *Social Cognitive and Affective Neuroscience*, 9(2), 240-249. doi: 10.1093/scan/nss121.
- Christov-Moore, L., Conway, P., & Iacoboni, M. (2017). Deontological dilemma response tendencies and sensorimotor representations of harm to others. *Frontiers in Integrative Neuroscience*, 11, 1-9. doi: 10.3389/fnint.2017.00034.
- Churchill, N.W., Hutchison, M. G., Graham, S. J., & Schweitzer, T. A. (2021, May 21). Insular connectivity is associated with self-appraisal of cognitive function after a concussion. *Frontiers in Neurology*, 12. Retrieved from <https://doi.org/10.3389/2021.653442>.
- Clark, A. & Chalmers, D. (1998). The extended mind. *Analysis*, 58(1), 7-19. Oxford, U.K.: Oxford University Press.
- Clark, A. (2013). Whatever next? Predictive brains, situated agents, and the future of cognitive science. *Behavioral Brain Science*, 36, 181-204.
- Clarke, P. (2015). *All in the mind? Does neuroscience challenge faith?* Oxford, U.K.: Lion Hudson.
- Clayton, P. (2000). Neuroscience, the person, and God: An emergentist account. *Zygon: Journal of Religion and Science*, 35(3), 613-652. doi: 10.1111/0591-2385.00301.
- Clayton, P. (2004). *Mind and emergence: From quantum to consciousness*. New York: Oxford University Press.
- Clayton, T. (n.d.). Political philosophy of Alasdair MacIntyre. *Internet encyclopedia of philosophy: A peer-reviewed academic resource*. Retrieved from <http://iep.utm.edu/p-mac>
- Clifford, A. M. (2004). Catholicism and Ian Barbour on theology and science. In R. J. Russell (Ed.), *Fifty years in science and religion: Ian G. Barbour and his legacy*. Hants, U.K.: Ashgate.
- Clinton, T., & Sibcy, G. (2012). Christian counseling, interpersonal neurobiology, and the future. *Journal of Psychology and Theology*, 40, 141-145.
- Coffee, D. (2004). The whole Rahner on the supernatural existential. *Theological Studies*, 65, 95-118.
- Cohen, M. R., & Nagel, E. (2007). *An introduction to logic and scientific method*. NY: Harcourt, Brace, & World.
- Comstock, G. W., & Patridge, K. B. (2008, October). Historical paper: Church attendance and health. *American Journal of Epidemiology*, 168(7), 819-826.

- Congleton, C., Holzel, B. K., & Lazar, S. W. (2015). Mindfulness can literally change your brain. *Harvard Business Review*. Retrieved from <https://hbr.org/2015/01/mindfulness-can-literally-change-your-brain>
- Congregation for Catholic Education. (2016). *The Gift of Priestly Formation, Ratio fundamentalis institutionis sacerdotatis*. Retrieved from [www.semscience.net](http://www.semscience.net).
- Conn, W. E. (1988). The desire for authenticity: Conscience and moral conversion. In V. Gregson (Ed.), *The desires of the human heart: Introduction to the theology of Bernard Lonergan*. NY: Paulist Press.
- Coolman, B. T. (2009). Gestimmtheit: Attunement as a description of the nature-grace relationship in Rahner's theology. *Theological Studies*, 70, 782-800.
- Cortez, M. (2017, April). [Review of the book *Neuroscience and the soul: The human person in philosophy, science, and theology* by T. M. Crisp, S. L. Porter, and G. A. Ten Elshof (Eds.)]. *Science and Christian Belief*, 30(1), 78-79.
- Cosgrove, M. (2018). *The brain, the mind, and the person within the enduring mystery of the soul*. Grand Rapids, MI: Kregel Academic.
- Cozolino, L. (2006). *The neuroscience of human relationships: Attachment and the developing social brain*. New York: W. W. Norton and Company.
- Craig, A. D. (2004). Human feelings: Why are some more aware than others? *Trends in Cognitive Sciences*, 8(6), 239-341.
- Craig, A. D. (2009, January). How do you feel—now? The anterior insula and human awareness. *Nature Reviews Neuroscience*, 10(1), 59-70.
- Crawford, S. (Ed.). (2011). General introduction. *Philosophy of mind: Critical concepts of philosophy*. (4 Vols.). London, U.K.: Routledge.
- Crescentini, C., Aglioti, S. M., Fabbro, F., & Urgesi, C. (2013). P 140. Virtual lesions of the inferior parietal and prefrontal cortex alter implicit religiousness and spirituality in healthy individuals. *Clinical Neuropsychology*, 124(10). doi: 10.1016/j.clinph.2013.04.217.
- Critchley, H. D., Wiens, S., Rotshtein, P., Ohman, A., & Dolan, R. J. (2004). Neural systems supporting interoceptive awareness. *Nature Neuroscience*, 7, 189-195.
- Critchley, P. (2013). Being and knowing: A Thomist reading of Immanuel Kant. Retrieved from <https://mmu.academia.edu/PeterCritchley/Books>.
- Crowe, F. E., & Doran, R. M. (1988). *Collected works of Bernard Lonergan*. Toronto, Canada: University of Toronto Press.
- Cunningham, L. S. (2006, February 24). Catholic spirituality: What does it mean today?" *Commonweal*, 133(4), 11-15.
- Cunningham, P. (2011, Summer). Are religious experiences really localized within the brain? The promise, challenges, and prospects of neurotheology. *Journal of Mind and Behavior*, 32(3), 223-249.
- Curtis, J. M., & Curtis, M. J. (2016). Factors related to susceptibility and recruitment by cults. *Psychological Reports*, 73(2). Retrieved from <https://doi.org/10.2466/pro.1993.73.2.451>.
- D'Aquili, E., & Newberg, A. B. (1993). Mystical states and the experience of God: A model of the neuropsychological substrate. *Zygon*, 22, 177-200.

- d'Aquili, E., & Newberg, A. B. (1999). *The mystical mind: Probing the biology of religious experience*. Minneapolis: Fortress Press.
- D'Urso, G., Petruccelli, I., & Pace, U. (2019). Attachment style, attachment to God, religiosity, and moral disengagement: A study on offenders. *Mental Health, Religion, and Culture*, 22(1), 1-11. doi: 10.1080/13674676.2018.1562429.
- Dadosky, J. D. (2010). Is there a fourth stage of meaning? *Heythrop Journal*, 51(5), 768-780. doi: 10.1111/j.1468-2265.2009.00518.x.
- dal Covolo, E. (March 17, 1999). The encounter of faith and reason in the Fathers of the Church. Vatican City, Europe: *L'Osservatore Romano*, 9-10.
- Damasio, A. (1994/2005). *Descartes' error: Emotion, reason, and the human brain*. London, England: Penguin Books.
- Damasio, A. (2000). *The feeling of what happens: Body, emotion, and the making of consciousness*. London, U.K.: Vintage.
- Damasio, A. (2010, November 9). *Self comes to mind: Constructing the conscious mind [electronic resources]*. Westminster, MD: Pantheon Books. Random House Digital.
- Damasio, A. (2012). *Self comes to mind: Constructing the conscious mind*. New York: Pantheon Books.
- Daniel, A. E. (2013). The immortality of the soul in the thought of Thomas Aquinas. Academia. Retrieved from <https://academia.edu/29459315/>
- Darr, R. (2020). Virtues as qualities of character: Alasdair MacIntyre and the situationist critique of virtue ethics. *Journal of Religious Ethics*, 48(1), 7-25.
- Davidson, B., & Irwin, W. (2002). The functional neuroanatomy of emotion and affective style. In J. T. Cacioppo, G. G. Berntson, R. Adolphs, et al., (Eds.), *Foundations in Social Neuroscience* (pp. 473-490). Cambridge, MA: MIT Press.
- Davidson, J. R. (1976, Spring). The physiology of meditation and mystical states of consciousness. *Perspectives in Biology and Medicine*, 345-379.
- Davis, D., & Hayes, J., A. (2011). What are the benefits of mindfulness? A practice review of psychotherapy-related research. *Psychotherapy*, 48(2), 198-208.
- Dawes, G. W., & MacLaurin, J. (Eds.). (2013). *A new science of religion*. New York: Routledge.
- Dawkins, R. (2008). *The God delusion*. Boston: HarperCollins.
- De Gregorio, D., Aguilar-Valles, A., Preller, K. H., Heifets, B. D., Hibicke, M., Mitchell, J., & Gobbi, G. (2021, February 3). Hallucinogens in mental health: Preclinical and clinical studies on LSD, psilocybin, MDMA, and ketamine. *Journal of Neuroscience*, 41(5), 891-900. Retrieved from <https://doi.org/10.1523/INEUROSCI.1659-20.2020>.
- De Haan, D. D. (2018). Hylomorphism and the new mechanist philosophy in biology, neuroscience, and psychology. In W. Simpson, R. Koons, & N. The (Eds), *Neo-Aristotelian perspectives on contemporary science* (pp. 1-27). Oxfordshire, U.K.: Routledge.
- De Haan, D. D. (2020). Philosophical hazards in the neuroscientific study of religion. In A. Coles & J. Colicutt (Eds.), *Neurology and religion* (pp. 48-70). Cambridge, U.K.: Cambridge University Press.
- Deacon, T. W. (1997). *The symbolic species: The co-evolution of language and the brain*. Scranton, PA: W. W. Norton.

- Deeley, P. Q. (2004, December). The religious brain: Turning ideas into convictions. *Anthropology & Medicine*, 11(3), 245-267. doi: 10.1080/1364847042000296554.
- Dehaene, S., & Changeux, J. P. (2000). Reward-dependent learning in neuronal networks for planning and decision making. *Progress in Brain Research*, 126, 217-229.
- Dehaene, S., & Cohen, L. (2011, June). The unique role of the visual word form area in reading. *Trends in Cognitive Sciences*, 15(6). doi:10.1016/j.tics.2011.04.003.
- DeKlerk, B. J., & Kruger, F. P. (2016). Continuous formation of liturgy through social cognition. *Theological Studies*, 72. Retrieved from <http://dx.doi.org/10.4102/hts.v72i3.3170>.
- Delio, I. (2003, September). Brain science and the biology of belief: A theological response. *Zygon: Journal of Religion and Science*, 38(3), 573-585. doi: 10.1111/1467-9744.00522.
- Delio, I. (2013). Faith and the cosmos. *America*. In P. McCaffrey (Ed.). *Faith and Science*. Ipswitch, MA: EBSCO.
- Depue, R. A., Luciana, M., Arbisi, R., Collins, P., & Leon, A. (2002). Dopamine and the structure of personality: Relation of agonist-induced dopamine activity to positive emotionality. In J. T. Cacioppo, G. G. Berntson, R. Adolphs, et al., (Eds.), *Foundations in Social Neuroscience* (pp. 1071-1092). Cambridge, MA: MIT Press.
- Desikan, R. S., Ségonne, Fischl, B., Quinn, B. T., Dickerson, B. C., . & Killiany, R. J. (2006). An automated labeling system for subdividing the human cerebral cortex on MRI scans into gyral-based regions of interest. *Neuroimage*, 31(3), 968-980.
- Devine, A. (1911/2023). Passionists. In *The Catholic encyclopedia*. New York: Robert Appleton. Retrieved from <http://www.newadvent.org/cathen/11521d.htm>
- Devinsky, O., & Lai, G. (2008, May). Spirituality and religion in epilepsy. *Epilepsy and Behavior*, 12(4), 636-643. Retrieved from <https://doi.org/10.1016/j.yebeh.2007.11.011>.
- Díaz, J.-L. (2000, September). Mind-body unity, dual aspect, and the emergence of consciousness. *Philosophical Psychology*, 13(3), 393-403. doi: 10.1080/09515080050128187.
- DiChiara, G. (1995). The role of dopamine in drug abuse viewed from the perspective of its role in motivation. *Drug and Alcohol Dependence*, 38, 95-137.
- Dillern, T. (2020). The act of knowing: Michael Polani meets contemporary natural science. *Foundations of Science*, 25, 573-585. Retrieved from <https://doi.org/10.1007/s10699-019-09626-3>.
- DiPaolo, E., & De Jaegher, H. (2012). The interactive brain hypothesis. *Frontiers in Human Neuroscience*, 6. Article 163. Retrieved from <https://doi.org/10.3389/fnhum.2012.00163>.
- Dixon, S., & Wilcox, G. (2016). The counseling implications of neurotheology: A critical review. *Journal of Spirituality in Mental Health*, 18(2), 98-107. doi: 10.1080/19349637.2015.1064804.

- Dodds, M. J. (2009). Hylomorphism and human wholeness: Perspectives on the mind-brain problem. *Theology and Science*, 7(2), 141-162. doi: 10.1080/14746700902796759.
- Dodds, M. J. (2014). *Philosophical anthropology*. (2<sup>nd</sup> ed.). Oakland, CA: Western Dominican Province.
- Dodds, M. J. (2017). *Unlocking divine action: Contemporary science and Thomas Aquinas*. Washington DC: Catholic University of America Press.
- Dodds, M. J. (2019, Summer). The reality of the soul in an age of neuroscience. *Nova et Vetera*, 17(3), 893-912. doi: 10.1353/nov.2019.0056.
- Dorman, D. (2021). The liturgical brain: Neuroscience of habit. Retrieved from <https://godandnature.asa3.org/dorman-liturgical-brain.html>
- Downey, M. (Ed). (1993). *New dictionary of Catholic spirituality*. Collegeville, MN: Liturgical Press.
- du Toit, D. (2015). *What science? Whose theology? A reformed theological response to Andrew Newberg's neurotheological model*. (Unpublished master's dissertation). University of Stellenbosch, Cape Town, South Africa.
- Duke, M. (2018). A loving kind of knowing: Connatural knowledge as a means of knowing God in Thomas Aquinas's Summa Theologica. *Lumen et Vita* 8, 12-18.
- Dunn, B. R., Hartigan, J. A., & Mikulas, W. L. (1999). Concentration and mindfulness meditations: unique forms of consciousness? *Applied psychophysiology and biofeedback*, 24(3), 147-165. <https://doi.org/10.1023/a:1023498629385>
- Dunne, T. (2003). Generalized empirical method in ethics. Retrieved from [https://www.academia.edu/32843646/Generalized\\_Empirical\\_Method\\_in\\_Ethics](https://www.academia.edu/32843646/Generalized_Empirical_Method_in_Ethics).
- Durkheim, E. (1915/1969/2016). *Elementary forms of the religious life: A study in religious sociology*. Oxford, U.K.: Oxford University Press.
- Edwards, K. J. (2015). When Word meets Flesh: A neuroscience perspective on embodied Spiritual Formation. *Journal of Psychology and Christianity* 34, 228-239.
- Egan, H. D. (1993a). Affirmative way. In M. Downey (Ed.), *The new dictionary of Catholic spirituality* (pp. 14-17). Collegeville, MN: Liturgical Press.
- Egan, H. D. (2013). The mystical theology of Karl Rahner. *The Way*, 52, 43-62.
- Egan, H.D. (1993b). Negative way. In M. Downey. *The new dictionary of Catholic spirituality* (pp. 700-04). Collegeville, MN: Liturgical Press.
- Ekstrom, R. R. (1982). *New concise Catholic dictionary*. Mystic, CN: Twenty-Third.
- Eliade, M. (1958). *Rites and symbols of initiation: The mysteries of birth and rebirth*. Dallas, TX: Spring Publications.
- Eliade, M. (1959). *The sacred and the profane: The nature of religion*. New York: Harcourt Brace Jovanovich.
- Eliade, M. (1968). *Myth and reality*. Scranton, PA: HarperCollins.
- Ellis, G. F. (2009). Top-down causation and the human brain. In N. Murphy, G. F. R Ellis, & T. O'Connor (Eds.), *A downward causation and the neurobiology of free will* (pp. 63-82). Berlin-Heidelberg: Springer-Verlag.

- Ellis, R. D. (1999, Spring). Integrating neuroscience and phenomenology in the study of consciousness. *Journal of Phenomenological Psychology, 30*(1), 1-27. doi: 10.1163/156916299X00020.
- Emmons, R. A., & McNamara, P. (2006). Sacred emotions and affective neuroscience: Gratitude, costly signaling, and the brain. In P. McNamara (Ed.), *Where God and science meet: How brain and evolutionary studies alter our understanding of religion* (pp. 11-30). Westport, CT: Praeger.
- Encyclopedia Britannica*. (2018). Psychokinesis. *Encyclopedia Britannica*. Retrieved from <https://www.britannica.com/topic/psychokinesis>
- Encyclopedia Britannica*. (2023). Basilian. Retrieved from <http://basilian.org/en/about-us/our-charism/>
- Encyclopedia Britannica*. (2023). Cistercian. Retrieved from <http://www.britannica.com/topic/Cistercians>
- Encyclopedia Britannica*. (2023). Epistemology. Retrieved from <https://www.britannica.com/topics/epistemology>
- Encyclopedia Britannica*. (2023). History of science. Retrieved from <https://www.britannica.com>
- Encyclopedia Britannica*. (2023). Oratorian. Retrieved from <https://www.britannica.com/topic/Oratorians>
- Encyclopedia Britannica*. (2023). Poor Clare Spirituality. Retrieved from <https://www.britannica.org>
- Englander, Z. A., Haidt, J., & Morris, J. P. (2012). Neural basis of moral elevation demonstrated through inter-subject synchronization of cortical activity during free-viewing. *Plos One, 7*, e39384. doi: 10.1371/journal.pone.0039384. Public Library of Science.
- Evans, D. (1989). Can philosophers limit what mystics can do? A critique of Steven Katz. *Religious Studies, 25*(1). 53-60.
- Exline, J. (2013). Religious and spiritual struggles. In K. I. Pargament (Ed.), *APA handbook of psychology, religion, and spirituality: Context, theory, and research* (pp. 459-475). Washington, DC: American Psychological Association.
- Exline, J. J., & Geyer, A. L. (2004, April-June). Perceptions of humility: A preliminary study. *Self and Identity, 3*(2), 95-114.
- Fagerberg, D. (2019). *Liturgical mysticism*. Steubenville, OH: Emmaus Academic.
- Fakhri, O. (2021). The ineffability of God. *International Journal for Philosophy of Religion, 89*, 25-41.
- Fayard, C., Pereau, M. J., and Ciovica, A. (2009). "Love the Lord with all your mind": Explorations on a possible neurobiology of the experience of God and some implications for the practice of psychotherapy. *Journal of Psychology and Christianity, 28*, 167-181.
- Ferguson, M. A., Schaner, F. L. W. V. J., Cohen, A., Siddiqi, Sh., Merrill, S. M., Nielsen, J. A. & Fox, M. A. (2022, February). A neural circuit for spirituality and religiosity derived from patients with brain lesions. *Biological Psychiatry, 91*(4), 380-388.
- Ferguson, M. A., Schaper, F. L. W. V. J., Cohen, A., Siddiq, S., Merrill, S. M., Nielsen, J. A., Fox, M. D. (2022). A neural circuit for spirituality and religiosity derived from patients with brain lesions. *Biological Psychiatry, 91*(4), 380-388. doi: 10.1016/j.biopsych.2021.06.016.

