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Islam and the cognitive study of colonialism: The case of religious and educational reform at Egypt's al-Azhar

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Abstract

This article argues that the emerging Cognitive Science of Religion (CSR) provides a valuable new perspective on colonialism. CSR argues that humans are innately inclined towards certain types of religious belief (e.g., belief in spirit beings, belief in immortal souls) and certain types of non-utilitarian morality (e.g., belief in an obligation to care for kin, belief in an obligation to avoid 'disgusting' substances or behaviours). These innate inclinations underlie many religious and cultural traditions transformed by colonialism, including Islam. The article suggests that colonial power operates not only by suppressing traditional non-Western institutions but also by suppressing the natural inclinations underlying non-Western traditions. This claim is developed through a study of colonial efforts to transform Egypt's al-Azhar, the world's most influential institution of Islamic learning and scholarship. These efforts made al-Azhar into the centre of a global Islamic reform movement, which sought to integrate Islam with a colonial scientific-utilitarian worldview.

Keywords: Islam; cognitive science; colonialism; Egypt; education; religion

Introduction

Over the course of the eighteenth and nineteenth centuries, European thinkers elaborated a set of mutually reinforcing ideas which coalesced into an influential discourse on 'civilisational progress'.[1] This discourse deeply shaped traditions of *liberal* philosophy and related *liberal* projects of colonialism.[2] The discourse was, of course, characterised by a number of ambiguities, gaps and internal contradictions. Nevertheless, it retained coherence because of certain basic and widely dispersed attitudes. There was a commonplace assumption that, over time, all human societies develop along a single trajectory characterised by ever higher levels of so-called civilisational

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[1] Notable thinkers who contributed ideas to this discourse include Claude Adrien Helvétius, Anne Robert Jacques Turgot, Cesare Beccaria, the Marquis de Condorcet, Jeremy Bentham, James Mill, Henri de Saint-Simon, François Guizot, Auguste Comte, Alexis de Tocqueville, John Stuart Mill, Henry Maine, Herbert Spencer, Henry Sidgwick and Edward Burnett Tylor.

[2] Many studies take up this discourse and its relationship to colonialism. These studies include Eric Stokes, *The English Utilitarians and India* (New York: Oxford University Press, 1959); Uday Mehta, *Liberalism and Empire* (Chicago: University of Chicago Press, 1999); Antony Anghie, *Imperialism, Sovereignty, and the Making of International Law* (New York: Cambridge University Press, 2004); Jennifer Pitts, *A Turn to Empire* (Princeton: Princeton University Press, 2005); Bart Schultz and Georgios Varouxakis, eds., *Utilitarianism and Empire* (Lanham: Lexington, 2005); Karuna Mantena, *Alibis of Empire* (Princeton: Princeton University Press, 2010); Domenico Losurdo, *Liberalism: A Counter-History* (London: Verso, 2011); Matthew Fitzpatrick, ed., *Liberal Imperialism in Europe* (New York: Palgrave Macmillan, 2012). Notable studies which analyse this discourse in relationship to the Muslim world include Edward Said, *Orientalism* (New York: Vintage Books, 1994 [1978]); Joseph Massad, *Islam in Liberalism* (Chicago: University of Chicago Press, 2015); Wael Hallaq, *Restating Orientalism* (New York: Columbia University Press, 2018).

progress.[3] Such progress has material and moral components.[4] The material component is reflected in a continuous increase in scientific knowledge, and resulting advances in technology and economic output.[5] The moral component is reflected in a utilitarian vision of a continuous increase in human happiness and decrease in human suffering. These are facilitated by liberal reforms to, in particular, society and law.[6]

Civilisational progress in this discourse was strongly associated with 'reason'. European and, more generally, Western thinkers viewed science and utilitarianism as modes of thought based on reason. In so doing, they contrasted their science and utilitarianism with (non-scientific) religious beliefs and (non-utilitarian) norms (including laws) – concerned with, say, sacred rituals, diets and sexual taboos. It was believed that civilisational progress would gradually eliminate 'traditional' forms of society permeated by religious beliefs and non-utilitarian norms. It was also assumed that the polities of the West, above all, Britain, France, Germany, the Netherlands, and the United States, had achieved the highest levels of civilisational progress to date. This discourse was integral to European imperialism, which by the early twentieth century had established dominance over large swathes of Asia and Africa. That included almost all areas home to Muslim populations. European colonialists justified their empires in these areas as effective means for conferring on Muslims the benefits of progress which they themselves were experiencing at home.[7] The liberal project of colonialism, popularly referred to as the 'civilising mission' and the 'White Man's Burden',[8] is the subject of this article. The article is also concerned with the related notion of 'progress', which is broadly synonymous with the contemporary terms 'modernisation' and 'development'.