- Fields, S. (1996, June). Balthasar and Rahner on the spiritual senses. *Theological Studies*, 57(2), 224-241. doi: 10.1177/004056399605700202.
- Finglehurts, A., & Finglehurts, A. (2009). Is our brain hardwired to produce God, or is our brain hardwired to perceive God? A systematic review on the role of the brain in mediating religious experience. *Cognitive Process*, 10, 293-326.
- Fishbane, M. D. (2019, December). Healing intergenerational wounds: An integrative relational-neurobiological approach. *Family Process*, 58(4). Retrieved from <https://web-s-ebSCOhost-com.eresources.cuyahogalibrary.org/ehost/detail/detail?vid=56&sid=25621a8b-8c17-41a8>
- Flippen, D. (2006, Spring). Was John Paul II a Thomist or a Phenomenologist? In *Faith and Reason* (pp. 65-106). Front Royal, VA: Christendom College. Retrieved from <https://www.catholicculture.org/culture/library/view.cfm?recnum-8105>.
- Fontana, L. L. B. (2018). Human transcendence as a locus of revelation and foundation for the theological work: Implications from Rahner's *Hearer of the Word*. *Teocomunicacao*, 48(1), 82-96. doi: 10.15448/1980-6736.2018.1.31907.
- Forman, R. K. C. (1999). *Mysticism, mind, consciousness*. Albany, NY: State University of New York Press.
- Fowler, J. W. (1981/1995). *Stages of faith: The psychology of human development and the quest for meaning*. San Francisco, CA: HarperOne.
- Fowler, J. W. (1991). *Weaving the new creation: Stages of faith and the public church*. New York: HarperCollins.
- Fox, K. C., Dixon, M.L., Nijeboer, S., Girn, M., Floman, J. L., Litshitz, M., et al., (2016). Functional neuroanatomy of meditation: A review and meta-analysis of 78 functional neuroimaging investigations. *Neuroscience & Biobehavioral Review*, 2016, 65, 208-228.
- Fox, K. C., Nijeboer, S., Dixon, M. L., Floman, J. L., Ellamil, M., Rumak, S. P. et al. (2014). Is meditation associated with altered brain structure? A systematic review and meta-analysis of morphometric neuroimaging in meditation practitioners. *Neuroscience & Biobehavioral Reviews*, 2014, 43, 48-72.
- Fox, T. C. (2004, February 27). Mapping the spirituality of Catholicism. [Review of the book *What makes us Catholic: Eight Gifts for Life* by T. H. Groome]. *National Catholic Reporter*, 40(17), 21.
- Francis, Pope. (2013, November 24). *Evangelii Gaudium*: Apostolic exhortation on the proclamation of the Gospel in today's world. 242, 243. Retrieved from [https://www.vatican.va/content/francesco/en/apost\\_exhortations/documents/papa-francesco\\_esortazione-ap\\_20131124\\_evangelii-gaudium.html](https://www.vatican.va/content/francesco/en/apost_exhortations/documents/papa-francesco_esortazione-ap_20131124_evangelii-gaudium.html).
- Francis, Pope. (2017, November 18). Address of His Holiness Pope Francis to participants in the plenary session of the Pontifical Council for Culture. Retrieved from [www.vatican.va/content/francesco/en/speeches/2017/november/documents/papa-francesco\\_20171118\\_plenaria-cultura.html](http://www.vatican.va/content/francesco/en/speeches/2017/november/documents/papa-francesco_20171118_plenaria-cultura.html)
- Francis, Pope. (2018). *Gaudete and Exsultate*: On the call to holiness in today's world. Retrieved from <http://www.vatican.va/content/vatican/en/search.html?q=Gaudete+et+exsultate>
- Francis, Pope. (2021). Video message of His Holiness Pope Francis to participants in the Fifth International Conference entitled "Exploring the mind, body, and soul: How innovation and novel delivery systems improve human health." Retrieved from [www.vatican.va/content/francesco/en/](http://www.vatican.va/content/francesco/en/)

- messages/pont-messages/2021/documents/papa-francesco\_20210508\_videomessaggio-mindbodysoul
- Francis, Pope. (2022). Address of His Holiness Pope Francis to participants in the symposium promoted by the Dicastery for the Causes of Saints. Retrieved from <https://www.vatican.va/content/francesco/en/speeches/20221006-convegno-causedeisanti.html>
- Frankl, V. E. (1993). *Man's search for meaning: an introduction to logotherapy*. Cutchogue, NY: Buccaneer Books.
- Frankl, V. E. (2014). *The will to meaning: Foundations and applications of logotherapy*. New York: Penguin USA.
- Freud, S. (1895/2004). *Studies in hysteria*. London, U.K.: Penguin Classics.
- Froese, T. (2015). Enactive neuroscience, the direct perception hypothesis, and the socially extended mind. (Unpublished manuscript for *Behavior and Brain Sciences*). Retrieved from <https://www.academia.edu>
- Fukuyama, M. A., & Sevig, T. D. (1999). *Integrating spirituality into multicultural counseling: Multicultural aspects of series 13*. Thousand Oaks, CA: Sage.
- Gaillardetz, R. R., & Clifford, C. E. (2012). *Keys to the Council: Unlocking the teaching of Vatican II*. Collegeville, MN: Liturgical Press.
- Gaitan, L. M. (2017). *Neurotheology*. Retrieved from <https://www.academia.edu>.
- Gaitan, L. M., & Castresana, J. S., & Zollner, H. (2021). Is an integrative model of neurotheology possible? *Religions*, 12(4), 1-11. Retrieved from <https://mdpi.com/journal/religions>. doi: 10.3390/rel12040277
- Galanter, M., Hansen, H., & Potenza, M. N. (2021) The role of spirituality in addiction medicine: A position statement from the spirituality interest group of the International Society of Addiction Medicine. *Substance Abuse*, 42(3), 269-271, doi: 10.1080/08897077.2021.1941514.
- Gall, T. L. & Guirguis-Younger, M. (2013). Religious and spiritual coping: Current theory and research. In K. I. Pargament (Ed.), *APA handbook of psychology, religion, and spirituality: Context, theory, and research* (pp. 349-364). Washington, DC: American Psychological Association.
- Gallagher, H. L., & Frith, C. (2003). Functional imaging of "theory of mind." *Trends in Cognitive Sciences*, 7(2), 77-83.
- Gambrel, L. E., Faas, C., Kaestle, C. E., & Savla, J. (2016, February 12). Interpersonal neurobiology and couple relationship quality: A longitudinal model. *Contemporary Family Therapy*. doi: 10.1007/s10591-061-9381-y.
- Garcia-Valdecasas, M. (2005, September). Psychology and mind in Aquinas. *History of Psychiatry*, 16, 291-310. doi: 10.1177/0957154X05051920.
- Garrigou-Lagrange, R. (1937). *Christian perfection and contemplation*. Freiburg, Germany: B. Herder.
- Gay, V. P. (Ed.). (2009). *Neuroscience and religion: Brain, mind, self, and soul*. Lanham, MD: Lexington.
- Geertz, A. W. (2008). How *not* to do cognitive science of religion today. *Method and Theory in the Study of Religion*, 20, 7-21.
- Geertz, A. W. (2010). Brain, body, and culture: A biocultural theory of religion. *Method and Theory in the Study of Religion*, 22(4), 304-321. doi: 10.1163/157006810X531094.



- Geertz, C. (1993/2017). *Religion as a cultural system*. In *The Interpretation of Cultures*. New York: Fontana Books.
- Gellhorn, E., & Keily, W. F. (1972). Mystical states of consciousness: Neurophysiological and clinical aspects. *Journal of Nervous and Mental Disease*, 154, 399-405.
- George, M. (2020). Neuroscience and the human soul [Audio recording]. The Thomistic Institute. Retrieved from <https://www.soundcloud.com/thomistic-institute/neuroscience-and-the-human-soul-prof-marie-george>
- Gervais, W., Willard, A., Norenzayan, A., & Henrich, J. (2011). The cultural transmission of faith: Why innate intuitions are necessary, but insufficient, to explain religious belief. *Religion*, 41, 6.
- Gilson, E. (1932/1991). *The spirit of medieval philosophy*. South Bend, IN: Notre Dame University Press.
- Goleman, D., & Thurman, R. A. F. (Eds.). (1991). *MindScience: An east-west dialogue*. Boston, MA: Wisdom Publications.
- Golink, R. A., Meijboom, R., Vernooij, M. W., Smits, M., Hunink, M. M., (2016). Eight-week mindfulness-based stress reduction induces brain changes similar to traditional long-term meditation practice—A systematic review. *Brain and Cognition*, 108, 32-41. Retrieved from <https://doi.org/10.1016/bandc.2016.07.001> PMID:27429096
- Goodman, R. (2021, Spring). William James. In *The Stanford encyclopedia of philosophy*. Retrieved from <https://plato.stanford.edu/archives/spr2022/entries/james>
- Gordon, I, Vander Wyk, B.C., Bennet, R. H., Cordeaux, C., Lucas, M. V., Eilbott, J. A., Pelphrey, K. A. (2013). Oxytocin enhances brain function in children with autism. *Proceedings of the National Academy of Sciences*, 110(52), 20953-20958. Retrieved from <http://www.pnas.org/cgi/doi/10.1073/pnas.1312857110>
- Graf, F.W. (2007). God's brain: Some critical remarks on modern neurotheology. *European Review*, 15, 257-264.
- Granfield, D. (1991). *Heightened consciousness: The mystical difference*. Mahwah, NY: Paulist.
- Grassie, W. (2008). The new sciences of religion. *Zygon: Journal of Religion and Science*, 43(1), 127-158. doi: 10.1111/j.1467-9744.2008.00903.x.
- Gregson, V. (Ed.). (1988). *The desires of the human heart: An introduction to the theology of Bernard Lonergan*. Mahwah, NJ: Paulist.
- Grialou, Marie-Eugene. (1986). *I want to see God: A practical synthesis of Carmelite spirituality*. Westminster, MD: Christian Classics.
- Griffiths, T. L., Kemp, C., and Tenenbaum, J. B. (2008). Bayesian models of cognition. In R. Sun (Ed.), *The Cambridge handbook of computational psychology* (pp. 59-100). Cambridge, U.K.: Cambridge University Press.
- Grim, B.J., & Grim M. E. (2019). Belief, behavior, and belonging: How faith is indispensable in preventing and recovering from substance abuse. *Journal of Religion and Health*, 58(5), 1713-1750. doi: 10.1007/s10943-019-00876-w.
- Guardini, R. (1954). *The Lord*. Chicago, IL: Henry Regnery.
- Guntrip, H. (1952). The psychotherapist is a parent and exorcist. In J. Hazell (Ed.), *Personal relations therapy: The collected papers of H. J. S. Guntrip* (pp. 63-88). Northvale, NJ: Jason Aronson.

- Guthrie, S. E. (1993). *Faces in the clouds: A new theory of religion*. Oxford, U.K.: Oxford University Press.
- Haggerty, D. (2022). *Saint John of the Cross: Master of contemplation*. San Francisco: Ignatius.
- Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review*, 108(4), 814-834. doi: 10.1037/0033-295X.108.4.814.
- Hamer, D. (2005). *The God gene: How faith is hardwired into our genes*. New York: Anchor Knopf Doubleday.
- Hampson, P. (2019). [Review of the book *The brain, the mind, and the person within: The enduring mystery of the Soul*, by M. Cosgrove]. *Science and Christian Belief*, 31(2), 217-218.
- Han, H. (2016). How can neuroscience contribute to moral philosophy, psychology, and education based on Aristotelian virtue ethics? *International Journal of Ethics Education*, 1, 201-217.
- Han, H., Chen, J., Jeong, C., & Glover, G. H. (2016). Influence of the cortical midline structures on moral emotion and motivation in moral decision-making. *Behavioral Brain Research*, 302, 237-251. doi:10.1016/j.bbr.2016.01.001.
- Han, H., Glover, G. H., & Jeong, C. (2014). Cultural influences on the neural correlate of moral decision-making processes. *Behavioral Brain Research*, 259, 215-228. doi:10.1016/j.bbr.2013.11.012.
- Han, S., Mao, L., Gu, X., Zhu, Y., Ge, J., & Ma, Y. (2008, March). Neural consequences of religious belief on self-referential processing. *Social Neuroscience*, 3(1), 1-15.
- Han, S., Northoff, G., Vogeley, K., Wexler, B. E., Kitayama, S., & Varnum, M. E. W. (2013). A cultural neuroscience approach to the biosocial nature of the human brain. *Annual Review of Psychology*, 64, 333-359. doi: 10.1146/annurev-psych-071112-054629.
- Happel, S. (1989). The sacraments: Symbols that redirect our desires. In V. Gregson (Ed.). *The desires of the human heart: An introduction to the theology of Bernard Lonergan* (pp. 237-254). Mahwah, NJ: Paulist.
- Hardon J. A. (2001, Spring). The meaning of virtue in St. Thomas Aquinas. *Faith and Reason: The Journal of Christendom College*, 26, 1-6.
- Hardon, J. A. (1980). *Modern Catholic dictionary*. Garden City, NY: Doubleday.
- Hatefi, M., Tarjoman, A., & Borji, M. (2019). Do religious coping and attachment to God affect perceived pain? Study of the elderly with chronic back pain. *Journal of Religion and Health*, 58(2), 465-475. doi: 10.1007/s10943-018-00756-9.
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52, 511-524.
- Hefling, C. C. (1988). Philosophy, theology, and God. In V. Gregson (Ed.). *The desires of the human heart: An introduction to the theology of Bernard Lonergan*. New York: Paulist Press.
- Heiden, P., Heinz, A., & Sieferth, N. R. (2017). Pathological gambling in Parkinson's disease: What are the risk factors, and what is the role of

- impulsivity? *European Journal of Neuroscience*, 45(1), 67-72. doi: 10.1111/ejn.13396.
- Helminiak, D. (2010). "Theistic psychology and psychotherapy:" A theological and scientific critique. *Zygon*, 45(1), 47-74. doi: 10.1111/j.1467-9744.2010.01058.x.
- Helminiak, D. A. (2006, March). The role of spirituality in formulating a theory of the psychology of religion. *Zygon*, 1(1), 191-224. doi: 10.1111/j.1467-9744.2006.00733.x
- Helminiak, D. A. (2015). *Brain, consciousness, and God: A Lonerganian integration*. Albany, NY: University of New York Press.
- Helminiak, D. A. (2021, April). A genuinely scientific psychology based on Lonergan's analysis of consciousness. *Clinical Psychiatry*, 7, 1-4. Retrieved from <http://www.imedpub.com>
- Henson, D., Morrill, B., & Barina, R. (2023). Healing health care: Moving the sacramental tradition from the edges to the center of Catholic healthcare. Conference on Medicine and Religion. Retrieved from <http://www.medicineandreligion.com>
- Hess, N. J., & Allen, P. L. (2008). *Catholicism and science*. Westport, CT: Greenwood.
- Heyes, C., & Catmur, C. (2022). What happened to mirror neurons? *Perspectives on Psychological Science*, 17(1), 153-168. Retrieved from <http://www.psychologicalscience.org/PPS> doi: 10.1177/1745691621990638.
- Hickok, G. (2008). Eight problems for the mirror neuron theory of action understanding in monkeys and humans. *Journal of Cognitive Neuroscience*, 21(7), 1229-1243. doi: 10.1162/jocn.2009.21189.
- Hickok, G. (2014). *The myth of mirror neurons: The real neuroscience of communication and cognition*. New York: W. W. Norton & Company.
- Highfield, R. (1995). The freedom to say "No"? Karl Rahner's doctrine of sin. *Theological Studies*, 56(3), 485-505. doi: 10.1177/004056399505600304.
- Hilgers, J. (1912). Scapular. In *The Catholic encyclopedia*. New York: Robert Appleton. In *New Advent Catholic Encyclopedia*. Retrieved from <https://www.newadvent.org/cathen/13508b>
- Hill, P. C., & Hood, R. W. (1999). *Measures of religiosity*. Birmingham, AL: Religious Education Press.
- Hill, P. C., & Pargament, K. I. (2003, January). Advances in the conceptualization and measurement of religion and spirituality: Implications for physical and mental health research. *American Psychologist*, 58(1). pp. 64-74. doi: 10.1037/0003-066X.58.1.64.
- Hobson, R. P., & Bishop, M. (2003) The pathogenesis of autism: Insights from congenital blindness. *Philosophical Transactions of the Royal Society B: Biological Sciences* 358, 335-344.
- Hoche, F., Guell, X., Sherman, J. C., Vangel, M. G., & Schmahmann, J. D. (2016). Cerebellar contribution to social cognition. *Cerebellum*, 15(6), 732-743. doi: 10.1007/s12311-015-0746-9.
- Hochman, E. Y., Vaidya, A. R., & Fellows, L. K. (2014). Evidence for a role for the dorsal anterior cingulate cortex in disengaging from an incorrect action. *Plos ONE*, 9(6), 1-11. doi: 10.1371/journal.pone.0101126.

- Hoffman, L. W., & Strawn, B.D. (2009). Normative thoughts, normative feelings, normative actions: A Protestant, relational psychoanalytic reply to E. Christian Brugger and the faculty of IPS. *Journal of Psychology and Theology*, 37, 125-136.
- Hoffman, T., & Michon, C. (2017, May). *Aquinas on free will and intellectual determinism*. Retrieved from <http://www.philosophersimprint.org/017005>
- Hole, S. (2017). [Review of the book *Neuroscience and the soul: The human person in philosophy, science, and theology*, by T. M. Crisp, S. L. Porter, and G. A. Ten Elshof (Eds.)]. *Reviews in Religion and Theology*, 24(3), 460-462. doi: 10.1111/rirt.12974.
- Hollingsworth, A. (2008). Neuroscience and spirituality: Implications of interpersonal neurobiology for a spirituality of compassion. *Zygon: Journal of Religion and Science*, 43, 837-860.
- Hood, R. W. Jr. (2006). The common core thesis in the study of mysticism. In P. McNamara (Ed.), *Where God and science meet, Vol. 3: The psychology of religious experience* (pp. 119-138). Westport, CT: Praeger.
- Hood, R. W., & Chen, Z. (2013). The social scientific study of Christian mysticism. In J. A. Lemm (Ed.), *The Wiley-Blackwell companion to Christian mysticism* (pp. 577-591). West Sussex, U.K.: John Wiley & Sons.
- Hood, R. W., Jr. (2002). The mystical self: Lost and found. *International Journal for the Psychology of Religion*, 12(1), 1-14.
- Horvat, S. (2017). Neuroscientific findings in the light of Aquinas' understanding of the human being. *Scientia et Fides*, 5, 1-27.
- Houston, P. (2021). Expanding historical theological perspectives through transdisciplinary meta-methodological engagement. *Studia Historiae Ecclesiasticae*, 47, 1-14. Retrieved from <http://dx.doi.org/10.25159/2412-4265/9150>
- Howard-Jones, P. (2010). *Introducing neuroeducational research: Neuroscience, education, and the brain from context to practice*. Philadelphia, PA: Routledge.
- Howells, E. (2002). *John of the Cross and Teresa of Avila: Mystical knowing and selfhood*. New York: Crossroad.
- Hugh of St. Victor. (1130/1992). The moral/mystical ark of Noah. In C. Mathuen & A. Spicer (Eds.), *Studies in Church history*, 28 (pp. 99-116). Cambridge, UK: University of Cambridge Press.
- Hummer, R., Rogers, R., Nam, C., Ellison, C. G. (1999). Religious involvement and U.S. adult mortality. *Demography*, 36, 273-285.
- Hunter, J. D. (1986, September). [Review of the book *Habits of the heart: Individualism and commitment in American life*]. *Journal for the Scientific Study of Religion*, 25(3), 373-374. doi: 10.2307/1386303.
- Huxley, A. (1962/2009). *The island*. New York: Harper Perennial Modern Classics.
- Hyde, B. (2004). The plausibility of spiritual intelligence: Spiritual experience, problem-solving, and neural sites. *International Journal of Children's Spirituality*, 9(1), 39-52. doi: 10.1080/1364436042000200816.
- Immordino-Yang, M. H., McColl, A., Damasio, H., Damasio, A. (2009). Neural correlates of admiration and compassion. *Proceedings of the National Academy of Sciences, U.S.A.*, 106(19), 8021-8026.

- James, W. (1902/1958/2017). *The varieties of religious experience: A study in human nature*. Edinburgh, Scotland: CrossReach Publications.
- Jastrzebski, A. K. (2018). The neuroscience of spirituality: An attempt at critical analysis. *Pastoral Psychology*, 67(5), 515-524. doi: 10.1007/s11089-018-0840-2.
- Jeeves, M. (2013). *Minds, brains, souls, and gods: A conversation on faith, psychology, and neuroscience*. Downers Grove, IL: InterVarsity Press.
- Jeeves, M. A., & Ludwig, T. E. (2013). *Psychological science and Christian faith: Insights and enrichments from constructive dialogue*. W. Coshohocken, PA: Templeton.
- Jeeves, M. A., & Ludwig, T. E. (2018). *Psychological science and Christian faith: Insights and enrichments from constructive dialogue*. West Coshohocken, PA: Templeton.
- Jeeves, M., & Brown, W. S. (2009). *Neuroscience, psychology, and religion: Illusions, delusions, and realities about human nature*. West Conshohocken, PA: Templeton Foundation Press.
- Jeftic, A. (2013). Andrew Newberg's model of neurotheology: A critical overview. *Philotheos*, 13, 261-278.
- John of the Cross, St. (1591/1991). *The collected works of St. John of the Cross: the Ascent of Mount Carmel, the Dark Night, the Spiritual Canticle, the Living Flame of Love, Letters, and Minor Works*. Washington, DC: ICS Publications.
- John Paul II, Pope. (1979). Apostolic Exhortation *Catechesi Tradendae*. Retrieved from [https://www.vatican.va/content/john-paul-ii/en/apost\\_exhortations/documents/hf\\_jp-ii\\_exh\\_16101979\\_catechesi-tradendae.html](https://www.vatican.va/content/john-paul-ii/en/apost_exhortations/documents/hf_jp-ii_exh_16101979_catechesi-tradendae.html)
- John Paul II, Pope. (1983). *Code of Canon Law*. Retrieved from [https://www.vatican.va/cic-cann1364-1399\\_en](https://www.vatican.va/cic-cann1364-1399_en)
- John Paul II, Pope. (1985, July 17). Church document: Scientists and God. Retrieved from <http://www.semscience.net>
- John Paul II, Pope. (1988). Church document: Message to Rev. G. V. Coyne, S.J., Director of the Vatican Observatory. Retrieved from <http://www.semscience.net>
- John Paul II, Pope. (1993). *Veritatis splendor* (The splendor of truth). Retrieved from [https://www.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf\\_jp-ii\\_enc\\_06081993\\_veritatis-splendor.html](https://www.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_06081993_veritatis-splendor.html)
- John Paul II, Pope. (1994). *Crossing the threshold of hope*. New York: Alfred A. Knopf Publishing.
- John Paul II, Pope. (1996). Message to the Vatican Observatory conference on evolutionary and molecular biology. Retrieved from <http://www.ctns.org/research/past-research/scientific-perspectives-divine-action/neuroscience-and-person>
- John Paul II, Pope. (1998). Encyclical letter: *Fides et ratio*, 29, 34. Retrieved from <http://www.semscience.net>
- John Paul II, Pope. (2000). Address of the Holy Father John Paul II to the 18<sup>th</sup> International Congress of the Transplantation Society. Retrieved from [http://www.vatican.va/content/john-paul-ii/en/speeches/2000/julsep/documents/hf\\_jpii\\_spe\\_20000829\\_transplants.html](http://www.vatican.va/content/john-paul-ii/en/speeches/2000/julsep/documents/hf_jpii_spe_20000829_transplants.html)
- John Paul II, Pope. (2001). *Novo millennio Innuente*. At the beginning of the third millennium. Retrieved from <http://www.vatican.va/content/john-paul-ii/>

- en/apost\_letters/2001/documents/hf\_jp-ii\_apl\_20010106\_novo-millennio-ineunte.html
- John Paul II, Pope. (2003). Address of John Paul II to the members of the Pontifical Academy of Sciences (10 November). Retrieved from [http://www.vatican.va/content/john-paul-ii/en/speeches/2003/november/documents/hf\\_jp-ii\\_spe\\_20031110\\_academy-sciences.html](http://www.vatican.va/content/john-paul-ii/en/speeches/2003/november/documents/hf_jp-ii_spe_20031110_academy-sciences.html)
- Johnston, W. (Ed.). (1996). *The cloud of unknowing and the book of privy counseling*. New York: Image Random House.
- Johnston, W. H. (2011, September). Schools of spirituality: Drawing from the wealth of the Catholic tradition. *Catechist*. Retrieved from <http://www.catechist.com>
- Johnstone, B., Cohen, D., & Dennison, A. (2021, August 200). The integration of sensations and mental experiences into a unified experience: A neuropsychological model for the “sense of self.” *Neuropsychologia*, 159, 1-35. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0028393221001901>
- Johnstone, B., Cohen, D., Konopacki, K., & Ghan, C. (2016). Selflessness as a foundation of spiritual transcendence: Perspectives from the neurosciences and religious studies. *International Journal for the Psychology of Religion*, 26(4), 287-303. doi: 10.1080/10508619.2015.1118328.
- Jones, M. K. (2015). The four transcendental imperatives of Bernard Lonergan. Retrieved from <https://equivalentexchange.blog/2015/12/09/the-four-transcendental-imperatives-of-bernard-lonergan>
- Jones, R. H. (2018). Limitations on the scientific study of mystical experiences. *Zygon: Journal of Science and Religion*, 53(4), 992-1017.
- Jones, R. H. (2018, December). Limitations on the neuroscientific study of mystical experiences. *Zygon: Journal of Religion and Science*, 53(4), 992-1017.
- Jones, R., & Gellman, J. (2022, Fall). Mysticism. In E. N. Zalta (Ed.), *Stanford Encyclopedia of Philosophy*. Retrieved from <https://plato.stanford.edu/archives/fall2022/entries/mysticism>.
- Jordan, K. D., Niehus, K. L., & Feinstein, A. M. (2021). Insecure attachment to God and interpersonal conflict. *Religions* 12(9), 1-12. Retrieved from <https://www.mdpi.com/journal/religions>. doi: 10.3390/rel12090739.
- Jordan, K. D., Niehus, K. L., & Feinstein, A. M. (2021, September). Insecure attachment to God and interpersonal conflict. *Religions* 12(9), 739-739.
- Jowett, B. (n.d.) Tripartite soul theory. Retrieved from <http://www.tripartite-soul-theory.com/platos-republic/chariot-allegory.html>.
- Jung, C. J. (1969). *On the nature of the psyche*. Princeton, NJ: Princeton University Press.
- Kant, I. (1787/2088). *Critique of pure reason*. (M. Weigelt, Ed.). London, England: Penguin Classics.
- Kapogiannis, D., Barbey, A. K., Su, M., Zamboni, G., Kreuger, F., & Grafman, J. (2009). Cognitive and neural foundations of religious belief. *Proceedings of the National Academy of Sciences*, 106(12), 4876-4881. doi: 10.1073/pnas.0811717106.
- Kapur, S. (2003). Psychosis as a state of aberrant salience: A framework linking biology, phenomenology, and pharmacology in schizophrenia. *American Journal of Psychiatry*, 160(1), 13-24.

- Kapur, S. Mizrahi, R., & Ming, L. (2005). From dopamine to salience to psychosis—linking biology, pharmacology, and phenomenology of psychosis. *Schizophrenia Research, 79*, 59-68.
- Karatsoreos, I. N., Bhagat, S., Bloss, E. B., Morrison, J. H., & McEwen, B. S. (2011). Disruption of circadian clocks has ramifications for metabolism, brain, and behavior. *Proceedings of the National Academy of Sciences, 108*(4), 1657-1662. doi: 10.1073/pnas.1018375108.
- Karo, R., & Friedenthal, M. (2008). Kenosis, anamnesis, and our place in history: A neurophenomenological account. *Zygon, 43*(4), 823-836. doi: 10.1111/j.1467-9744.2008.00962.x.
- Kasamatsu, A., & Hirai, T. (1966). An electroencephalographic study on Zen meditation. *Folio Psychiatrica & Neurologica Japonica, 20*, 315-336.
- Katz, S. T. (1978). Language, epistemology, and mysticism. In S. T. Katz (Ed.), *Mysticism and philosophical analysis* (pp. 22-74). New York: Oxford University Press.
- Katz, S. T. (Ed.). (1983). *Mysticism and religious traditions*. Oxford, U.K.: Oxford University Press.
- Kavanaugh, K. & Lisi, C. (2010). Teresa of Avila. *The interior castle: Study edition*. Trans. K. Kavanaugh & O. Rodriguez. Washington, DC: Institute of Carmelite Studies.
- Kavanaugh, K., & Rodriguez, O. (Trans.). (1991). *The collected works of St. John of the Cross*. Washington, DC: Institute of Carmelite Studies.
- Kellert, S. H., Longino, H. E., & Waters, C. K. (Eds.). (2006). *Scientific pluralism. Minnesota Studies in the Philosophy of Science*, Minneapolis, MN: University of Minnesota Press.
- Kelly, E. F., & Grosso, M. (2007). Mystical experience. In Kelly, E. F., Kelly E. W., Crabtree, A., Gauld, A., Grosso, M., & Greyson, B, *Irreducible mind: Toward a psychology for the 21st century* (pp. 495-575). Lanham, MD: Rowman & Littlefield.
- Kelly, G. B. (Ed.). (1992). *Karl Rahner: Theologian of the graced search for meaning*. Minneapolis: Fortress Press.
- Kernberg, O. (2015). Neurobiological correlates of object relations theory: The relationship between neurobiological and psychodynamic development. *International Forum of Psychoanalysis, 24*(1), 38-46, <http://dx.doi.org/10.1080/0803706X.2014.912352>.
- Kiecolt-Glaser, J. K., McGuire, L., Robles, T. F., & Glaser, R. (2002). Emotions, morbidity, and mortality: New perspectives for psychoneuroimmunology. *Annual Review of Psychology, 53*(1), 83-108.
- Kirchoff, R. W., Tata, B., McHugh, J, Kingsley, T., Burton, M. C., Manning, D., Chaudhary, R. (2021, April). Spiritual care of inpatients focusing on outcomes and the role of chaplaincy services: A systematic review. *Journal of Religion and Health, 60*(2), 1406-1422. doi: 10.1007/s10943-021-01191-z.
- Kirkpatrick, L. A., & Shaver, P. R. (1992). An attachment-theoretical approach to romantic love and religious belief. *Personality and Social Psychology Bulletin, 18*(3), 266-275.
- Kirsch, K. M. (2023). How “Catholic” should a Catholic studies program aspire to be? *Logos Supplement, 26*(5), 32-37.

- Kitson, A., Chirico, A., Gaggioli, A., & Reicke, B. (2020). A review of research and evaluation methods for investigating self-transcendence. *Frontiers in Psychology, 11*, 1-14. doi: 10.3389/fpsyg.2020.547687.
- Klemm, W. R. (2019). Whither neurotheology? *Religions, 10*(11), 1-16. doi: 10.3390/rel10110634.
- Knight, C. (1999). Sex and language as pretend play. In R. Dunbar, C. Knight, & C. Power (eds.), *The evolution of culture*. Edinburgh, Scotland: Edinburgh University Press.
- Knuuttila, S. (2022, Fall). Medieval Theories of the Emotions, In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy*. Retrieved from <https://plato.stanford.edu/archives/fall2022/entries/medieval-emotions>.
- Koenig, H. G. (2001). Religion and medicine IV: Religion, physical health, and clinical implications. *International Journal of Psychiatry in Medicine, 31*(3), 321-336.
- Koenig H. G. (2012). Religion, spirituality, and health: the research and clinical implications. *ISRN Psychiatry, 2012*, 278730.
- Koenig, H. G., Hays, J. C., Larson, D. B., George, L. K., Cohen, H. J., McCullough, M. E., Meador, K. G., & Blazer, D. G. (1999). Does religious attendance prolong survival? A six-year follow-up study of 3,968 older adults. *The Journals of Gerontology. Series A, Biological Sciences and Medical Sciences, 54*(7), M370-M376.
- Kohut, P. V. (2012). The offer of Catholic spirituality. *European Journal of Theology, 21*(2), 156-165.
- Kok, B. E., Coffey, K. A., Cohn, M. A., Catalino, L. I., Vacharkulksemsuk, T., Algoe, S. B. . . . Frederickson, B. L. (2013, July). How positive emotions build physical health: Perceived position social connections account for the upward spiral between positive emotions and vagal tone. *Psychological Science, 24*(7), 1123-1132. doi: 10.1177/0956797612470827.
- Kollar, R. (2011, May). [Review of the book *A secular age* by Charles Taylor. *Heythrop Journal, 52*(3), 535-536. doi: 10.1111/j.1468-2265.2011.00663\_77.x.
- Koole, S. L. (2009). The psychology of emotion regulation: An integrative review. *Cognition and Emotion, 23*, 4-41.
- Koole, S. L., & Kuhl, J. (2007). Dealing with unwanted feelings: The role of affect regulation in volitional action control. In J. Shah & W. Gardner (Eds.), *Handbook of motivational science*. New York: Guilford.
- Korup, A. K., Thygesen, L. C., Christensen, R. D., Johansen, C. Sondergaard, J., & Hvidt, N. C. (2016). Association between sexually transmitted diseases and church membership: A retrospective cohort study of two Danish religious minorities. *Biomedical Journal, 6*. doi: 10.1136/bmjopen-2015-010128.
- Korzybski, A. (1958). *Science and sanity: An introduction to non-Aristotelian systems and general semantics*. Lakeville, CT: International Non-Aristotelian Library Publishing.
- Kotchoubey, B., Tretter, F., Braun, H. A., Buchheim, T., Draguhn, A., Fuchs, T., Tschacher, W. (2016). Methodological problems on the way to integrative human neuroscience. *Frontiers in Integrative Neuroscience, 10*, 1-19.
- Krebs, V. J. (2016). [Review of the book *Soul machine: The invention of the modern mind*, by George Makari]. *Analytical Psychology, 63*, 538-542.



- Retrieved from [www.academia.edu/37294753/Review\\_of\\_George\\_Makaris\\_Soul\\_Machine](http://www.academia.edu/37294753/Review_of_George_Makaris_Soul_Machine).
- Kreeft, P. (2011). *The God who loves you: Love divine, all loves excelling*. San Francisco: Ignatius Press.
- Kroenke, C. H., Kubzanski, L.D., Schernhammer, E. S., Holmes, M. D., & Kawachi, I. (2006). Social networks, social supports, and survival after breast cancer diagnosis. *Journal of Clinical Oncology*, 24(7), 1105-1111.
- Kuhl, J., & Quirin, M. (2011). *Seven steps to freedom and two ways to lose it*. Gottingen, Germany: Hogrefe Publishing.
- Kuhl, J., Quirin, M., & Koole, S. (2015, March). Being someone: The integrated self as a neuropsychological system. *Social and Personality Psychology Compass*, 9(3), 115-132. Abstract retrieved from <https://web-s-ebshost-com.eresources>.
- Kuhn, T. S. (1962/2012). *The structure of scientific revolutions*. (3rd ed.). Chicago, IL: University of Chicago Press.
- Laidlaw, J. (2007). A well-disposed social anthropologist's problems with the 'Cognitive Science of Religion.' In H. Whitehouse & J. Laidlaw (Eds.), *Religion, anthropology, and cognitive science*, (pp. 211-246). Durham, NC: Carolina Academic Press.
- Laird, M. (2005). The "open country" whose name is prayer: Apophasis, deconstruction, and contemplative practice. *Modern Theology*, 21(1), 141-155. doi: 10.1111/j.1468-0025.2005.00279.x.
- Laneri, D., Schuster, V., Dietsche, B., Jansen, A., Ott, U., & Sommer, J. (2016). Effects of Long-Term Mindfulness Meditation on Brain's White Matter Microstructure and its Aging. *Frontiers in Aging Neuroscience*, 7, 254. <https://doi.org/10.3389/fnagi.2015.00254>.
- Larriee, D., & Echarte, L. (2018). Contemplative meditation and neuroscience: Prospects for mental health. *Journal of Religion and Health*, 57(3), 960-978. doi: 10.1007/s10943-017-0475-0.
- Larriée, D., & Gini, A. (2014). Is the philosophical concept of 'habitus operativus bonus' compatible with the modern neuroscience concept of human flourishing through neuroplasticity? A consideration of prudence as a multidimensional regulator of virtue. *Frontiers in Human Neuroscience*, 8, 1-4.
- Larson, D. B., Sawyers, J. P., & McCullough, M. E. (Eds.). (1998). *Scientific research on spirituality and health: A report based on the scientific progress in spirituality conferences*. Rockville, MD: National Institute for Healthcare Research.
- Lazar, S. W., Bush, G., Gollub, R. L., Fricchione, G. L., Khalsa, G., & Benson, H. (2000, May 15). Functional brain mapping of the relaxation response and meditation. *Neuroreport*. London, U.K.: Lippincott, Williams, & Wilkins.
- Lazar, S. W., Kerr, C. E., Wasseman, R.H., Gray, J. R., Greve, D.N., Treadway, M. T., et al., (2005). Meditation experience is associated with increased cortical thickness. *Neuroreport*, 16(17), 1893.
- Leaf, C. (2021). How are the mind and the brain different? A neuroscientist explains. *Integrative Health*. Retrieved from <http://www.mindbodygreen.com>
- Lee, B., & Newberg, A. (2005). Religion and health: A review and critical analysis. *Zygon: Journal of Religion and Science*, 40, 443-468.

- Lehmann, K., Raffelt, A., & Egan, H. D. (Eds.). (1993). *The best of Karl Rahner's Theological Writings*. NY: Crossroad.
- Lehmann, K., Raffelt, A., & Egan, H. D. (Eds.). (2000). *The content of faith: The best of Karl Rahner's theological writings*. New York: Crossroad.
- Lehtonen, J. (2010). Dimensions in the dialogue between psychoanalysis and neuroscience. *Routledge: International Forum of Psychoanalysis*, 19(4), 218-223. doi: 10.1080/0803706X.2010.499136.
- Lejeune, J. (1992). A geneticist's point of view. In G. del Re (Ed.), *Brain research and the mind-body problem: Epistemological and metaphysical issues*. Vatican, Rome: Pontifical Academy of Sciences.
- Leman, J., Hunter, W., Fergus, T., & Rowatt, W. (2018). Secure attachment to God and trust with psychological health in a national, random sample of American adults. *The International Journal for the Psychology of Religion*, 28, 116-123.
- Leo XIII, Pope. (1879). *Aeterni Patris: On the Restoration of Christian Philosophy*. Retrieved from [https://www.vatican.va/content/leo-xiii/en/encyclicals/documents/hf\\_l-xiii\\_enc\\_04081879\\_aeterni-patris.html](https://www.vatican.va/content/leo-xiii/en/encyclicals/documents/hf_l-xiii_enc_04081879_aeterni-patris.html)
- Letheby, C. (2017). Naturalizing psychedelic spirituality. *Zygon: Journal of Science and Religion*, 52(3), 623-642.
- Lewis, R. (2019, February 24). What actually is a thought? And how is information physical? *Psychology Today*. Retrieved from <http://www.psychologytoday.com/us./blog/finding-purpose/201902/what-actually-is-thought-ahd-how-is-information-physical>.
- Lex, B. W. (1979). The neurobiology of ritual trance. In E. G. d'Aquili, C. D. Laughlin, Jr., and J. McManus (Eds.), *The Spectrum of Ritual* (pp. 117-151). New York: Columbia University Press.
- Li, H., Chen, Q., Lu, J., & Qiu, J. (2017, December). Brain structural bases of tendency to forgive: evidence from a young adults sample using voxel-based morphometry. *Scientific Reports*, 7, 16856-16856.
- Libet, B. (1999). Do we have free will? *Journal of Consciousness Studies*, 6(8-9), 47-57.
- Ling, S., Umbach, R., & Raine, A. (2019). Biological explanations of criminal behavior. *Psychology, Crime, and Law*, 25(6), 626-640. doi: 10.1080/1068316X.2019.1572753
- Lombard, J. (2017). *The mind of God: Neuroscience, faith, and a search for the soul*. New York: Harmony.
- Loneragan, B. (1957/1992). *Insight: A study in human understanding*. (F. Crowe & R. Doran, (Eds.)). Toronto, Ontario, Canada: University of Toronto Press.
- Loneragan, B. (1967). *Collection: Papers by Bernard Lonergan*. Montreal, Quebec, Canada: Palm Publishers.
- Loneragan, B. (1972/2017). *Method in theology*. Toronto, Ontario, Canada: University of Toronto Press.
- Loneragan, B. (2002). *The ontological and psychological constitution of Christ*. In *Collected Works of Bernard Lonergan*. Lonergan Research Institute. Toronto, Canada: Regis College.

- Lou, H. C., Kjaer, T. W., Friberg, L., Wildschiodtz, G., Holm, S., & Nowak, M. (1999). A 150-H2O PET study of meditation and the resting state of normal consciousness. *Human Brain Mapping*, 7(2), 98-105.
- Ludwig, D., & Ruphy, S. (2021, Winter). Scientific pluralism. In E. N. Zalta (Ed.), *Stanford Encyclopedia of Philosophy*. Retrieved from <https://plato.stanford.edu/archives/win2021/entries/scientific-pluralism>
- Lutz, A., Greischar, L. L., Rawlings, N. B., Davidson, R. J., et al. Long-term meditators self-induce high-amplitude gamma synchrony during mental practice. (2004, December). *Proceedings of the National Academy of Sciences*, 101(46), 16369-16373.
- Maas, A. (1912/2021). Salvation. In *The Catholic encyclopedia*. New York: Robert Appleton. In *New Advent Catholic Encyclopedia*. Retrieved from <https://newadvent.org/cathen/13407a.htm>.
- MacIntyre, A. C. (1984/2007) *After virtue: A study in moral theory*. Notre Dame, IN: Notre Dame University Press.
- MacLean, C. R. K., Walton, K. G., Wenneberg, S. R., Levitsky, D. K., Mandarin, J. P., Wziri, R., & Schneider, R.H. (1997). Effects of the transcendental meditation program on adaptive mechanisms: Changes in hormone levels and responses to stress after four months of practice. *Psychoneuroimmunology*, 22, 277-295.
- Madden, J. (2013). Thomistic hylomorphism and philosophy of mind and philosophy of religion. *Philosophy Compass*, 8, 664-676.
- Manalili, M. M. C. (2018). On neurotheology? Why engage empirical studies on theological concepts. *Lumen et Vita*, 9, 35-45.
- Mandel, A. (1980). Toward a psychobiology of transcendence: God in the brain. In J. Davidson & R. Davidson (Eds.), *Psychobiology of consciousness* (pp. 379-464). New York: Plenum Press. Marcel, G., & Fraser, G. S. (1950-1951/2001). *The mystery of being. Gifford Lectures (1949-1950). Vol 1: Reflection and Mystery; Vol 2: Faith and Reality*. South Bend, IN: St. Augustine's Press.
- Maritain, J. (1932/1959/1995). *The degrees of knowledge*. (Trans. G. B. Phelan). Notre Dame, IN: University of Notre Dame Press.
- Maritain, J. (1953). *The range of reason*. Retrieved from <https://maritain.nd.edu/jmc/etext/range05.htm>.
- Maritain, J. (1954/1962). *Approaches to God*. New York: Colliers.
- Markie, P., & Folescu, M. (2021, Fall). Rationalism vs. Empiricism, In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy*. Retrieved from <https://plato.stanford.edu/archives/fall2021/entries/rationalism-empiricism>.
- Marmion, D. (1996). The notion of spirituality in Karl Rahner. *Louvain Studies*, 21, 61-86.
- Martinez Selio, A. (2009). Neuroteologia, *Neurologia Suplementos* 51(1), 21-27.
- Maturana, H. R., & Varela, F. J. (1992). *The Tree of Knowledge: the Biological Roots of Human Understanding (revised edition)*. Boston: Shambala.
- McAndrew, F. T. (2019). Costly signaling theory. In T. K. Shackelford & V. A. Weekes-Shackelford (Eds.), *Encyclopedia of Evolutionary Psychological Science*. doi.org/10.1007/978-3-319-16999-6\_3483-1.
- McCabe, D., & Castel, A. (2008). Seeing is believing: The effect of brain images on judgments of scientific reasoning. *Cognition*, 107, 343-352.