Many scholars have sought to analyse the impact of colonialism on non-Western polities and societies (including Muslim ones). Here, it is useful to consider three perspectives, reflecting three different understandings of 'human nature': (1) the 'Modernist' perspective, (2) the 'Post-structuralist' perspective and (3) the 'Cognitive' perspective. Informed by the Enlightenment, the 'Modernist' perspective views humans as fundamentally rational beings, who naturally or innately are inclined towards rational modes of thought like science and

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[3]Although all societies move in the same direction, they do not necessarily reach the same level of progress. The most capable societies reach the highest levels but can help raise up less capable societies. For discussions of the trajectory of civilisational progress see Steven Lukes and Nadia Urbinati, eds., *Condorcet: Political Writings* (New York: Cambridge, 2012), 1–147; E.B. Tylor, *Primitive Culture* (London: John Murray, 1920), vol.1: 1–69. Leslie Sklair, *The Sociology of Progress* (New York: Routledge, 1970), 17–56; Mehta, *Liberalism*, 77–114; Dipesh Chakrabarty, *Provincializing Europe* (Princeton: Princeton University Press, 2000), 1–46; Richard Wolin,'"Modernity": The Peregrinations of a Contested Historiographical Concept,' *The American Historical Review* 116, no. 3 (2011): 741–51.

[4]See Sklair, *Progress*, 17–56.

[5]Lukes and Urbinati, *Condorcet*, 3–10, 118–9; John Stuart Mill, *Principles of Political Economy*, 5th ed. (New York: D. Appleton & Co., 1896), vol.2: 272–3; John Stuart Mill, *A System of Logic Ratiocinative and Inductive*; *Collected Works of John Stuart Mill*, vol. 8 (Toronto: University of Toronto, 1974), 926–7; Wolin, *Modernity*.

[6]Jeremy Bentham, *Theory of Legislation*, trans. R. Hildreth (London: Trubner & Co.); John Stuart Mill, *Utilitarianism* (London: Parker, Son, and Bourne, 1863), esp. 21–2; Mill, *Principles of Political Economy*, vol. 2, 271–7; Stokes, *Utilitarians and India;* Mehta, *Liberalism*, 77–114; Schultz and Varouxakis, *Utilitarianism and Empire*; Scott Kugle, 'Framed, Blamed and Renamed: The Recasting of Islamic Jurisprudence in Colonial South Asia,' *Modern Asian Studies* 35, no. 2 (2001): 257–313.

[7]See e.g., Alice Conklin, *A Mission to Civilize: The Republican Idea of Empire in France and West Africa, 1895–1930* (Stanford: Stanford University Press, 1997); Kugle, *Framed, Blamed and Renamed*; Pessah Shinar, 'A Major Link between France's Berber Policy in Morocco and Its "Policy of Races" in French West Africa: Commandant Paul Marty (1882–1938),' *Islamic Law and Society* 13, no. 1 (2006): 33–62; Osama Abi-Mershed, *Apostles of Modernity: Saint-Simonians and the Civilizing Mission in Algeria* (Stanford: Stanford University Press, 2010); David Motadel, ed., *Islam and The European Empires* (New York: Oxford University Press, 2014); Alexander Morrison, 'Peasant Settlers and the 'Civilising Mission' in Russian Turkestan, 1865–1917,' *The Journal of Imperial and Commonwealth History* 43, no. 3 (2015): 387–417; Muhamad Ali, *Islam and Colonialism: Becoming Modern in Indonesia and Malaya* (Edinburgh: Edinburgh University Press, 2016); Iza Hussin, *The Politics of Islamic Law* (Chicago: University of Chicago Press, 2016).

[8]See Mehta, *Liberalism*, 77–114; Anghie, *Imperialism*, esp. 1–12, 32–195; Wolin, *Modernity*.

utilitarianism.[9] In keeping with this perspective, if irrational religious beliefs and non-utilitarian norms are prevalent in some polities, it is primarily because they are imposed by powerful traditional institutions. Versions of this perspective have been endorsed by many liberal thinkers and proponents of colonialism – especially from Britain (e.g., Adam Smith, Jeremy Bentham, James and John Stuart Mill).[10] 'Rational' scientific-utilitarian values are not simply abstract ideas. Rather, following Weber, I believe that they implicitly shape modern Western institutions (e.g., schools, courts, corporations). These institutions make decisions (largely) based on scientific information and are (largely) guided by the aim of maximising happiness or some phenomenon linked to happiness (e.g., wealth, health). Owing to its purportedly modern, Western character, the British Empire operated (largely) through rational scientific-utilitarian institutions. This is true, even though most British imperial officials had worldviews that were not exclusively scientific-utilitarian in nature (e.g., liberal Christianity)[11] and often opposed certain stringent scientific-utilitarian ideologies[12].