- McCarthy, M. H. (2015). *Authenticity as self-transcendence: The enduring insights of Bernard Lonergan*. South Bend, IN: University of Notre Dame Press.
- McCauley, R. N. (2001). Ritual, memory, and emotion: Comparing two cognitive hypotheses. In J. Andresen (Ed.), *Religion in mind* (pp. 115-140). Cambridge, UK: Cambridge University Press.
- McGilchrist, I. (2021). *The matter with things*. Vol 2: *What then is true?* Padstow, Cornwall, U.K.: TJ Books.
- McGilchrist, I. (2021). *The matter with things*. Vol. 1: *The ways to truth*. Padstow, Cornwall, U.K.: TJ Books.
- McGinn, B. (2006). *The essential writings of Christian mysticism*. New York: Random House.
- McGoldrick, T. A. (2012, September). The spirituality of human consciousness: A Catholic evaluation of some current neuro-scientific interpretations. *Science and Engineering Ethics*, 18(3), 483-501. doi: 10.1007/s11948-012-9387-2.
- McGonigle, T. D. (1993). Union, unitive way. In M. Downey (Ed.), *The new dictionary of Catholic spirituality* (pp. 987-988). Collegeville, MN: Liturgical Press.
- McIlhenny, R. (2011). "God is in your head": Neurotheology and religious belief. *American Theological Inquiry*, 3(2), 29-44.
- Meissner, W. W. (1984). Transformative Processes in *The Spiritual Exercises*. In J. J. Heaney (Ed.), *Psyche and Spirit: Readings in Psychology and Religion*. NY: Paulist Press.
- Meissner, W. W. (1992). *Ignatius of Loyola: The psychology of a saint*. New Haven, CT: Yale University Press.
- Menary, R. (2014). Neural plasticity, neuronal recycling, and niche construction. *Mind & Language*, 29(3), 286-303. Retrieved from <https://doi.org/10.1111/MILA.12051>.
- Merkur, D. (1999). *Mystical moments and unitive thinking*. Herndon, VA: State University of New York Press.
- Merton, T. (1949/1984). Is mysticism normal? In P. F. O'Connell (Ed.), *Thomas Merton; Early Essays, 1947-1952* (pp. 50-58). Collegeville, MH: Liturgical Press.
- Merton, T. (2003). *The inner experience*. San Francisco: HarperCollins.
- Messer, N. (2017). *Theological neuroethics: Christian ethics meets the science of the human brain*. New York: Bloomsbury Publishing.
- Mesulam, M. M. (1998). From sensation to cognition. *Brain*, 121, 1013-1052. [https://www.vatican.va/archive/hist\\_councils/ii\\_vatican\\_council/documents/vat-ii\\_const\\_19631204\\_sacrosanctum-concilium\\_en.html](https://www.vatican.va/archive/hist_councils/ii_vatican_council/documents/vat-ii_const_19631204_sacrosanctum-concilium_en.html)
- Michaud, D. (Ed.). (2005). Karl Rahner (1904-1984). In *Boston collaborative encyclopedia of Western theology*, W. Wildman (Ed.). Retrieved from <https://people.bu.edu/wwildman/bce/rahner.htm>
- Miller, J. B. (2012, September). Haunted by the ghost in the machine. Commentary on "The spirituality of human consciousness: A Catholic evaluation of some current neuroscientific interpretations." *Science of Engineering Ethics*, 18(3), 503-507. doi: 10.1007/s11948-012-9389-0.

- Miller, L., & Kelley, B. S. (2005). Relationships of religion and spirituality with mental health and psychopathology. In R. F. Paloutzian & C. Park (Eds.). *Handbook of the psychology of religion and spirituality*. New York: Guilford.
- Miller, L., Balodis, I. M., McClintock, C. H., Xu, J., Lacardie, C. M., Sinha, R., & Potenza, M. N. (2019, June). Neural correlates of personalized spiritual experiences. *Cerebral Cortex*, 29(6), 2331-2338. doi: 10.1093/cercor/bhy102.
- Miller, L., Wickramaratne, P., Hao, X., McClintock, C. H., Pan, L., Svo, C., Weissman, M. M. (2021, September). Altruism and “love of neighbor” offer neuroanatomical protection against depression. *Psychiatry Research: Neuroimaging*, 315, 1-9. doi: 10.1016/j.psychresns.2021.111326.
- Milstein, G., & Manierre, A. (2012). Culture ontogeny: Lifespan development of religions and the ethics of spiritual counseling. *Counseling and Spirituality*, 31, 8-29.
- Miner, M., & Dowson, M. (2012). Spiritual experiences reconsidered: A relational approach to the integration of psychology and theology. *Journal of Psychology and Theology*, 40, 55-59.
- Mitchell, S. (2003). *Biological complexity and integrative pluralism*. Cambridge, U.K.: Cambridge University Press.
- Mitchell, S. D. (2009). *Unsimple truths: Science, complexity, and policy*. Chicago: University of Chicago Press.
- Mitchen, S. (2000). Mind, brain, and material culture: An archeological perspective. In P. C. Caruthers & A. Chamberlain (eds.), *Evolution and the human mind: Modularity, language, and metacognition*. Cambridge, U.K.: Cambridge University Press.
- Moberg, K. U. (2003). *The oxytocin factor: Tapping the hormone of calm, love, and healing*. Lebanon, IN: Da Capo Press.
- Moghadosi, A.N. (2014). Ability to gain religious experiences as a part of cognitive abilities. *Iranian Journal of Neurology*, 13, 191-192.
- Moll, J., de Oliveira-Souza, R. (2007). Moral judgments, emotions, and the utilitarian brain. *Trends in Cognitive Sciences*, 11, 319-321. doi:10.1016/j.tics.2007.06.001.
- Moll, J., de Oliveira-Souza, R., Garrido, G.J., Bramati, I. E., Egas, M. A., Caparelli-Daquer, E. M. A., Paiva, L. M. M. F. et al. (2007). The self as a moral agent: Linking the neural bases of social agency and moral sensitivity. *Social Neuroscience*, 2, 336-352. doi:10.1080/17470910701392024.
- Moll, J., Kreuger, F., Zahn, R., Pardini, M., de Oliveira-Souza, R., & Grafmar, J. (2006, October 17). Human fronto-mesolimbic networks guide decisions of charitable donation. *Proceedings of the National Academy of Sciences, U.S.A.*, 103(42), 15623-15628.
- Moloney, R. (2004). Conversion and spirituality: Bernard Lonergan (1904-1984). *The Way*, 43(4), 123-134.
- Mouch, C. A., & Sonnega, A. J. (2012). Spirituality and recovery from cardiac surgery: a review. *Journal of religion and health*, 51(4), 1042-1060.
- Mueller, J. J. (1984). *What are they saying about theological method?* New York: Paulist Press.
- Muller, J., Middleton, D., Alizadeh, M., Zabrecky, G., Wintering, N., Bazzan, A. J., Lang, J., Wu, C., Monti, D. A., Wu, Q., Newberg, A. B., & Mohamed, F. B.

- (2021). Hybrid diffusion imaging reveals altered white matter tract integrity and associations with symptoms and cognitive dysfunction in chronic traumatic brain injury. *NeuroImage, Clinical*, 30, 102681. Retrieved from <https://doi.org/10.1016/j.nicl.2021.102681>
- Muller, R. J. (2008, May). Neurotheology: Are we hardwired for God? *Psychiatric Times*, 25(6). Retrieved from <http://www.psychiatrictimes.com/view/neuro-theology-are-we-hardwired-god>
- Murphy, B. (2023). The development of doctrine. Simply Catholic. Retrieved from <https://www.simplycatholic.com/the-development-of-doctrine/#:~:text=in Newman's view>
- Murray, P. (2012). *In the grip of light*. London, U.K.: Bloomsbury.
- Murray, P. D. (2000, April). [Review of the book *The shaping of rationality: Toward interdisciplinarity in theology and science*, by J. W. van Huyssteen (pp. 215-217)]. *Reviews in Religion & Theology*, 7(2), 215.
- Nairn, A. K. (2017). [Review of the book *Theological neuroethics: Christian ethics meets the science of the human brain*, by Neil Messer]. International Society for Science and Religion. Retrieved from <https://www.issr.org.uk/blog/theological-neuroethics-christian-ethics-meets-science-human-brain-neil-messer>
- National Catholic Bioethics Center. (2020, May 11). FAQ: On the determination of death using neurological criteria (brain death). Retrieved from <https://www.ncbcenter.org/resources-and-statements-cms/faq-on-the-determination-of-death-using-neurologica-criteria-brain-death>
- Navarini, C. (2020). The likelihood of actions and the neurobiology of virtues: Veto and consent power. *Ethical Theory and Moral Practice*, 23, 309-323. Retrieved from <https://doi.org/10.1007/s10677-020-10081-4>.
- Neher, A. (1962). A physiological explanation of unusual behavior in ceremonies involving drums. *Human Biology*, 34, 151-161.
- Nelson, J.A., Kirk, A. M., Ane, P., Serres, S. A. (2011, April). Religious and spiritual values and moral commitment in marriage: Untapped resources in couples counseling? *Counseling and Values*, 55(2), 228-246.
- Newberg, A. (2018). *Neurotheology: How science can enlighten us about spirituality*. New York: Columbia University Press.
- Newberg, A. B. (2013). How does meditation change our brains? Retrieved from <https://andrewnewberg.com/research-blog/how-does-meditation-change-our-brains>
- Newberg, A. B. (2014). The neuroscientific study of spiritual practices. *Frontier on Psychology*, 5(215), 1-6.
- Newberg, A. B., & Halpern, D. (2018). *The rabbi's brain: Mystics, moderns, and the science of Jewish thinking*. Nashville, TN: Turner.
- Newberg, A. B., & Iversen, J. (2003). The neural basis of the complex mental task of meditation: neurotransmitter and neurochemical considerations. *Medical Hypotheses*, 61(2), 282-291.
- Newberg, A. B., & Lee, B. Y. (2005). The neuroscientific study of religious and spiritual phenomena: Or why God doesn't use biostatistics. *Zygon*, 40(2), 469-489.
- Newberg, A. B., & Newberg, S. (2008, January). Hardwired for God: A neuropsychological model for developmental spirituality. In K. K. Kline (Ed.),

- Authoritative communities: The scientific case for nurturing the whole child* (pp. 165-186). New York: Springer.
- Newberg, A. B., & Waldman, M. (2009). *How God changes your brain: Breakthrough findings from a leading neuroscientist*. New York: Ballantine.
- Newberg, A. B., & Waldman, M. R. (2016). *How enlightenment changes your brain: The new science of transformation*. New York: Penguin Random House.
- Newberg, A. B., & Waldman, M. R. (2018b). A neurotheological approach to spiritual awakening. *International Journal of Transpersonal Studies*, 37, 119-130.
- Newberg, A. B., Wintering, N., Yaden, C. B., Zhong, L., Bowen, B., Averick, N., & Monti, D. (2018). Effect of a one-week spiritual retreat on dopamine and serotonin transporter binding: A preliminary study. *Religion, Brain, and Behavior*, 8(3), 265–278. Retrieved from <https://doi.org/10.1080/2153599X.2016.1267035>
- Newberg, A., Alavi, A., Baime, M., Pourdehmed., M., Santanna, J., & d'Aquili, E. (2001, April 10). The measurement of regional cerebral blood flow during the complex cognitive task of meditation: A preliminary SPECT study. *Psychiatry Research*, 106(2), 113-122. doi: 10.1016/s0925-4927(01)00074-9.
- Newberg, A., d'Aquili, E., & Rause, V. (2002). *Why God won't go away: Brain science and the biology of belief*. New York: Random House.
- Newberg, A., Wintering, N., & Waldman, M. (2019, November). Comparison of different measures of religiousness and spirituality: Implications for neurotheological research. *Religions*, 10(11), 637. doi: 10.3390/rel10110637.
- Newberg, A. B. (2010). *Principles of neurotheology*. Burlington, VT: Ashgate Publishing.
- Newen, A., Gallagher, S., & De Bruin, L. (2018). 4E cognition: Historical roots, key concepts, and central issues. In A. Newen, L. De Bruin, & S. Gallagher, *Oxford Handbook of 4E cognition* (pp. 1-16). Oxford, UK: Oxford University Press.
- Newman, J. H. (1845/2023). *Essay on the development of Christian doctrine*. Chapter 8. Application of the Third Note of a True Development—Assimilative Power. In Newman Reader. Retrieved from <https://www.newmanreader.org/works/development/chapter8.html>
- Noble, W., & Davidson, I. (1996). *Human evolution, language, and mind*. Cambridge, U.K.: Cambridge University Press.
- Noe, A. (2010). *Out of our heads: Why you are not your brain and other lessons from the biology of consciousness*. New York: Hill & Wang.
- Nola, R. (2018). Demystifying religious belief. In H. van Eyghen, R. Peels, & G. van den Brink (Eds.), *New developments in the cognitive science of religion* (pp. 71-92). New York: Springer International.
- Northoff, G. (2014). *Unlocking the brain. Vol. 1: Coding*. Oxford, U.K.: Oxford University Press.
- Northoff, G. (2014). *Unlocking the brain. Vol. 2: Consciousness*. Oxford, U.K.: Oxford University Press.
- Northoff, G., & Bermpohl, F. (2004). Cortical midline structures and the self. *Trends in Cognitive Sciences*, 8(3), 102-107.

- O'Callaghan, J. (2000). From Augustine's mind to Aquinas' soul. Jacques Maritain Center: Thomistic Institute. Retrieved from <https://maritain.nd.edu/jmc/ti00/ocallagh.htm>
- O'Dougherty, J., et al. (2000). Abstract reward and punishment representations in the human orbitofrontal cortex. *Nature Neuroscience*, 4(1), 95-102.
- Oomen, P. M. F. (2003). On brain, soul, self, and freedom: An essay in bridging neuroscience and faith. *Zygon: Journal of Religion and Science*, 38, 377-391.
- Otto, R. (1923/2010). *Idea of the holy*. London: Oxford University Press.
- Otto., R. (1932/2016). *Mysticism East and West: A comparative analysis of the nature of mysticism*. Eugene, OR: Wipf and Stock.
- Pace, U., Cacioppo, M., & Schimmenti, A. (2011). The moderating role of father's care on the onset of binge eating symptoms among female late adolescents with insecure attachment. *Child Psychiatry and Human Development*, 43(2), 282-292.
- Pargament, K. I., Koenig, H. G., Tarakeshwar, N., & Hahn, J. (2004, November). Religious coping methods as predictors of psychological, physical, and spiritual outcomes among medically ill elderly patients: A two-year longitudinal study. *Journal of Health Psychology*, 9(6), 713-730. doi: 10.1177/1359105304045366.
- Park, C. L. & McNamara, P. (2006). Religion, meaning, and the brain. In P. McNamara (Ed.), *Where God and science meet* (pp. 67-90). Westport, CT: Praeger.
- Paul VI, Pope. (1963). Dogmatic constitution *Sacrosanctum concilium*. Retrieved from Sacrosanctum Concilium (vatican.va)
- Paul VI, Pope. (1964). *Lumen Gentium*: Dogmatic constitution on the Church. Retrieved from [https://www.vatican.va/archive/hist\\_councils/ii\\_vatican\\_council/documents/vat-ii\\_const\\_19641121\\_lumen-gentium\\_en.html](https://www.vatican.va/archive/hist_councils/ii_vatican_council/documents/vat-ii_const_19641121_lumen-gentium_en.html)
- Paul VI, Pope. (1965). *Dei Verbum*. Dogmatic constitution on Divine Revelation. Retrieved from *Dei Verbum* (Vatican.va)
- Paul VI, Pope. (1965). *Gaudium et spes*: Pastoral Constitution on the Church in the Modern World. Retrieved from [https://www.vatican.va/archive/hist\\_councils/ii\\_vatican\\_council/documents/vat-ii\\_const\\_19651207\\_gaudium-et-spes\\_en.html](https://www.vatican.va/archive/hist_councils/ii_vatican_council/documents/vat-ii_const_19651207_gaudium-et-spes_en.html)
- Payne, S. (2022). Some definitions of spirituality, Christian spirituality, and spiritual theology. [Handout for course, Introduction to the History of Spirituality, First Semester 2022-2023]. Washington, DC: Catholic University of America.
- Peacock, B. (2022, September). A-118 Psychedelic interventions for neuropsychological conditions. *Archives of Clinical Neuropsychology*, 37(6), 1270. doi: 10.1093/arclin/acac060.118.
- Peacocke, A. (2002). The sound of sheer silence. In R. J. Russell, N. Murphey, T. C. Meyering, T. C., & M. A. Arbib, (Eds.). *Neuroscience and the person: Scientific perspectives on divine action* (pp. 215-247). Notre Dame, IN: University of Notre Dame Press.
- Pearce, M. J. (2013). Addressing religion and spirituality in health care systems. In K. I. Pargament, A. Mahoney, & E. P. Shafranske (Eds.), *APA handbook of*



- psychology, religion, and spirituality*, Vol 2 (pp. 527-541). Washington, DC: American Psychological Association.
- Peres, J. F. P., Moreira-Almeida, A., Nasella, A. G., & Koenig, H. G. (2007). Spirituality and resilience in trauma victims. *Journal of Religion and Health*, 46, 343-350. doi: 10.1007/s10943-006-9103-0.
- Persinger, M. A. (1983). Religious and mystical experiences as artifacts of temporal lobe function: A general hypothesis. *Perceptual Motor Skills*, 57, 1255-1262.
- Persinger, M. A. (1987). Neuropsychological bases of God beliefs. New York: Praeger.
- Persinger, M. A. (1997). I would kill in God's name: Role of sex, weekly church attendance, report of a religious experience, and limbic lability. *Perceptual and Motor Skills*, 85, 128-130.
- Peters, K. E. (2001, September). Neurotheology and evolutionary theology: Reflections on *The mystical mind*. *Zygon*, 36(3), 493-500. doi: 10.1111/0591-2385.00376.
- PEW Research Center. (2012, December 18). The global religious landscape. Washington, DC: PEW Research Center. Retrieved from <https://www.pewresearch.org/religion/2012/12/18/global-religious-landscape-exec/>
- Phelps, E. O. C., Gatenby, C. J., Gore, J., Grillon, C., & Davis, M. (2001). Activation of the left amygdala to a cognitive representation of fear. *Nature Neuroscience*, 4(4), 437-441.
- Picard, F. (2023). Ecstatic or mystical experience through epilepsy. *Journal of Cognitive Neuroscience*, 35(9), 1372-1381.
- Pigliucci, M. (2004). God in the brain. *Skeptic*, 10(4), 82-83.
- Pike, N. (1992). On the possibility of theistic experience. In *Mystic union* (pp. 116-153). Ithaca, NY: Cornell University Press.
- Pinsent, A. (2015a). Neurotheological eudaimonia. In J. Clausen & N. Levy (Eds.). *Handbook of neuroethics* (pp. 1603-1617). Dordrecht, Germany: Springer Science and Business Media. doi: 10.1007/978-94-007-4707-4\_100.
- Pinsent, A. (2015b). *The second-perspective in Aquinas' ethics: Virtues and gifts*. New York: Routledge.
- Planche, V., Manjon, J. K., Mansencal, B., Lanuza, E., Tordias, T., Catheline, G., Coute, P. (2023, February 7). Structural progression of Alzheimer's disease over decades: The MRI staging scheme. *Brain Communications*, 4, fcas109. Retrieved from <https://doi.org/10.1093/braincomms/fcas109>
- Podgorny, P., & Shepard, R. N. (1978). Functional representations common to visual perception and imagination. *Journal of Experimental Psychology: Human Perception and Performance*, 9, 380-393.
- Polanyi, M. (1966). *The tacit dimension*. Chicago, IL: University of Chicago Press.
- Poldrack, R., & Yankoni, T. (2016). From brain maps to cognitive ontologies: Informatics and the search for mental structure. *Annual Review of Psychology*, 67, 587-612.
- Poldrack, R., Kittur, A., Kalar, D., Miller, E., Seppa, C., Gil, Y., & Bilder, R. (2011). The Cognitive Atlas: Toward a knowledge foundation for cognitive neuroscience. *Neuroinformatics*, 5(17), 1-11.

- Polger, T. W., & Shapiro, L. A. (2016). *The multiple realization book*. New York: Oxford University Press.
- Poulin, A. (1901/2016). *Graces of interior prayer: A treatise on mystical theology*. Jeffersonville, IN: Caritas Publishing.
- Premack, D. (2007). Human and animal cognition: Continuity and discontinuity. *Proceedings of the National Academy of Sciences*, 104(35), 13861-13867. Retrieved from <http://www.pnas.org/cgi/doi/10.1073/pnas.0706147104>
- Pressman, P., Lyons, J. S., Larson, D. B., & Strain, J. J. (1990). Religious belief, depression, and ambulation status in elderly women with broken hips. *American Journal of Psychiatry*, 147, 758-760.
- Price, C. J., & Devlin, J. T. (2011, June). The interactive account of ventral occipitotemporal contribution to reading. *Trends in Cognitive Sciences*, 15(6), 246-253.
- Puderbaugh, M. & Emmady, P. D. (2022). Neuroplasticity. *StatPearls*. Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK557811>
- Pulvermuller, F., Garagnani, M., & Wennekers, T. (2014, October). Thinking in circuits: Toward neurobiological explanation in cognitive neuroscience. *Biological Cybernetics*, 108(5), 573-593. doi: 10.1007/s00422-014-0603-9.
- Purves, D., Augustine, G. J., Fitzpatrick, D., Hall, W. C., Lamantia, A-S. Mooney, R. D., White, L. E. (2019). *Neuroscience*. International Sixth Edition, New York: Sinauer.
- Pylyshyn, Z. W. (1973). What the mind's eye tells the mind's brain. *Psychological Bulletin*. 80: 1-24. doi:10.1037/h0034650.S2CID 145431092.
- Pyyssäinen, I. (2006). Amazing grace: Religion and the evolution of the human mind. In P. McNamara (Ed.), *Where God and science meet: How brain and evolutionary studies alter our understanding of religion* (pp. 209-225) Westport, CT: Praeger.
- Quartz, S., & Sejnowski, T. J. (2002). *Liars, lovers, and heroes: What the new brain science reveals about how we become who we are*. Mosaic, PA: HarperCollins.
- Quirin, M., Frohlich, S., & Kuhl, J. (2016). Implicit self and the right hemisphere: Increasing implicit self-esteem and implicit positive affect by left hand contractions. *European Journal of Social Psychology* Retrieved from <http://dx.doi.org/10.1002/ejsp.2281>
- Quirin, M., Kent, M., Bokeem, M. A. S., & Tops, M. (2015, July). Integration of negative experiences: A neuropsychological framework for human resilience. *Behavioral and Brain Sciences*, 38.
- Rachlin, H. (2012, July). Is the mind in the brain? A review of the book *Out of our heads: Why you are not your brain, and other lessons from the Biology of consciousness* by Alva Noe. *Journal of Experimental Analysis of Behavior*, 98(1), 131-17. doi: 10.1901/jeab.2012.98-131.
- Rahm, C., & Sorman, K. (2019). From brain to symptom: Introduction to neuroscientific psychiatry. [Online Course, Coursera]. Karolinska Institute, Sweden.
- Rahner, K. (1941/1994). *Hearer of the Word*. New York: Continuum Books.
- Rahner, K. (1958). *Happiness through prayer*. Dublin, Ireland: Conmore and Reynolds.

- Rahner, K. (1961-1992). *Theological investigations*. 23 vols. Baltimore, MD: Helicon.
- Rahner, K. (1963/2010). *The mystical way in everyday life*. Maryknoll, New York: Orbis Books.
- Rahner, K. (1964). *Nature and grace*. New York: Sheed and Ward.
- Rahner, K. (1966). Dogmatic reflections on the knowledge and self-consciousness of Christ. In *Theological investigations*, Vol. 5. Oxfordshire, U.K.: Helicon Press.
- Rahner, K. (1967/1974). Theology of the spiritual life. In *Theological investigations*, Vol. 3. Oxfordshire, U.K.: Helicon Press.
- Rahner, K. (1968/1994). *Spirit in the world*. New York: Continuum.
- Rahner, K. (1974). The theology of the spiritual life. In *Theological investigations*, Vol. 3. New York: Seabury Press.
- Rahner, K. (1979). Experience of the Spirit: Source of theology. In *Theological investigations*, Vol. 16. New York: Seabury Press.
- Ramachandran, V. S., & Blakeslee, S. (1998). *Phantoms in the brain: Probing the mysteries of the human mind*. New York: William Morrow.
- Rao, T. S. S., Asha, M. R., Rao, K. S. J., & Vasedevaraju, P. (2009). The biochemistry of belief. *Indian Journal of Psychiatry*, 51(4), 230-241. doi: 10.4103/0019-5545.58285.
- Rappaport, R. A. (1999). *Holiness and humanity: Ritual in the making of religious life*. Bridgewater, NJ: Cambridge University Press.
- Rappaport, R. A. (1999). *Ritual and religion in the making of humanity*. London, UK: Cambridge University Press.
- Ratcliffe, M. (2006). Neurotheology: A science of what? In P. McNamara (Ed.), *Where God and science meet: How brain and evolutionary studies alter our understanding of religion*. Vol 2. Westport, CT: Praeger.
- Ratzinger, J. (1989). Letter to the bishops of the Catholic Church on some aspects of Christian meditation. Vatican City: Congregation for the Doctrine of the Faith.
- Rausch, T. P. (1998, January 31). Divisions, dialogue, and the catholicity of the church. *America Magazine*, pp. 20-29.
- Reddy, V., & Uithol, S. (2016). Engagement: Looking beyond the mirror to understand action understanding. *British Journal of Developmental Psychology*, 34(1), 101-114. doi: 10.1111/bjdp.12106.
- Reddy, V., & Uithol, S. (2016, March). Engagement: Looking beyond the mirror to understand action understanding. *British Journal of Developmental Psychology*, 34(1), 101-114.
- Redemptorist Spirituality. (2023) Retrieved from <https://redemptorists.net>
- Redfern, C., & Coles, A. (2015, July 15). Parkinson's Disease, religion, and spirituality. *Movement Disorders in Clinical Practice*, 2(4), 341-346. doi: 10.1002/mdc3.12206.
- Reeves, J. (2020, September). Methodology in science and religion: A reply to critics. *Zygon*, 55(3), 824-836. doi: 10.1111/zygo.12630.
- Reimao, S. (2020). A window into the mind? Neuroimaging and our understanding of the human being [Audio recording]. Retrieved from <https://soundcloud>.

- com/thomisticinstitute/a-window-into-the-mind-neuroimaging-and-our-understanding-of-the-human-being-pro-sofia-reimao.
- Reiner, P. (2011). The rise of neuroessentialism. In J. Illes & Shhakian, B. J. (Eds.), *The Oxford handbook of neuroethics* (pp. 161-175). Oxford, U.K.: Oxford University Press.
- Reniers, R. L. F. P., Corcoran, R., Vollm, B. A., Asha, M., Richard, H., & Liddle, P. F. (2012). Moral decision-making, ToM, empathy, and the default mode network. *Biological Psychology*, *90*, 202-210. doi:10.1016/j.biopsycho.2012.03.009.
- Riordan, P. (2015, July). [Review of the book, *The second-person perspective in Aquinas' ethics*, by Andrew Pinsent]. *Heythrop Journal*, *56*(4), 694-696. doi: 10.1111/heyj.12250\_10.
- Rites of the Catholic Church. (2023). Catholic News Agency. Retrieved from <http://www.catholicnewsagency.com/resources/56009/the-rites-of-the-catholic-church>
- Ritvo, E., Haji, L., Baker, L., & Albright, J. (2021, June 2). The pandemic's impact on well-being. *Psychology Today*. Retrieved from <https://www.psychologytoday.com/us/blog/vitality/202106/the-pandemics-impact-well-being>
- Rixon, G. (2001). Bernard Lonergan and mysticism. *Theological Studies*, *62*, 479-497.
- Roache, R. (2014, April). Can brain scans prove criminals unaccountable? *AJOB Neuroscience*, *5*(2), 35-37. doi: 10.1080/21507740.2014.884188.
- Roberts, R. (2021, Spring). Emotions in the Christian Tradition. In E. N. Zalta (Ed.). *The Stanford encyclopedia of philosophy*. Retrieved from <https://plato.stanford.edu/archives/spr2021/entries/emotion-Christian-tradition>.
- Roberts, T. B. (2006). Chemical input, religious output—entheogens: A pharmatheology sampler. In P. McNamara (Ed.), *Where God and science meet* (pp. 235-267). Westport, CT: Praeger.
- Robillard, R., Naismith, S. L., Smith, K. L., Rogers, N. L., White, D., Terpening, Z., & Hickie, I. B. (2014). Sleep-wake cycle in young and older persons with a lifetime history of mood disorders. *Plos One*, *9*(2), 1-8.
- Robles, T. F., & Kiecolt-Glaser. (2003, August). The physiology of marriage: Pathways to health. *Physiology and Behavior*, *79*(3), 409-417.
- Robson, J. A. (1983). The morphology of corticofugal axons to the dorsal lateral geniculate nucleus in the cat. *Journal of Comparative Neurology*, *216*, 89-103.
- Rohlf, M. (2020, Fall). Immanuel Kant. In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy*. Retrieved from <https://plato.stanford.edu/archives/fall2020/entries/kant>.
- Rolls, E. T. (1999). *The brain and emotion*. Oxford, U.K.: Oxford University Press.
- Rose, E., Westfield, J., & Ansley, T. (2008). Spiritual issues in counseling: Clients' beliefs and preferences. *Psychology of Religion and Spirituality*, *5*(1), 18-33.
- Rosok, I. (2011). Unconditional surrender and love: How spirituality illuminates the theology of Karl Rahner. *The Way*, *50*(4), 121-132.
- Rosok, I. (2017, January). The kenosis of Christ revisited: The relational perspective of Karl Rahner. *Heythrop Journal*, *63*(1), 51-63. doi: 10.1111/j.1468-2265.2012.00773.x.

- Rossano, M. J. (2007). Did meditating make us human? *Cambridge Archaeological Journal*, 17(1), 47-58. doi: 10.1017/S0959774307000054.
- Roth, G., & Dicke, U. (2005). Evolution of the brain and intelligence. *Trends in Cognitive Sciences*, 9(9).
- Rottschaefer, W. A. (1999, March). The image of God of neurotheology: Reflections on culturally based religious commitment or evolutionarily based neuroscientific theories? *Zygon*, 34(1), 57-65. doi: 10.1111/0591-2385.192199192.
- Rowe, C. (1999). Receiver psychology and the evolution of multi-component signals. *Animal Behavior*, 58, 921-931.
- Roy, L. (2001). *Transcendent experiences: Phenomenology and critique*. Toronto, Canada: University of Toronto Press.
- Ruczaj, S. (2022). Grace contra nature: The etiology of Christian religious beliefs from the perspective of theology and the cognitive science of religion. *Theology and Science*. Retrieved from <https://www.tandfonline.com/loi/rtas20>
- Runehev, A. L. (2007). *Sacred or neural? The potential of neuroscience to explain religious experience*. Gottingen: Vandenhoeck & Ruprecht.
- Russell, R. J., Murphy, N., Meyering, T. C., & Arbib, M. A. (1999/2004). Neuroscience and the person: Scientific perspectives on divine action. Castel Gondolfo, Italy: Vatican Observatory.
- Ryan, T. (2014, April). Second-person perspective, virtues, and the gifts in Aquinas' ethics. *Australian eJournal of Theology*, 21(1), 1-14.
- Sanguineti, J. J. (2011). Can free decisions be both intentional and neural operations? In J. J. Sanguineti, A. Acerbi, & J. A. Lombo (Eds.), *Moral behavior and free will: A neurobiological and philosophical approach* (pp. 179-202). Morolo, Italia: IF Press.
- Sanguineti, J. J. (2013). Can the self be considered a cause? In G. Auletta, I. Colage, & M. Jeannerod (Eds.), *Brains top down: Is top-down causation challenging neuroscience?* (pp. 121-142). Hackensack, NJ: World Scientific.
- Sanguineti, J. J. (2013). Neuroscience, philosophical relevance of. In R. L. Fastiggi [Ed.]. *New Catholic encyclopedia supplement 2012-2013: Ethics and philosophy*. Vol. 3 (pp. 1065-1068). Detroit, MI: Gale.
- Sanguineti, J. J. (2015). The relevance of neuroscience in the study of religiosity. *Scientia et Fides*. Retrieved from <http://www.academia.edu>
- Sanguineti, J. J. (2019). Freedom. In *Philosophica: Enciclopedia filosofica*. Retrieved from <http://www.filosofica.info/archivo/2019/voces/libertad/libertad.html>
- Sanguineti, J. J. (2022). For a philosophy of the human brain. Retrieved from <http://www.academia.edu>
- Sanislow, C., Pine, D., Quinn, K., Kozak, M., Garvey, M., Heinssen, R., & Cuthbert, B. (2010). Developing constructs for psychopathology research: Research domain criteria. *Journal of Abnormal Psychology*, 119(4), 631-639.
- Sapolsky, R.M. *Determined: A science of life without free will*. New York, NY: Penguin Press, 2023.
- Sarbacker, S. (2016, August 31). Rudolf Otto and the Concept of the Numinous. Oxford Research Encyclopedias. Retrieved from <https://doi.org/10.1093/acrefore/9780199340378.013.88>.

- Sattler, D. (2022). Being Roman Catholic today in a worldwide context: Ecumenical perspectives on confessional reform efforts. *Ecumenical Review*, 74(1), 84-97.
- Sbarra, D. A., & Hazan, C. (2008). Coregulation, dysregulation, self-regulation: An integrated analysis and empirical agenda for understanding adult attachment, separation, loss, and recovery. *Personality and Social Psychology Review*, 12(2), 141-167.
- Scaramelli, G. B. (1913/2005). *A handbook of mystical theology*. Berwick, ME: Nicolas-Hays.
- Schall, J. D. (2009). Actions, reasons, neurons, and causes. In V. P. Gay (Ed.), *Neuroscience and religion: Brain, mind, self, and soul* (pp. 175-198). Lanham, MD: Rowman & Littlefield.
- Scherer, K. R., & Zentner, M. R. (2001). Emotional effects of music: Production rules. In J. Juslin & J. Sloboda (Eds.), *Music and emotion* (pp. 361-392). Oxford, U. K.: Oxford University Press.
- Schleiermacher, F. (1799/1996). *On religion: Speeches to its cultured despisers. Cambridge texts in the history of philosophy*. Cambridge, U.K.: Cambridge University Press.
- Schmidt, S. N. L., Hass, J., Kirsch, P., & Mier, D. (2021, May). The human mirror neuron system—A common neural basis for social cognition? *Psychophysiology*, 58(5). Retrieved from <https://doi.org/10.1111/psyp.13781>.
- Schmidt, S., & Walsh, H. (eds.). (2014). *Meditation: Neuroscientific approaches and philosophical implications*. New York: Springer.
- Schore, A. N. (2003a). *Affect regulation and the repair of the self*. New York: Norton.
- Schore, A. N. (2021, April 20). The interpersonal neurobiology of intersubjectivity. *Frontiers in Psychology*, 12:648616. Retrieved from <http://doi.org/10.3389/fpsyg.2021.648616>.
- Schwartz, M. E. (2012). Consciousness, spirituality, and postmaterialist science: An empirical and experiential approach. In L. Miller (Ed.), *Handbook of Psychology and Spirituality*. New York: Oxford University Press.
- Science Council. (2023). Science. Retrieved from <https://sciencecouncil.org/aboutscience/our-definition-of-science>.
- Scott, B. (2004). Second-order cybernetics: An historical introduction. *Kybernetes*, 33(9), 1365-1378.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55, 5-14.
- Sevine, G., & Spreng, R.N. (2014). Contextual and perceptual brain processes underlying moral cognition: A quantitative meta-analysis of moral reasoning and moral emotions. *Plos One*, 9, c87427. doi:10.1371/journal.pone.0087427.
- Shae, H. (2021, July). Internal difficulties in the theology of Karl Rahner. *Modern Theology*, 37(3). doi:10.1111/moth.12652.
- Shamay-Tsoory, S. G., Tomoer, R., Goldsher, D., Berger, B. D. & Aharon-Peretz, J. (2004). Impairment in cognitive and affective empathy in patients with brain lesions: Anatomical and cognitive correlates. *Journal of Clinical and Experimental Neuropsychology* 26(8), 1113-1127

- Shannon, N. D. (2017, September). Believe and confess: Revisiting Christian doxastic intentionality. *Heythrop Journal*, 58(5), 749-761. doi: 10.1111/j.1468-2265.2012.00795.x.
- Shantz, D. H. (2010). The place of religion in a secular age: Charles Taylor's explanation of the rise and significance of secularism in the West. Calgary, Canada: University of Calgary. Retrieved from [https://arts.ucalgary.ca/sites/default/files/teams/2/CLARE/Chair\\_Christian\\_Thought/2009march16\\_schantz\\_charles\\_taylorlecture.pdf](https://arts.ucalgary.ca/sites/default/files/teams/2/CLARE/Chair_Christian_Thought/2009march16_schantz_charles_taylorlecture.pdf).
- Sharifi, S. (2018). Relationship between attachment style to God and depression in female breast-cancer patients: The mediating role of illness perception. *Pakistan Journal of Medical and Health Sciences*, 61(1), 27-35.
- Shear, J., & Jevning, R. (1999). Pure consciousness: Scientific exploration of meditation techniques. *Journal of Consciousness Studies*, 6(2-3), 189-210.
- Shukla, S., Acharya, S., & Raiput, C. (2013). Neurotheology: Matters of the mind or matters that mind? *Journal of Clinical and Diagnostic Research*, 7, 1486-1490.
- Siegel, D. J. (1999/2020). *The developing mind: How relationships and the brain interact to shape who we are. (3rd. ed.)*. New York: Guilford.
- Siegel, D. J. (2006). An interpersonal neurobiology approach to psychotherapy. *Psychiatric Annals*, 36, 248-256. Retrieved from <http://www.healio.com/psychiatry/journals/psycann/2006-4-36-3>
- Siegel, D. J. (2007). *The mindful brain: Reflection and attunement in the cultivation of well-being*. New York: W. W. Norton.
- Siegel, D. J. (2012). *Pocket guide to interpersonal neurobiology: An integrative handbook of the mind*. New York: W. W. Norton.
- Siegel, D. J., & Drulis, C. (2023, February 3). An interpersonal neurobiology perspective on the mind and mental health: Personal, public, and planetary wellbeing. *Annals of General Psychiatry*, 22(5). Retrieved from doi: 10.1186/s11991-023-0043405
- Simmonds-Moore, C., Rice, D. L., O'Gwin, A., & Hopkins, R. (2019). Exceptional experiences following exposure to a sham "God helmet:" Evidence for placebo, individual difference, and time of day influences. *Imagination, Cognition, and Personality: Consciousness in Theory, Research, and Practice*, 39(1), 44-87.
- Simmons, J. A. (2019). Robert Cummings Neville, Defining religion: Essays in philosophy of religion. *International Journal for Philosophy of Religion*. Retrieved from <https://research-ebSCO-com.eresources.cuyahogalibrary.org/e/oeuzzwh/viewer/html/dvcohi4liv>
- Singh, N., & Telles, S. (2015). Neurophysiological effects of meditation based on evoked and event-related potential recordings. *BioMed Research International*, 1-11. Retrieved from <http://dx.doi.org/10.1155/2015/406261>
- Sisters of Notre Dame. (2023). Retrieved from <http://www.snd1.org>
- Skrzypinska, K. (2021). Does spiritual intelligence (SI) exist? A theoretical investigation of a tool useful for finding the meaning of life. *Journal of Religion and Health*, 60(1), 500-516. doi: 10.1007/s10943-020-01005-8.

- Smith, D. W. (2013, Summer). Phenomenology, In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy*. Retrieved from <https://plato.stanford.edu/archives/sum2013/entries/phenomenology>.
- Smith, E. E. (2017, Summer). How does the brain experience God? Interview on neurotheology with Andrew B. Newberg. *Sufi*, 31-37.
- Snead, O. C. (2020, December 1). The anthropology of expressive individualism. *Church Life Journal: A Journal of the McGrath Institute for Church Life*. Notre Dame, IN: University of Notre Dame. Retrieved from <https://churchlifejournal.nd.edu/articles/the-anthropology-of-expressive-individualism>
- Society of Catholic Scientists. (2023). Retrieved from <http://www.catholic-scientists.org>
- Sohn, Y. H. I., Kaelin-Lang, A., & Hallett, M. (2003, July). The effect of transcranial magnetic stimulation on movement selection. *Journal of Neurology, Neurosurgery, and Psychiatry*, 74 (7), 985-987. doi: 10.1136/jnnp.74.7.985.
- Song, Y., Tian, M., & Liu, J. (2012, August 29). Top-down processing of symbolic meanings modulates the visual word form area. *Journal of Neuroscience*, 32(35), 12277-12283. doi: <https://doi.org/10.1523/JNEUROSCI.1874-12.2012>.
- Sorenson, S. J. (2013). Depression and God: The effect of major depressive disorder on theology and religious identity. *Pastoral Psychology*, 62(3), 343-353. doi: 10.1007/s11089-012-0479-3.
- Sosis, R. (2000). Religion and intragroup cooperation: Preliminary results of a comparative analysis of utopian communities. *Cross-Cultural Research*, 34, 70-87.
- Sosis, R. (2003). Why aren't we all Hutterites? *Human Nature*, 14(2), 91-127.
- Sosis, R., & Bressler, E. (2003). Cooperation and commune longevity: A test of the costly signaling theory of religion. *Cross-Cultural Research*, 37, 211-239.
- Sosis, R., & Ruffle, B. (2003). Religious ritual and cooperation: Testing for a relationship on Israeli religious and secular kibbutzim. *Current Anthropology*, 44, 713-722.
- Sosis, R., & Ruffle, B. (2004). Ideology, religion, and the evolution of cooperation: Field experiments on Israeli Kibbutzim. *Research in Economic Anthropology*, 23, 87-115.
- Sousa, D. A. (2011). *How the brain learns*. (4th ed.). Thousand Oaks, CA: Corwin.
- Spezio, M. (2000, March 1). [Review of the book *Whatever happened to the Soul? Scientific and theological portraits of human nature* by W. S. Brown, N. Murphy, & H. N. Malony (Eds.)]. *Zygon: Journal of Religion & Science*, 35(2), 202-204.
- Spezio, M. L. (2011, March). The neuroscience of emotion and reasoning in social contexts: Implications for moral theology. *Modern Theology*, 27(2), 339-356. doi:10.1111/j.1468-0025.2010.01680.x
- Spezio, M. L. (2013, June). Social neuroscience and theistic evolution: Intersubjectivity, love and the social sphere. *Zygon: Journal of Religion and Science*, 48(2), 428-438. doi: 10.1111/zygo.12005.
- Spirituality: Canons Regular of Premontre. (2023). Retrieved from <https://www.norbertines.org.uk/the-order/spirituality>
- Spitzer, R. (2015) *The soul's upward yearning: Clues to our transcendent nature from experience and reason*. San Francisco, CA: Ignatius Press.



- Sporns, O. (2016). *Networks of the brain*. Cambridge, MS: MIT Press.
- Stace, W. (1960). *Mysticism and philosophy*. London, U.K.: Macmillan.
- Stanton, S. (2023). Epistemology and how we come to know. Retrieved from [magiscenter.com/blog/epistemology](https://magiscenter.com/blog/epistemology).
- Statistics & Data. (2022). "Most popular religions in the world—1945-2022." Retrieved from [www.statisticsanddata.org/data/most-popular-religions-in-the-world](https://www.statisticsanddata.org/data/most-popular-religions-in-the-world)
- Stein, E. (2000). Individual and Community. In E. Stein & M. Sawicki et al. (Eds.), *Philosophy of psychology and the humanities: The collected works of Edith Stein, vol. 7*. Washington, DC: ICS Publications.
- Steup, M. (1997). [Review of the book *Perceiving God. The epistemology of religious experience* by W. Alston]. *Nous*, 31(3), 408-421.
- Stinson, C. (2016). Mechanisms in psychology: Ripping nature at its seams. *Synthese*, 193(5), 1585-1614.
- Stockigt, B., Jeserich, F., Walach, H., Elies, M., & Brinkhaus, B. (2021, December). Experiences and perceived effects of rosary praying. *Journal of Religion and Health*, 60(6), 3886-3906. doi: 10.1007/s10943-021-01299-2.
- Stoeber, M. (1992). Constructivist epistemologies of mysticism: A critique and a revision. *Religious Studies*, 28, 107-116.
- Stone, J. A. (2000, June). J. Wentzel van Huyssteen: Refiguring rationality in the postmodern age. *Zygon: Journal of Religion and Science*, 35(2), 415-426. doi: 10.1111/0591-2385.00284.
- Stovall, P. (2011). Professional virtue and professional self-awareness: A case study in engineering ethics. *Science and Engineering Ethics*, 17, 109-132. doi:10.1007/s11948-009-9182-x.
- Strawn, B. D., & Brown, W. S. (2013). Liturgical animals: What psychology and neuroscience tell us about formation and worship. *Liturgy*, 28(4). Fuller Theological Seminary. doi: 10.1080/0458063X.2013.803838 Retrieved from <http://www.tandfonline.com/loi/ultg20>
- Stuckey, H. L., & Nobel, J. (2010, February). The connection between art, healing, and public health: A review of current literature. *American Journal of Public Health*, 100(2), 254-63. doi: 10.2105/AJPH.2008.156497.
- Stucky, K., Kirkwood, M. W., Donders, J., & Liff, C. (Eds.). (2014/2020). *Clinical neuropsychology study guide and board review*. New York: Oxford University Press.
- Stuhlmeuller, C. (Ed.). (1996). *The Collegeville pastoral dictionary of Biblical theology*. Collegeville, MN: Liturgical Press.
- Sullivan, J. (2016a). Construct stabilization and the unity of the mind-brain sciences. *Philosophy of Science*, 83, 662-673.
- Sullivan, J. (2016b). Stabilizing constructs across different research fields as a way to foster the integrative approach of the research domain criteria project. *Frontiers in Human Neuroscience*, 10, 309.
- Sullivan, J. (2016c). Neuroscientific kinds through the lens of scientific practice. In C. Kendig (Ed.), *Natural kinds and classification in scientific practice* (pp. 47-56). New York: Routledge.

- Sullivan, J. A. (2017, June). Coordinated pluralism as a means to facilitate integrative taxonomies of cognition. *Philosophical Explorations*, 20(2), 129-145. doi: 10.1080/13869795.2017.1312497.
- Swaab, D. F. (2001, August 20-24). Plasticity in the adult brain: From genes to neurotherapy. *Proceedings of the 22nd International Summer School of Brain Research*. (M. A. Hoffman et al., Eds.). University of Amsterdam: Elsevier.
- Sweet, W. (2019). Jacques Maritain. In *Stanford encyclopedia of philosophy*. Retrieved from <https://plato.stanford.edu/entries/maritain>
- Tangney, J. P. (2009). Humility. In S. J. Lopez & C. R. Snyder (Eds.), *Oxford Handbook of Positive Psychology, 2nd Edition* (pp. 483-490). New York: Oxford University Press.
- Taylor, C. (1989). *Sources of the self: The making of modern identity*. Cambridge, MA: Harvard University Press.
- Taylor, C. (2003). *Varieties of religion today: William James revisited. Series: Institute for Human Sciences Vienna Lecture*. Cambridge, MA: Harvard University Press.
- Taylor, C. (2018). *A secular age*. Cambridge, MA: Belknap, Harvard University Press.
- Taylor, K. I., et al. (1999). Qualitative hemispheric differences in semantic category matching. *Brain and Language*, 70(1), 119-131.
- Taylor, K., Zach, P., & Brugger, P. (2002). Why is magical ideation related to leftward deviation on an implicit line bisection task? *Cortex*, 38(2), 247-252.
- Teresa of Avila, St. (1577/1980). *The collected works of Teresa of Avila, vol. 2, The Way of Perfection and Interior Castle*. Washington, DC: ICS Publications.
- Thielicke, H. & Louth, A. (2022). Theology. In *Encyclopedia Britannica*. Retrieved from <http://www.britannica.com/topic/theology>.
- Thurston, H. (1911/2023). Relics. In *The Catholic encyclopedia*. New York: Robert Appleton. In *New Advent Catholic encyclopedia*. Retrieved from <https://www.newadvent.org/cathen/12734a>.
- Titus, C. S., & Moncher, F. (2009). A Catholic Christian positive psychology: A virtue approach. *Edification: Journal of the Society for Christian Psychology*, 57-63.
- Tranel, D., Hathaway-Nepple, J., & Anderson, S. W. (2007). Impaired behavior on real-world tasks following damage to the ventromedial prefrontal cortex. *Journal of Clinical and Experimental Neuropsychology*, 29(3), 319-332. Retrieved from <https://doi.org/10.1080/13803390600701376>
- Traska, B. (2017, March). [Review of the book *Brain, Consciousness, and God* by D. A. Helminiak]. *Zygon: Journal of Religion and Science*, 52(1), 282-284. doi: 10.1111/zygo.12323.
- Trepanier, L. (2017). Culture and education in Josef Pieper's thought. Retrieved from <http://www.voegelinview.com/culture-education-josef-piepers-thought>
- Trevena, J., & Miller, J. (2010). Brain preparation before a voluntary action: Evidence against unconscious movement initiation. *Consciousness and Cognition*, 19 (1), 447-456.
- Tucker, D. M. (2013, August). [Review]. Neuropsychological foundations of conscious experience. *The Journal of Nervous and Mental Disease*, 201(8), 724-725. Retrieved from <http://www.jonmd.com>

- Turner, L. (2020). Isolating the individual: Theology, the evolution of religion, and the problem of abstract individualism. *Zygon: Journal of Religion and Science*, 55(1), 207-228. doi: 10.1111/zygo.12580.
- Turner, R. (2016). Uses, misuses, new uses and fundamental limitations of magnetic resonance imaging in cognitive science. *Philosophical Transactions B*, 371(1705), 1-11. doi: 10.1098/rstb.2015.0349. Retrieved from <http://www.rstb.royalsocietypublishing.org>
- Turner, V. (1967). *The forest of symbols*. New York: Cornell University Press.
- Turner, V. (1969). *The ritual process*. Chicago, IL: Aldine.
- Turri, J., Alfano, M., & Greco, J. (2021, Winter). Virtue Epistemology, In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy*. Retrieved from <https://plato.stanford.edu/archives/win2021/entries/epistemology-virtu>.
- Uddin L. Q. (2020). Bring the noise: Reconceptualizing spontaneous neural activity. *Trends in Cognitive Sciences*, 24(9), 734-746.
- Umpleby, S. A. (2016). Second-order cybernetics as a fundamental revolution in science. *Constructivist Foundations*, 11(3), 455-465.
- Underhill, E. (1911). *Mysticism: A study in the nature and development of man's spiritual consciousness*. New York: E. P. Dutton and Company.
- University of Edinburgh. (2016). Science and religion: Three views. [Online course, Module Two: *Philosophy, Science, and Religion*]. Retrieved from <https://www.coursera.org/learn/philosophy-science-religion-3>
- Uttal, W. (2001). *The new phenomenology: The limits of localizing cognitive processes in the brain*. Cambridge, MA: MIT Press.
- van Dongen, J. D. M. (2020, April 6). The empathic brain of psychopaths: From social science to neuroscience in empathy. *Frontiers in Psychology*, 11, 1-12. Retrieved from <https://doi.org/10.3389/fpsyg.2020.00695>
- von Hildebrand, D. (2001). *Transformation in Christ: On the Christian attitude*. San Francisco, CA: Ignatius Press.
- van Huyssteen, J. W. (1999). *The shaping of rationality: Toward interdisciplinarity in theology and science*. Grand Rapids, MI: William Eerdmans.
- van Huyssteen, J. W. (2006). *Alone in the world? Human uniqueness in science and theology*. Grand Rapids, MI: William Eerdmans.
- van Inwagen, P., & Sullivan, M. (2021, Winter). Metaphysics, in E. N. Zalta (Ed.). *Stanford encyclopedia of philosophy*. Retrieved from <https://plato.stanford.edu/archives/win2021/entries/metaphysics/>
- Varela, F., & Singer, W. (1987). Neuronal dynamics in the visual cortico-thalamic pathway as revealed through binocular rivalry. *Experimental Brain Research*, 66(1), 10-20.
- Varela, F., Thompson, E., & Rosch, E. (1991/2017). *The embodied mind: Cognitive science and human experience*. Cambridge, MA: MIT Press.
- Verheijnde, J. L., & Potts, M. (2010). Commentary on the concept of brain death within the Catholic bioethical framework. *Christian Bioethics*, 16, 246-256.
- Vicini, A. (2012). Imaging in severe disorders of consciousness: Rethinking consciousness, identity, and care in a relational key. *Journal of the Society of Christian Ethics*, 32, 169-191.
- Vicini, A. (2014). Neuroscience and bioethics. *La Civiltà Cattolica*, 2, 143-158.

- Vieten, C., Scammel, S., Pilato, R., Ammondson, I., Pargament, K. I., & Lukoff, D. (2013). Spirituality and religious competencies for psychologists. *Psychology of Religion and Spirituality, 5*(3), 129-144. doi: 10.1037/a0032699.
- Vieten, C., Wahbeh, H., Cahn, B. R., MacLean, K., Estrada, M., Mills, P., Delorme, A. (2018). Future directions in meditation research: Recommendations for expanding the field of contemplative science. *PLoS One, 13*(11), 1-30. doi: 10.1371/journal.pone.0205740.
- Vincelette, A. (2011). *Recent Catholic philosophy: The twentieth century*. Milwaukee, WI: Marquette University Press.
- Vincelette, A. (2020). *A reader in recent Catholic philosophy*. St. Louis, MO: Enroute.
- Vincentian Spirituality. (2023). Retrieved from <https://vinformation.org>
- Vita, P. C., Nordling, W. J., & Titus, C. S. (Eds.). (2020). *A Catholic Christian meta-model of the person*. Sterling, VA: Divine Mercy University Press.
- Vitz, P. C. (2009). Reconceiving personality theory from a Catholic Christian perspective. *Edification, 3*, 42-50.
- Vitz, P. C. (2011). Christian and Catholic advantages for connecting psychology with the faith. *Journal of Psychology and Christianity, 30*, 294-306.
- Vogt, C. P. (2016). Virtue: Personal formation and social transformation. *Theological Studies, 77*, 181-196.
- Von Hildebrand, D. (2001). *Transformation in Christ*. San Francisco, CA: Ignatius.
- Wahlberg, M. (2020, Fall). Divine revelation. In E. N., Zalta (Ed.), *The Stanford encyclopedia of philosophy*. Retrieved from <https://plato.stanford.edu/archives/fall2020/entries/divine-revelation>
- Wainright, W. J. (1981). *Mysticism: A study in its nature, cognitive value, and moral implications*. Madison, WI: University of Wisconsin Press.
- Wainright, W. J. (2011). The spiritual senses in Western spirituality and the analytic philosophy of religion. *European Journal for the Philosophy of Religion, 3*, 21-41.
- Walch, J. (2015). Nested narratives: Interpersonal neurobiology and Christian formation. *Christian Education Journal, 12*, 151-161.
- Wall, T. (2015, April). Resurrection and the natural sciences: Some theological insights on sanctification and disability. *Science and Christian Belief, 27*(1), 41-58.
- Walter, V. J., & Walter, W. G. (1949). The central effects of rhythmic sensory stimulation. *Electroencephalography and clinical neurophysiology, 1*, 57-86.
- Watts, F. (2002). Cognitive neuroscience and religious consciousness. In R. J. Russell, N. Murphey, T. C. Meyering, T. C., & M. A. Arbib, (Eds.), *Neuroscience and the person: Scientific perspectives on divine action* (pp.327-346). Notre Dame, IN: University of Notre Dame Press.
- Weaver, E. (2023). *Overcoming the darkness: Shining the light on mental illness, trauma, and suicide*. Retrieved from [www.overcomingthedarkness.com/eric-weaver](http://www.overcomingthedarkness.com/eric-weaver)
- Weisberg, D. S., Keil, F. C., Goodstein, J., Rawson, E., & Gray, J. R. (2008). The seductive allure of neuroscience explanations. *Journal of Cognitive Neuroscience, 20*, 470-477.

- Weissenbacher, M. C. (2015, March). Ten principles for interpreting neuroscientific pronouncements regarding human nature. *Dialogue: A Journal of Theology*, 54(1), 41-50. doi: 10.1111/dial.12153.
- Weker, M. (2016, December). Searching for neurobiological foundations of faith and religion. *Studia Humana*, 5(4), 57-63. doi: 10.1515/sh-2016-0024.
- Werk, R. S., Steinhorn, D. M., & Newberg, A. (2021). The relationship between spirituality and the developing brain: A framework for pediatric oncology. *Journal of Religion and Health*, 60(1), 389-405. doi: 10.1007/s10943-020-01014-7.
- White, C. (2017). What the cognitive science of religion is (and is not). In A. W. Hughes (Ed), *Theory in a time of excess: Beyond reflection and explanation in religious studies scholarship* (pp. 95-114). London, U.K.: Equinox Publishing.
- Whitehouse, H. (2000). *Arguments and icons: Divergent modes of religiosity*. Oxford, U.K.: Oxford University Press.
- Wildman, W. & Brothers, L. (2002). A neuropsychological-semiotic model of religious experiences. In R. J. Russell, N. Murphey, T. C. Meyering, T. C., & M. A. Arbib, (Eds.). *Neuroscience and the person: Scientific perspectives on divine action* (pp. 347-416). Notre Dame, IN: University of Notre Dame Press.
- Wildman, W. J. (2013). Spiritual experiences: A quantitative-phenomenological approach. *Journal of Empirical Theology*, 26(2), 139-164. doi: 10.1163/15709256-12341274.
- Wilson, C., Bungay, H., Munn-Giddings, C., & Boyce, M. (2016, April). Healthcare professionals' perceptions of the value and impact of the arts in healthcare settings: A critical review of the literature. *International Journal of Nursing Studies*, 56, 90-101. doi: 10.1016/j.ijnurstu.2015.11.003.
- Wilson, E. O. (1998). *Consilience: The unity of knowledge*. Visalia, CA: Vintage Press.
- Winkelman, M. (2000). *Shamanism: The neural ecology of consciousness and healing*. Westport, CT: Bergin.
- Wintering, N., Yaden, D. B., Conklin, C., Alizadeh, M., Mohamed, F. B., Zhong, L., Newberg, A. B. (2021). Effect of a one-week spiritual retreat on brain functional connectivity: A preliminary study. *Religions*, 12(1), 23. doi: 10.3390/rel12010023.
- Wiseman, J. A. (1993). Mysticism. In M. Downey (Ed.), *The new dictionary of Catholic spirituality* (pp. 681-692). Collegeville, MN: Liturgical Press.
- Wolff, H. W. (1974). *Anthropology of the Old Testament*. Philadelphia, PA: Fortress Press.
- Woodward, G. (2023). Karl Rahner (1904-1984). *Internet encyclopedia of philosophy: A peer-reviewed academic resources*. Retrieved from <http://iep.utm.edu/rahner>
- Worthington, E. L. (1989). Religious faith across the life span: Implications for counseling and research. *The Counseling Psychologist*, 17(4), 555-612.
- Yaden, D. B., & Newberg, A. B. (2022). *The varieties of spiritual experiences: 21<sup>st</sup> century research and perspectives*. Oxford, U.K.: Oxford University Press.
- Yaden, D. B., Haidt, J., Hood, R. W., Vago, D. R., & Newberg, A. B. (2017, June). The varieties of self-transcendent experience. *Review of General Psychology*, 21(2), 1-18. doi: 10.1037/gpr0000102.

- Yaden, D. B., Le Nguyen, K. D., Kern, M. L., Belser, A. B., Eichstaedt, J. C., Iwry, J., Newberg, A. B. (2017, July). Of roots and fruits: A comparison of psychedelic and nonpsychedelic mystical experiences. *Journal of Humanistic Psychology*, 57(4), 1-16, 338-353. doi: 10.1177/0022167816674625.
- Yamane, D. (2007). Introduction: *Habits of the heart at 20*: Symposium on the 20<sup>th</sup> Anniversary of *Habits of the Heart*. *Sociology of Religion*, 68(2), 179-187.
- Yasinski, E. (2021, July 12). Religion on the brain. *The Scientist*. Retrieved from <https://www.the-scientist.com/news-opinion/religion-on-the-brain-68969>
- Zagzebski, L. T. (2009). *On epistemology*. Belmont, CA; Wadsworth.
- Zagzebski, L. T. (2021). *The two greatest ideas: How our grasp of the universe and our minds changed everything*. Princeton, NJ: Princeton University Press.
- Zarzycka, B., & Zietek, P. (2019, August). Spiritual growth or decline and meaning making as mediators of anxiety and satisfaction with life during religious struggle. *Journal of Religion and Health*, 58(4), 1072-1086. doi: 10.1007/s10943-018-0598-y.
- Zinnbauer, B. J., & Pargament, K. I. (2005). Religiousness and spirituality. In R. F. Paloutzian & C. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 21-42). New York: Guilford.
- Zohar, D., & Marshall, I. (2000). *Spiritual Intelligence: The Ultimate Intelligence*. London: Bloomsbury.

### Further Reading

- Anderson, E. B. (1997, Summer). Liturgical catechesis: Congregational practice as formation. *Religious Education*, 93(3), 349-363.
- Anscombe, G. E. M., Schneewind, J. B., & Reiman, J. H. (1958/2004). O'Hear, A. (Ed.), *Modern Moral Philosophy*. Cambridge, U.K.: Cambridge University Press.
- Augustine, St. (400/1947). *De libero arbitrio voluntatis*. Richmond, VA : Dietz Press.
- Benedict XVI, Pope. (1988/2007). *Eschatology: Death and eternal life*. 2<sup>nd</sup> ed. Washington, DC: Catholic University of America Press.
- Bouyer, L. (2017). *Mysterion: De mystère à la mystique*. Paris, France : Edition du Cerf.
- Byrne, P. (2016). [Review of book *Authenticity of self-transcendence: The enduring insights of Bernard Lonergan* by M. H. McCarthy]. Retrieved from <https://ndor.nd.edu/reviews/>
- Carlson, J. W. (2012). *Words of wisdom: A philosophical dictionary for the perennial tradition*. South Bend, IN: University of Notre Dame Press.
- Catholic Church. (1983/2022). *Code of Canon Law* (4<sup>th</sup> ed.) Arrieta, J. I. (Ed.). Montreal, Quebec, Canada: Librarie Wilson & Lafleur.
- Catholic Church. Council of Trent, Session XXV. (2023). Retrieved from <http://www.thecounciloftrent.com/ch25.htm>
- Cuthbert, B., & Kozak, M. (2013). Constructing constructs of psychopathology: The NIMH research domain criteria (RDoC). *Journal of Abnormal Psychology*, 122(3), 928-937.
- dal Covolo, E. (1999, March 17). The encounter of faith and reason in the Fathers of the Church. Vatican City: *L'Osservatore Romano*, 9-10.

- Deely, J. (1997). Quid sit postmodernismus? In R. T. Ciapalo (Ed.), *Postmodernism and Christian Philosophy*. Washington, DC: Catholic University of America Press.
- de Longchamp, M. H. (1997). *Lectures de Jean de la Croix : Essai d'anthropologie mystique*. Paris, France : Beauchesne éditeur.
- Dixon, T. (2003). *From passions to emotions: The creation of a secular psychological category*. Cambridge, U. K.: Cambridge University Press.
- Doran, R. M. (1990). *Theology and the dialectics of history*. Toronto, Ontario, Canada: University of Toronto Press.
- Eckstrom, R. R. (1982/1995). *The new concise Catholic dictionary*. Mystic, CT: Twenty-Third Publications.
- Edwards, J. S. (1977). Pathfinding by arthropod sensory nerves. In G. Hoyle (Ed.), *Identified neurons and behavior of arthropods* (pp. 484–493). New York: Plenum.
- Elian, M., Hoerl, C., McCormack, T., & Koesler, J. (Eds.). (2005). *Joint attention: Communication and other minds: Issues in philosophy and psychology*. Oxford, U. K.: Clarendon Press.
- Fairbairn, W. R. D. (1952a). *An object relations theory of the personality*. New York: Basic Books.
- Fairbairn, W. R. D. (1952b). *Psychoanalytic studies of the personality*. London, U.K.: Routledge & Kegan Paul.
- Feyerabend, P. (1975). *Against method*. New York: New Left Books.
- Fizzotti, E. (2008). *Introduzione alle psicologia della religione*. Milano, Italy: FrancoAngeli.
- Gilson, E. (1919/2002). *Thomism: The philosophy of Thomas Aquinas*. Toronto, Ontario, Canada: Pontifical Institute of Medieval Studies.
- Gilson, E. (1941/2002). *God and philosophy*. New Haven, CT: Yale University Press.
- Hall, C. R., Dixon, W. A., & Mauzey, E. D. (2004). Spirituality and religion: Implications for counselors. *Journal of Counseling & Development, 82*(4), 504–507.
- Hardon, J. A. (1980). *Modern Catholic dictionary*. New York: Doubleday.
- Harre, R. S., & Secord, P. F. (1972). *The explanation of social behavior*. Oxford, U.K.: Blackwell.
- Hodge, D. R., & McGrew, C. C. (2006). Spirituality, religion, and the interrelationship: A nationally representative study. *Journal of Social Work Education, 42*(3), 637-654. doi: 10.5175/JSWE.2006.200500517
- Jewett, P. K., & Shuster, M. (1996). *Who we are: Our dignity as human: A neo-evangelical theology*. Grand Rapids, MI: William B. Eerdmans.
- Johnson, S. (1996/2004). *Creating connection: The practice of emotionally focused marital therapy*. New York: Brunner/Mazel (now Brunner/Routledge).
- Jones, R. H. (2013). *Analysis and the fullness of reality: An introduction to reductionism and emergence*. New York: Jackson Square Books.
- Jones, R. H. (2016). *Philosophy of mysticism: Raids on the ineffable*. Albany: State University of New York Press.
- Jones, R. M. (1909). *Studies in mystical religion*. London, U.K: Macmillan.

- Kelly, M. (2002/2014). *Rediscover Catholicism: A spiritual guide to living with passion and purpose*. North Palm Beach, FL: Blue Sparrow Books.
- Kenny, A. (1988). *The self: Aquinas lecture*. Milwaukee, WI: Marquette University Press.
- Kristjanson, K. (2014). Phronesis and moral education: Treading beyond the truisms. *Theory and Research in Education*. doi:10.10.1177/1477878514530244.
- Kruger, F. P., & de Klerk, B. J. (2017, Jan.). The mediating influence of liturgy on the way of life: Disposing oppressing powers in oneself and appropriating compassion toward the other. *HTS Theological Studies*, 73(1).
- Lambek, M. (2002). *A reader in the anthropology of religion*. Oxford, U.K.: Blackwell.
- Lamm, J. A. (2013). *The Wiley-Blackwell companion to Christian mysticism*. West Sussex, U. K.: John Wiley & Sons.
- MacIntyre, A. (2016). *Ethics in the conflicts of modernity: An essay on desire, practical reasoning, and narrative*. Cambridge, U.K.: Cambridge University Press.
- Maritain, J. (1946). *The twilight of civilization*. Andesite Press. [https://openlibrary.org/publishers/Andesite Press](https://openlibrary.org/publishers/Andesite_Press)
- Maritain, J. (1951). *Philosophy of nature*. New York: Philosophical Library Publishing.
- McGinn, B. (2001, Fall). The language of inner experience in Christian mysticism. *Spiritus: A Journal of Christian Spirituality*, 1(2), 56-171. Baltimore, MD: Johns-Hopkins University Press.
- Melina, L. (2001, Spring). Christ and the dynamism of action: Outlook and overview of Christocentrism in moral theology. *Communio: International Catholic Review*, 28, 112-139.
- Mittlestrass, J. (2011). On transdisciplinarity. *Trames* 4, 329-338. doi.org/10.3176/tr.2011.4.01
- Moodley, R. (2007). (Re)placing multiculturalism in counseling and psychotherapy. *British Journal of Guidance & Counselling*, 35(1), 1-22. doi: 10.1080/03069880601106740
- Morel, G. (1960). *Le sens de l'existence selon Saint Jean de al Croix*. Aubier, Paris : Presses Universitaires de France.
- Muñoz, C. P. D. (2012). En torno a dos lecturas posibles sobre el conocimiento de las esencias en Tomas de Aquino. *Temas: Revista de Filosofía (México)*, 43: 123– 151.
- Nédoncelle, M. (1942). *La réciprocité des consciences : Essai sur la nature de la personne*. Paris, France: Aubier.
- Nédoncelle, M. (1946/1966). *Love and the person*. New York: Sheed and Ward.
- Nicolescu, B. (2014, May). Methodology of transdisciplinarity. *World Futures: The Journal of General Evolution*, 70(3-4), 186-199.
- Paul VI, Pope. (1963). *Sacrosanctum concilium*. Decree on the Sacred Liturgy. Retrieved from [https://www.vatican.va/archive/hist\\_councils/ii\\_vatican\\_council/documents/vat-ii\\_const\\_19631204\\_sacrosanctum-concilium\\_en.html](https://www.vatican.va/archive/hist_councils/ii_vatican_council/documents/vat-ii_const_19631204_sacrosanctum-concilium_en.html)
- Paul VI, Pope. (1964). *Orientalium Ecclesiarum*: Decree on the Churches of the Eastern rite. [https://www.vatican.va/archive/hist\\_councils/ii\\_vatican\\_council/documents/vat-ii\\_decree\\_19641121\\_orientalium-ecclesiarum\\_en.html](https://www.vatican.va/archive/hist_councils/ii_vatican_council/documents/vat-ii_decree_19641121_orientalium-ecclesiarum_en.html)



- Paul VI, Pope. (1965). *Presbyterorum ordinis*. Decree on the life and ministry of priests. Retrieved from [Presbyterorum ordinis \(vatican.va\)](http://Presbyterorum ordinis (vatican.va))
- Paul VI, Pope. (1971). *Divinae consortium naturae*. Apostolic Constitution on the Sacrament of Confirmation. Retrieved from [https://www.vatican.va/content/paul-vi/la/apost\\_constitutions/documents/hf\\_p-vi\\_apc\\_19710815\\_divina-consortium.html](https://www.vatican.va/content/paul-vi/la/apost_constitutions/documents/hf_p-vi_apc_19710815_divina-consortium.html)
- Paul VI, Pope. (1974). *Marialis cultus*. Apostolic exhortation for the right ordering and development of devotion to the Blessed Virgin Mary. Retrieved from [https://www.vatican.va/paul-vi/en/apost\\_exhortations/documents/hf\\_p-vi\\_exh\\_19740202\\_marialis-cultus.html](https://www.vatican.va/paul-vi/en/apost_exhortations/documents/hf_p-vi_exh_19740202_marialis-cultus.html)
- Peterson, G. R. (2012). Exemplarism: Some considerations. In *Theology and the science of moral action*. Philadelphia, PA: Routledge.
- Piccinini, G., & Craver, C. (2011). Integrating psychology and neuroscience: Functional analyses as mechanism sketches. *Synthese* 183(3), 283-311.
- Pico della Mirandola, G. (1486/1996). *Oration on the dignity of man*. Southlake, TX: Gateway Publishing.
- Pius IX, Pope. (1870/2023). Dogmatic constitution *Dei filius*. Retrieved from <https://www.vatican.va/content/pius-ix/la/documents/constitutio-dogmatica-dei-filius-24-aprilis-1870.html>
- Pius XII, Pope. Encyclical *Humani generis*. Retrieved from [https://www.vatican.va/content/pius-xii/en/encyclicals/documents/hf\\_p-xii\\_enc\\_12081950\\_humani-generis.html](https://www.vatican.va/content/pius-xii/en/encyclicals/documents/hf_p-xii_enc_12081950_humani-generis.html)
- Plantinga, A. C. (2000). *Warranted Christian belief*. New York: Oxford University Press.
- Rahner, K. (1976/1982). *Foundations of Christian faith: An introduction to the idea of Christianity*. New York: Herder & Herder.
- Rahner, K. (1982). Theology of freedom. In *Theological investigations*. Vol. 6 (pp. 178-196). New York: Crossroad.
- Rubia, F. J. (2009). *La conexión divina: La experiencia mística y la neurobiología*. Barcelona, Spain: Critica.
- Sandok, T. H. (1993). *Person and community: Selected essays: Catholic thought from Lublin*. Lausanne, Switzerland: Peter Lang International Academic Publishing.
- Sanguinetti, J. J. (2007). *Filosofía de la mente*. Madrid, Spain: Palabra.
- Sanguinetti, J. J. (2014). *Neurociencia y filosofía del hombre*. Madrid, Spain: Palabra.
- Sanguinetti, J. J. (2018). La relevancia de la neurociencia en el estudio de la religiosidad. *Scientia et Fides*, 6, 85-99.
- Shaw, S. M. (1999). *Storytelling in religious education*. Birmingham, AL: Religious Education Press.
- Slatcher, R. B. (2010, June). When Harry and Sally met Dick and Jane: Creating closeness between couples. *Personal Relationships*, 17(2), 279-297.
- Smith, J. K. A. (2009). *Desiring the kingdom: Worship, worldview, and cultural formation*. Grand Rapids, MI: Baker Academic.
- Solomon, M. F., & Tatkin, S. (2011). *Love and war in intimate relationships: Connection, disconnection, and mutual regulation in couple therapy*. Scranton, PA: W. W. Norton.

- Stuhlmüller, C., Bergant, D., Dumm, D., et al. (Eds.). (1996). *The Collegeville pastoral dictionary of biblical theology*. Collegeville, MN: Liturgical Press.
- United Nations. (1948). *Universal declaration of human rights*. Retrieved from [https://www.un.org/udhr\\_booklet\\_en\\_web](https://www.un.org/udhr_booklet_en_web)
- von Balthasar, H. U. (1990). *The glory of the Lord*. 7 vols. San Francisco, CA: Ignatius Press.
- von Glasserfeld, E. (Ed.). (1991). Editor's introduction. In *Radical constructivism in mathematics education*. Dordrecht, Netherlands: Kluwer.
- von Hildebrand, D. (1953). *Christian ethics*. Philadelphia, PA: David McKay Publishing.
- von Hildebrand, D. (2016). *Liturgy and personality*. New York: Hildebrand Books. HarperCollins.
- Wolfson, H. A. (1956/2022). *Philosophy of the Church Fathers: Vol. 1: Faith, Trinity, Incarnation*. Cambridge, MA: Harvard University Press.
- Wojtyła, K. (1960/1993). *Love and responsibility*. San Francisco, CA: Ignatius Press.
- Wojtyła, K. (1969/1979). *The acting person*. Dordrecht, Netherlands: D. Reidel Publishing.

# Index

## A

Absolute Unitary Being (AUB),  
310, 313–15, 317, 328  
action understanding, 140, 155,  
213  
*Aeterni patris*, 26, 29  
affective neuroscience, 153  
aging, 159, 162, 240  
Alberic, St., 222  
Albert of Mt. Carmel, St., 223  
Albert the Great, St., 222  
Alexandria, 2, 74  
Alston, William, 246  
Angela of Foligno, St., 221  
Anointing of the Sick, 133, 154  
Anthony of Padua, St., 222  
altruism, 119, 142, 226, 274  
amygdala, 31, 33–34, 102, 108, 136,  
138, 140, 150, 153, 167, 170,  
175–76, 200–201, 210–12, 214–  
15, 220, 226  
Anscombe, Elizabeth, 28, 103  
anterior cingulate cortex (ACC),  
97, 137–39, 162, 168, 170, 294  
anterior insula, 138  
anxiety, 21, 113, 116–17, 119, 162,  
173, 180, 184, 212, 237, 298  
apophatic prayer, 236  
Aquinas, St. Thomas, 19, 26–28,  
30, 38–39, 45–47, 53–54, 59, 66–  
67, 75, 89–90, 100, 102, 105,  
107–8, 131, 164, 191–92, 194,  
222, 252–53, 256, 270–71, 292–  
93  
Aristotle, 26, 30, 38, 53–54, 56, 63,  
73, 89, 194, 273, 279  
atheism, 87, 112, 294, 319, 325

atheists, 10, 73, 180, 184, 256, 265,  
294  
attachment to God, 297–98  
attention, 32, 34–35, 40–41, 50, 55,  
62, 67, 143, 150, 152, 156, 162,  
165, 251, 253–54, 256  
attunement, 14, 137–38, 196, 247,  
283, 291–94, 296, 302–4  
auditory cortex, 33, 146–47, 171,  
215, 219  
Augustine of Hippo, St., 27, 37, 63,  
102, 104, 122, 127, 191, 205,  
221, 225, 236, 253, 256–257, 264,  
280, 298  
autonomic nervous system, 32–  
33, 108, 119, 123, 136, 148–49,  
201, 215  
autonomous beings, 43, 90, 286,  
305

## B

baptism, 2, 14, 101, 106, 117, 129–  
33, 135–36, 138, 141, 154–56,  
174, 189, 195, 254–55  
Barbour, Ian, 4, 67, 316  
basal ganglia, 150, 152–53, 181,  
216, 220  
Basil, St., 221  
Beatific Vision, 64, 66  
beatitudes, 15, 127, 255–56, 262,  
271  
Beauregard, James, 12  
Beauregard, Mario, 233–35, 238,  
250, 308, 311  
Bednar, Gerald, 235, 270, 273, 310  
behaviors  
complex, 20, 83, 102

criminal, 103  
 cult, 179  
 being, 49, 56–59, 64–66, 75–76, 89–90, 93, 99–100, 120–22, 132, 140–41, 200–201, 205–6, 216–17, 234–35, 247–48, 253, 257, 271–74, 283–84, 288–89, 313–15  
 beliefs, 9, 11, 13, 23, 38–39, 64, 74, 78–81, 85–86, 108–9, 112, 114, 116–17, 143–46, 167, 184, 216–17, 246, 266–68, 278  
   spiritual, 21–22, 80, 182–83  
 belief system, 2, 24, 150, 163  
 believers, 39, 73, 125, 132, 135, 148, 170, 196, 258, 280, 285, 298, 301, 306  
 Benedict, St., 221–22  
 Bernard of Clairvaux, St., 288  
 blessings, 65, 174, 176, 178  
 blood pressure, 119, 123, 162, 215  
 body and soul, 18, 27–28, 38–39, 43, 53–54, 70, 191, 237, 326  
 body of Christ, 140, 189, 273  
 body's response to religious experience, 13, 15, 113–23  
 Bonaventure, St., 127, 221–222  
 Bonhoeffer, Dietrich, 101–2  
 Bosco, St. John, 223  
 brain activity, 40, 87, 94–95, 102–3, 153, 239–41, 249, 316  
 brain and free will, 93–96  
 brain changes, 103, 144, 174, 255  
 brain death, 14, 277  
 brain functions, 36, 78, 88, 91, 95, 139, 142, 175, 180–81, 197, 199, 209, 234, 238  
 brain imaging, 84, 209, 244, 261, 264, 274, 319  
 brain scans, 44, 48, 77, 84–85, 88, 153, 182–83, 199, 210, 300, 313–14  
 brain sciences, 5

brainstem, 31–33, 231  
 brain structures, 10, 34, 155, 179, 211–12, 241, 260, 274–75, 280, 307, 311, 327  
 Brueggeman, Walter, 324  
 Brugger, Christian, 44, 188–91, 193–94  
 Buddhism, 20, 41, 81, 84, 93, 236, 243, 312, 325  
 Burns, Charlene, 265–66, 270, 272, 278, 313–14

## C

Carmelites, 219–20, 223  
*Catechesi tradendae*, 8  
*Catechism of the Catholic Church (CCC)*, 1–2, 15–16, 24–26, 37–39, 65, 70, 75–76, 96, 100–106, 121–22, 129, 131–42, 159–62, 172–74, 176–77, 190, 264–65, 278, 287–88, 290, 304  
 Catholic belief, 19, 60, 112, 176, 186, 219, 294  
 Catholic Church, 1–2, 8, 15, 17, 23, 37–39, 96, 118, 121, 159–60, 185, 280, 287, 296  
 Catholic faith, 15, 26–27, 66, 75, 90, 112, 133, 136, 160, 172, 176, 186, 326  
 Catholic neurotheology, 1–15  
 Catholic practices, 14–15, 159–77  
 Catholic rituals, 6, 14–15, 125–57  
 Catholic sacramental system, 125, 129, 135, 154–55, 157  
 Catholic spiritualities, 14, 159, 218–20, 226–27, 229  
 Catholic theology, 5, 9, 15, 64–66, 68–70, 74–75, 79, 109–10, 185, 192, 194, 294, 298, 301–2, 305, 326–27

- charisms, 218–19, 225, 229, 250, 261  
 charity, 29, 64–66, 102, 106, 164–65, 172–73, 190, 192, 219, 223–24, 249, 255–56, 258, 287, 290, 292  
 Christ Jesus, 2, 125, 171, 181, 222, 224, 280  
 Christian anthropology, 7, 189, 192, 194, 306  
 Christian beliefs, 6, 38, 170, 268, 279–80  
 Christian doctrine, 9, 24, 185, 246  
 Christian ethics, 28  
 Christian faith, 8, 25, 102, 117, 192, 265, 267–68, 289, 291  
 Christian mysticism, 235, 246, 249, 261  
 Christian philosophy, 26, 194  
 Christian spirituality, 155, 218, 229  
 Christian theology, 6, 69, 102, 108, 258, 268, 272, 280, 307  
 cingulate cortex, 34, 136, 220, 226, 295  
   anterior, 97, 137–39, 162, 170, 294  
   posterior, 169, 274, 294  
 circadian rhythms, 160  
 Clare of Assisi, St., 222  
 clinical psychology, 44, 190, 192–93, 197  
 Cloninger, Robert, 208  
*Code of Canon Law*, 75  
 cognition, 44, 46, 53, 55, 57, 62–64, 69, 163, 168, 175, 183, 189, 193, 198, 227, 232, 318–19  
 cognitive behavioral therapy (CBT), 44, 188, 192, 197  
 cognitive neuroscience, 20, 31, 40, 82, 84–85, 163, 325–26  
 cognitive operators, 312, 315  
 cognitive science theory, 63, 111, 186  
 Colette, St., 222  
 commandments, 15, 109, 187  
 communication, 76–77, 121, 137, 142, 146, 153, 156, 160, 196, 198, 217, 220, 222, 225, 227  
 communion, 2, 26, 114, 132–33, 135, 141, 143, 148, 154, 162, 177, 225, 270, 272  
 compassion, 11, 20, 46, 104, 142, 207, 213, 215, 233, 274, 296  
 complexity, 79, 95, 161, 168, 175, 201, 265, 306, 322, 326  
 connaturality, 14, 64, 68, 255, 259, 262, 292, 302–3  
 conscience, 103, 133, 205, 255, 257, 262, 285, 290  
 consciousness  
   mystical, 128, 250  
   subjective, 202, 232, 245, 314  
 contemplation, 2, 64, 74, 121–22, 161, 222–23, 253  
 contemplative neuroscience, 159, 161–63  
 conversion, religious, 118, 125–26, 251  
 cross, 131, 143, 172–75, 178, 221–24, 252–54, 262, 298, 300  
 culture, 38, 46, 149, 156, 161, 172, 176, 185, 205, 207, 268, 300, 306, 316
- ## D
- Damasio, Antonio, 99, 138, 200, 228  
 default mode network (DMN), 86, 169, 273–74, 279  
*Dei filius*, 104, 265  
*Dei verbum*, 160, 268, 280  
 de Montfort, St. Louis, 198

depression, 21, 23, 80, 84–85, 87,  
113, 116–17, 162, 180, 210, 228,  
27

Descartes, René 18, 28, 47

destiny, 2, 60, 76, 105, 273

development, lifespan, 164, 195

devotion, 171–73, 175, 190

dialogic model, 308, 327

dialogue  
constructive, 74  
neuroscience-theology, 45, 68,  
309, 329  
transversal, 324

diffusion tensor imaging (DTI), 85

Dionysius the Areopagite, 221, 236

divine, 64, 66–67, 99, 104–5, 126,  
128–29, 204–6, 217, 235, 237,  
248, 253, 263, 268, 287, 291, 298

divine action, 196, 272

divine plan, 100, 313

*Divinae consortium naturae*, 130

doctrine, 3, 9, 24, 76, 104, 126–27,  
131, 162, 191, 220, 268, 272,  
301, 310

Dodds, Michael, 26, 36, 46, 59–60,  
73, 89, 242, 260

dopamine, 87, 100, 150, 181, 201,  
216, 237

## E

electroencephalography, 87, 91

emergence, 18, 187, 213, 226

emotional centers, 35, 103, 108,  
173, 180, 200–201, 210, 216

emotional disorders, 192–93

empathy, 11, 103–4, 136, 138–40,  
151, 155, 165–66, 168, 212–15,  
237, 241, 276, 280, 295–96

enlightenment experiences, 245,  
249

epilepsy, 311

epistemological considerations  
and faith, 13, 45–69

epistemology, 13, 15, 21, 45, 49–50,  
52–53, 55, 58–59, 65, 68, 76, 79,  
238, 242, 246, 320, 323

*Evangelii Gaudium*, 90

Evermode, St., 225

existential, 20, 197, 295

exorcism, 174–75, 178

## F

faith  
expressing, 156, 225  
religious, 39, 68, 113, 150, 156,  
323

faith and reason, 2, 26, 30, 64, 74

faith and science, 23, 300

faith traditions, 216, 248–49, 302

Ferguson, Michael, 33, 183, 209

*Fides et Ratio*, 2, 30, 64, 74–75,  
299–300

flourishing, human, 188–89, 192,  
301

forgiveness, 104, 133, 139, 172,  
218, 235, 257, 293

Fowler, James, 188, 195, 198

Francis, Pope, 8, 10–11, 90, 177,  
287, 296, 299, 306, 327

Francis of Assisi, St., 222–23

Franciscans, 173, 220, 222

free will, 6, 13, 22, 29, 38, 78–79,  
93–100, 102, 104–7, 109–10,  
188, 195, 198, 241

Freud, Sigmund, 179, 187–88, 190,  
198

frontal, 34, 119, 143, 147, 149, 165,  
174, 193, 201, 215, 294, 296, 311

frontal lobes, 32, 35, 94, 97, 142–  
43, 165, 169, 180–81, 240–41,  
251

**G**

- Gabriel of Our Mother of Sorrows, St., 224  
 Galgani, St. Gemma, 224  
 gamma aminobutyric acid (GABA), 202  
*Gaudete et exsultate*, 287  
*Gaudium et spes*, 25, 185, 286, 299–300  
 Gilson, Etienne, 29  
 God  
   brain experience, 48  
   fear of, 101, 105  
   living, 268, 270, 289  
   love, 257  
 Gonzaga, St. Aloysius, 223  
 grace, 8, 13–15, 24, 65–67, 69–70, 101–2, 127, 129, 131, 133–35, 141, 154–56, 159–64, 172–73, 218–19, 232, 254–58, 262, 268, 283–304  
 Gregory of Rimini, St., 221  
 Groome, Thomas, 218  
 Guzman, St. Dominic, 173, 222–23

**H**

- Haidt, Jonathan, 97  
 Harding, St. Stephen, 222  
 Hardon, John, 1, 104  
 health outcomes, 12–13, 115–17, 123  
 hermeneutics, 73, 323  
 Hildegard of Bingen, St., 221  
 hippocampus, 31, 33–34, 63, 108, 138–39, 167, 170, 201, 211–12, 215–16, 226–27, 240, 272, 296  
 Holy Trinity, 65, 288, 290  
 Hugh of St. Victor, 160  
 human, 49, 144, 156, 287  
 human body, 38, 59, 270

- human condition, 19–22, 67, 70, 163, 203  
 humanism, 258, 306  
 human nature, 7, 17, 25, 28, 64, 127, 149, 190, 205, 287, 291, 327  
 human relationships, 14, 99, 119, 163, 194, 212  
 human soul, 46, 52–53, 55, 60, 65, 69, 90–91, 253, 262, 267, 279, 300–301, 320, 328  
 human understanding, 30, 64  
 human virtues, 106, 289  
*Humanae generis*, 265  
 hylomorphic, 26–27, 127–128, 154, 261, 271  
   Aristotelian-Thomistic, 27, 156, 244, 266  
   metaphysics, 48  
   unity, 237, 286  
 hymns, 145–46, 171  
 hypothalamus, 32–34, 136, 150, 160, 201, 220, 226, 295

**I**

- identity, 9, 36, 61, 134, 190, 227, 232, 272–73, 278, 301, 324  
 Ignatius of Loyola, St., 7, 207, 221, 223, 237, 258, 264  
 ineffability, 237, 248, 313  
 insula, 102–3, 136, 138, 153, 165, 180–82, 214–16, 220, 251, 274  
 integrative pluralism, 322  
 intelligence, 49, 53, 56, 59–60, 106, 152, 189, 271  
 intentional consciousness, 55–56, 59, 62, 259  
 interoception, 138, 155  
 interpersonal dynamics, 256  
 interpersonal neurobiology, 14, 137, 211, 214, 220, 226, 295–97, 302

Islam, 84, 114, 268, 325

## J

James, William, 208, 237, 248, 312  
 Jesuit, 153, 220, 223, 264, 291  
 John of the Cross, St., 223, 252, 262  
 John Paul II, Pope St., 2, 8, 15, 24,  
 30–31, 43, 50, 74–75, 90, 173,  
 221, 225, 269, 270, 275, 277,  
 281, 286, 299, 302  
 Johnson, Joel, 13  
 Jogues, St. Isaac, 223  
 Judaism, 114, 263–64, 268, 278,  
 325  
 judgment, moral, 44, 97, 294, 303  
 Jung, Carl, 187

## K

Kant, Immanuel, 28, 70  
 knowledge  
 empirical, 307  
 human, 56, 235, 292, 316  
 metaphysical, 51–52, 64  
 scientific, 77, 185, 322  
 Koenig, Harold, 21, 115  
 Kolbe, St. Maximilian, 222  
 Kuhl, Julius, 231–32, 259

## L

language abilities, 3, 41, 147  
 language and symbols, 149, 237  
 language areas, 147  
 laterality, 166  
 Lehmann, Kevin, 166, 205  
 lesion network mapping, 209, 228  
 Libet, Benjamin, 94–95, 105, 109,  
 198  
 life, mystical, 67, 70, 135, 237, 288,  
 298

Liguori, St. Alphonsus, 224  
 limbic system, 33–35, 97, 103, 162,  
 169, 172, 180–81, 212, 214, 216,  
 220, 226, 237, 241  
 liturgy, 14, 18, 76, 81, 123, 125, 129,  
 131–32, 134–35, 155, 159, 177,  
 219, 221  
 Lonergan, Bernard, 30, 45, 52, 54–  
 59, 61–62, 69, 76–79, 125, 154,  
 206, 228, 234, 257–59, 262, 269,  
 284–85, 289  
*Lumen gentium*, 7, 250, 287

## M

MacIntyre, Alasdair, 104, 107, 110  
 magnetic resonance imaging  
 (MRI), 85–86, 180, 313  
 Marcel, Gabriel, 28  
 Maritain, Jacques, 29, 45, 49–53,  
 60, 64–67, 254, 292  
 martyrdom, 8, 256, 296  
 Mary, mother of Jesus, 121, 172–  
 173, 175–176, 223  
 mathematics, 49, 51, 59, 85, 281,  
 319  
 Mazzarello, St. Mary, 223  
 McGilchrist, Iain, 166–68, 178  
 meditation  
 contemplative, 163  
 individual, 171  
 verbal/mantra, 166  
 meditation and prayer, 118–19,  
 181–82, 216, 251  
 meditation practices, 86–87, 114,  
 119, 162, 240  
 meditation research, 162  
 memory  
 autobiographical, 136, 170  
 episodic, 151, 170  
 explicit, 138  
 long-term, 211, 216



memory networks, 142, 193  
mental experiences, 232, 243–44  
Merton, Thomas, 222, 288  
Messer, Neil, 97, 102, 307  
metacognition, 163  
mind, conscious, 56  
mind and soul, 164  
mind-body problem, 264  
mindfulness, 163, 178, 207, 213, 296  
miracles, 121–22, 250  
mirror neurons, 140, 155, 166, 193, 198, 213–14, 220, 226, 228, 296  
Mitchell, Sandra, 322, 329  
models, neuropsychological, 231–32  
models of neurotheology, 305–6, 327  
Moltmann, Jurgen, 272  
morality, 6, 13, 20, 25, 29, 35, 37, 68, 99, 107–8, 185, 195, 272–73, 275  
moral reasoning, 97, 263, 273, 275, 280  
moral theology, 25, 273  
moral virtues, 1, 106, 247, 255, 262, 274, 276  
Mormonism, 325  
music, 96, 146, 150–51, 154, 166  
mystery, eternal, 298  
mystery of Christ, 2, 26, 159, 177, 288  
mystery of prayer, 161  
mystical, 32, 50, 232–34, 238–39, 242, 248–49, 253, 259, 261–62, 284, 288, 298, 302, 310–11  
mystical experiences, 6, 42, 67, 74, 80–81, 207, 231–33, 235–52, 254–55, 259–62, 288, 303, 312–16  
mystical states, 14, 128, 209, 232, 236–39, 260

mystical theology, 64, 220, 236  
mystical transformation, 253–54, 262  
mystical union, 122, 232, 250–51, 253, 303  
mysticism, 14–15, 29, 49, 64, 126, 231–61, 288, 290, 312, 316, 326

## N

near-death experiences, 41, 112, 116, 183  
Nédoncelle, Maurice, 29  
Neri, St. Philip, 223  
nervous system  
    parasympathetic, 32, 123  
    sympathetic, 32–33, 123  
Neumann, St. John, 224  
neural binding problem (NBP), 264, 278  
neural networks, 151–52, 165, 175, 178, 181, 186, 209, 215, 217, 243, 250, 279, 315  
neuroscientific perspective, 20, 94, 97, 202, 273  
neuroscientific research, 238, 266, 271, 275, 303  
neurotheological investigations, 17, 164, 194, 245, 309  
neurotheological investigations in Catholic thought, 13, 15, 19–43  
neurotheological perspective, 5, 14–15, 24, 62, 81, 87, 104, 111, 125, 177, 179, 183–84, 199–229, 327  
neurotheological studies, 21–22, 288, 321  
neurotheology, interdisciplinary, 301  
neurotheology and free will, 107  
neurotheology and metaphysics, 45

neurotheology studies, 265, 318  
 neurotransmitters, 68, 87, 98, 106–  
 7, 139, 201–2, 216, 228, 238, 266  
 Newman, St. John Henry Cardinal,  
 8–9, 223  
 Newberg, Andrew, 19–20, 22, 37,  
 39, 42, 44, 149, 165, 167, 169,  
 194–95, 215–16, 226–27, 232–  
 35, 240–41, 243, 245, 264–66,  
 309–15, 317  
 New Testament, 64, 100, 160, 249,  
 278, 280, 288  
 Norbert, St., 225  
 numinous, 233–34, 248, 259, 312,  
 328

## O

occipital lobe, 34, 36, 41  
 optimism, 120, 188, 192, 223, 324  
*Orientalium ecclesiarum*, 7  
 original sin, 6, 99–102, 109, 265  
 Otto, Rudolf, 175, 204, 312

## P

Papcsyanski, St. Stanislaus, 225  
 paradigms, 13, 71–72, 74, 77, 81,  
 325  
 paradoxicality, 248  
 Pargament, Kenneth, 206, 295  
 parietal lobe, 35–36, 63, 103, 143,  
 147, 149, 169, 182, 186, 202,  
 215, 288, 296, 298  
 passions, 44, 46, 68, 103, 133, 160,  
 172, 224, 280  
 pastoral care, 134, 185, 192, 198,  
 223, 225, 301, 325  
 Paul of Tarsus, St., 145, 163, 224,  
 250, 264, 268, 273, 288, 300  
 Payne, Steven, 12, 248, 262, 268,  
 281, 284

peace, 117, 132–33, 136, 139, 146,  
 169, 196, 256, 258, 313  
 penance, 118, 129, 133, 138–39,  
 141, 155, 222  
 perceiving God, 246  
 perceptions, sensory, 36, 232, 246,  
 254, 320  
 periaqueductal gray, 33, 136, 183,  
 201, 209, 226  
 Persinger, Michael, 311  
 personalism, 29, 189  
 perspective of neurotheology, 11,  
 59, 316  
 phenomenology, 28, 30–31, 126,  
 245  
 philosophers  
   moral, 103  
   political, 103  
   pre-Socratic, 91  
 philosophical anthropology, 14, 59  
 philosophical criticism, 242  
 philosophical psychology, 103,  
 191–92  
 philosophy, natural, 45, 51–52, 65  
 physical health, 111–15, 119, 122,  
 311  
 physics, 2, 72, 78, 82, 92, 203, 237,  
 285, 306  
 Pike, Nelson, 126  
 Pinsent, Andrew, 256, 262, 292–  
 294, 303  
 Pio of Pietrelcina, St., 222  
 pilgrimages, 14, 129, 176, 178  
 placebo effect, 270  
 Polanyi, Michael, 93  
 positive psychology, 186, 197  
 positron emission tomography  
 (PET), 86, 98, 153  
 posterior cingulate cortex (PCC),  
 169–70, 274, 294  
 practices  
   ascetical, 148

- devotional, 15, 178  
 liturgical, 2, 134, 152  
 meditative, 164  
 prayer  
   apophatic, 236-237  
   centering, 232, 313  
   contemplative, 123, 161-62  
   individual, 159  
   intercessory, 112, 312  
   kataphatic, 236  
   liturgical, 133, 221  
   meditative, 251, 253  
 prayer and meditation, 149, 165, 251, 253  
 praying, 76, 85, 143, 161, 173  
 precuneus, 102, 170, 274, 294  
 prefrontal cortex, 97, 102-3, 137-39, 141, 147, 162, 165, 168, 170, 172, 210-13, 220, 226, 294-95  
*Presbyterorum ordinis*, 141  
 prophets, 8, 141, 177, 263  
 Protestants, 2, 8, 102, 250  
 psychological health, 153, 179-81, 188, 197, 303  
 psychological problems, 84, 160, 180-81  
 psychological science, 174, 213  
 psychological theories, 186, 189, 192, 197-98, 231  
 psychoneuroimmunology, 142  
 psychotherapy, 84, 190, 193, 275, 296  
 PTSD (post-traumatic stress disorder), 185, 210-11, 228  
 pure consciousness, 236, 241-42, 244, 260-61
- R**
- Rahner, Karl, 29-30, 74, 93, 127-28, 154, 205-7, 228, 247, 255-57, 262, 283-85, 287-92, 302-4  
 mysticism, 290  
 spirituality, 207  
 theology, 302, 304  
 rationality, 47, 53, 323-25, 329  
   transcend, 216  
   transversal, 323  
 realism, 45, 50, 191  
 realness of mystical experience, 261  
 reason  
   human, 65, 267, 300, 316  
   natural, 25, 190, 264-65  
 Reconciliation 133, 154  
 redemption, 131, 189, 220, 226, 268  
 reductionism, 48, 308, 326  
 Reformation, 47, 187  
 relationality, 198, 207, 214, 228, 295  
 relationships  
   causal, 123  
   complex, 90  
   husband-wife, 293  
   social, 38, 116, 212  
 relativism, 25, 28, 189, 309  
 religion  
   ancient, 238  
   folk, 325  
 religion and health, 111-12, 115, 117, 122-23  
 religiosity, 80, 114-16, 122, 297, 321  
   extrinsic, 297  
   intrinsic/extrinsic, 297  
 religious activities, 143, 182, 311, 321, 328  
 religious beliefs, 5, 80, 83, 87, 113-16, 122, 134, 144-45, 156, 174, 181-83, 196, 246, 251  
 religious coping, 297  
 religious experiences, 13, 15, 67, 111-23, 163, 167, 178-79, 181-

84, 195–97, 203, 205–6, 208–9, 233–35, 258–62, 266, 270–71, 278–79, 308, 310–23, 328

religious individuals, 73, 115, 163, 303

religiousness, 112–14, 116, 164, 183, 208

religious perspectives, 4, 24, 83, 107, 182, 211, 311

religious rituals, 112, 150–51, 153, 156, 232

religious studies, 279, 306–7, 325–26

religious traditions, 15, 73, 81, 111–12, 117–18, 183, 188, 240–41

representations  
 abstract, 153  
 cognitive, 153  
 complex, 36, 170  
 visual, 144, 214

research, neurotheological, 20, 22, 251, 329

resonance, neurological, 213

resurrection, final, 39, 52, 60, 70

resurrection of Christ, 172, 177

revelation  
 biblical, 220, 286, 305  
 explicit, 128  
 extraordinary, 267  
 implicit, 128  
 ordinary, 267  
 transcendental, 154

revelatory experiences, 312

rhythms, 86, 146, 151, 159–60, 169

right hemisphere, 32, 41, 130, 146, 166–68

Rita of Cascia, St., 221

rites  
 liturgical, 174  
 sacramental, 131, 135, 145  
 sacred, 214

rituals, 1, 3, 6, 11, 13, 125–26, 129, 134–35, 148–52, 154, 156, 166–67, 169, 171, 173–74, 176, 205–6, 265, 267, 323

Rodriguez, St. Alphonsus, 223

Runehov, Anne, 307, 313

Ruysbroeck, 221

## S

sacramentals, 14–15, 129, 159, 172, 174–78, 217–18, 277, 298

sacraments of healing, 133

sacraments of initiation, 130, 135, 154

sacredness, 218, 224, 248

sacred symbols, 150, 154, 172

sacred texts, 3, 10, 73, 144, 179, 259

*Sacrosanctum concilium*, 16, 131, 159

salvation, 6, 75, 129, 133, 216, 267, 329

Sanguineti, Juan José, 54, 59, 99, 107–8, 316, 320–21, 328

Scholastica, St., 221

science and faith, 23, 52, 265, 299, 303, 306

scientific discoveries, 23–24, 309

scientific falsifiability, 310

scientific investigation, 15, 79, 269

scientific method, 18, 54, 69, 71–74, 76–77, 79, 90, 205, 242, 266–67, 270, 316, 319

scientific model, 321

self  
 autobiographical, 231  
 moral, 274, 279  
 observing, 119  
 religious, 142  
 spiritual, 119

self-actualization, 207, 286

- self-awareness and free will, 29  
selfishness, 241  
selflessness, 208, 216–17, 239  
self-transcendence, 43, 93, 163,  
178, 182, 188, 198, 206–8, 217,  
219, 229, 234, 257–58, 266  
sense of self, 259  
serotonin, 87–88, 100, 184, 201,  
216, 227  
Seton, St. Elizabeth Anne, 224  
sexual behavior, 44, 295  
single-photon emission computed  
tomography (SPECT), 86, 91,  
243, 313  
Smith, James, 152  
social brain, 212, 295–96  
social cognition, 138, 140, 155,  
171, 193  
social neuroscience, 82  
soul  
enduring, 190  
immaterial, 270  
intellectual, 39  
rational, 38–39, 43, 59–60, 98,  
271, 278  
spiritual, 38–39, 52, 60, 144, 266,  
270  
soul and body, 37, 48, 60, 111  
soul and brain, 79  
Spezio, Michael, 7, 275  
spirit and matter, 38  
“spirit in the world,” 128, 154  
spiritual, 42, 55–56, 185, 200, 218,  
233, 269  
spiritual awakening, 208  
spiritual capacities, 36, 46, 57, 75,  
254, 265, 293, 301  
spiritual development, 161–62,  
169, 197, 220, 226  
spiritual experiences, 6, 32–33, 36,  
68, 81, 83, 88, 91, 164, 183–84,  
199–202, 215–17, 227–28, 233–  
34, 240–41, 244, 259, 311–12  
survey of, 81, 184, 234  
spirituality  
apostolic, 219  
human, 201  
spirituality and health, 43, 115  
spiritual life, 11, 68, 123, 160, 218–  
20, 225, 262, 287, 290  
spiritual practices, 35, 85, 88, 166,  
168–69, 178, 181, 199, 201, 211,  
240–41, 243, 247, 251  
spiritual theology, 161, 220  
spiritual transformation, 152, 154,  
157, 163–64, 177–78, 245  
split-brain conditions, 40  
Stace, William, 237, 248, 261  
stages of faith, 194  
Stein, Edith, St., 28, 221, 223  
stimuli, visual, 40, 175–76  
stress, 117, 119–20, 137, 139, 173,  
295, 299  
Sullivan, Jacqueline Anne, 187,  
322  
*Summa Theologica*, 39, 45  
supernatural aptitude, 255  
supernatural beings, 267  
supernatural capacities, 64, 255  
supernatural connaturality, 29  
supernatural faith, 65–66, 69, 106  
supernatural order, 65–66, 141,  
287  
symbols  
abstract, 150  
affective, 125, 159  
anthropomorphic, 144  
religious, 86, 130, 144  
visual, 172  
sympathetic nervous system  
(SNS), 32–33, 123

**T**

Taylor, Charles, 130, 187, 197, 258  
 temporal lobe epilepsy, 182  
 temporal lobes, 35, 147, 174, 182,  
 193, 214–16, 270, 311  
 Teresa of Avila, St., 126, 188, 221,  
 223, 246–47, 250, 261, 288, 298  
 Teresa of Calcutta, St. Mother, 114,  
 200, 224, 300, 314  
 theological approaches, 19  
   early, 6  
 theological closeness to God, 145  
 theological disciplines, 9, 19, 220,  
 229  
 theological implications, 14–15,  
 189, 269  
*Theological Investigations*, 128,  
 205, 290, 292, 309, 317  
 theological principles, 6, 13, 185,  
 301, 324  
 theological virtues, 65–66, 68–69,  
 106, 254, 289  
 Thérèse of Lisieux, 221  
 Thomas Aquinas, 18, 24, 26, 29,  
 104, 313  
 Thomism, 18, 28–29, 75  
 Thomistic philosophy, 26–27, 54  
 Thompson, Evan, 63  
 Tillich, Paul, 58, 200, 272  
 traditions  
   apostolic, 2  
   cultural, 242–43  
   devotional, 75  
   liturgical, 2  
 transcendence, 42, 115, 187, 197,  
 204–5, 209, 228, 233, 283, 285,  
 296, 302, 316  
 transcranial magnetic stimulation  
   (TMS), 88, 91, 95–96  
*Transformation in Christ*, 123  
 traumatic brain injury (TBI), 123

trauma victims, 211  
 truth  
   absolute, 324  
   faith-based, 299  
   moral, 24, 265  
   scientific, 305

**U**

ultimate questions, 67, 69, 120,  
 169, 186, 211, 226, 323  
 ultimate truth, 43, 75, 205–6, 280,  
 317  
 Underhill, Evelyn, 234, 246–47,  
 251–52, 259, 261–62

**V**

van Huyssteen, J. Wentzel, 323–25,  
 329  
 Varela, Francisco, 94  
*Veritatis splendor*, 24, 30, 275  
 Vega, Margarita, 12  
 Vincent de Paul, St., 223  
 Vitz, Paul, 44, 186–193, 198  
 vesicular monoamine transporter  
   2 (VMAT2), 266  
 von Balthasar, Hans Urs, 127, 154  
 von Hildebrand, Dietrich, 23, 28,  
 123

**X**

Xavier, St. Francis, 223

**Z**

Zagzebski, Linda, 70