That brings us to the Post-structuralist perspective. In this perspective, scepticism is expressed about whether humans have natural inclinations of any kind – be they towards science and utilitarianism or towards religion and non-utilitarian norms. Instead, humans are conceptualised as fundamentally malleable beings shaped by powerful institutions and associated cultural practices. The Post-structuralist perspective finds its most influential expression in the work of Michel Foucault. Foucault regards claims about what is 'natural' (or 'biological') as mostly or entirely based on historically specific normative standards. Moreover, he treats all beliefs (or forms of 'knowledge') as products of 'power'.[13] Following the lead of Edward Said and Talal Asad[14], the past four decades have seen countless historians and anthropologists draw on Foucault to understand (post)colonialism, not least in the Arab Muslim world. According to the Post-structuralist perspective, in precolonial societies, powerful traditional institutions, such as religious schools, Shariʿa courts, and extended families, often promoted religion and non-utilitarian norms by imposing distinctive forms of thought and practice. Subsequently, in the colonial era, it is claimed that European Empires weakened traditional institutions and replaced them with modern institutions (e.g., modern schools, courts, business corporations, media organisations). These modern institutions then promoted science and utilitarianism by imposing new forms of thought and practice.[15]

Finally, we come to the 'Cognitive' perspective. In laying out this perspective, I focus on a subfield of cognitive science known as the Cognitive Science of Religion (CSR). CSR has emerged over the past three decades and views religion and morality as closely intertwined. It further posits that the human mind is characterised by certain natural forms of thought, emotion and behaviour related to religion and morality. Here, the term 'natural' does not carry a normative meaning but rather refers to genetically heritable evolved traits which spontaneously emerge in the course of human development (e.g., desire for sweet and fatty foods, postpubescent

[9]E.g., 'homo economicus' or 'rational actor' models.

[10]Also see Eric Stokes, *Utilitarians and India*; Kristen Renwick Monroe and Kristen Hill Maher, 'Psychology and Rational Actor Theory,' *Political Psychology* 16, no. 1 (1995): 1–21.

[11]E.g., William Muir, Lord Cromer.

[12]E.g., Orientalist opposition to Anglicists in India.

[13]See e.g., Michel Foucault, *Power/Knowledge*, ed. Colin Gordon (New York: Pantheon Books, 1980), esp. 109–33; Michel Foucault, 'Introduction,' in *The Normal and the Pathological*, ed. Georges Canguilhem (New York: Zone Books, 1991).

[14]See Edward Said, *Orientalism* (New York: Vintage Books, 1994 [1978]); Talal Asad, *Formations of the Secular* (Stanford, CA: Stanford University Press, 2003); Saba Mahmood, *Politics of Piety* (Princeton: Princeton University Press, 2005).

[15]See e.g., Timothy Mitchell, *Colonising Egypt* (Berkeley: University of California Press, 1988); Brinkley Messick, *The Calligraphic State* (Berkeley: University of California Press, 1993); Gregory Starrett, *Putting Islam to Work* (Berkeley: University of California Press, 1998); Louis Brenner, *Controlling Knowledge* (London: Hurst & Company, 2000).

capacity for reproduction).[16] CSR is highly interdisciplinary and draws on a range of fields, including anthropology, history, psychology, neuroscience, and evolutionary biology. In doing so, CSR integrates myriad kinds of data, such as cross-cultural surveys, psychological experiments, brain scans and studies of primate behaviour.[17] It asserts that natural types of thought, emotion and behaviour produce highly general patterns across human societies. Nevertheless, these patterns are always moulded into specific forms and are profoundly shaped by factors like culture, technology, economics and political power.

Over the past two decades, a growing number of scholars have produced specialist analyses of particular religious traditions using insights from CSR.[18] A small number of studies have taken up the Islamic tradition – addressing topics like Islamic theology, law, mysticism and education.[19] CSR scholarship often gives some attention to the broader impact of progress or modernisation on religion. But, modern European colonialism was not simply modernisation. Rather, it was a durable system of governance which legitimated and facilitated the dominance of Western societies over non-Western societies using a mechanism of modernisation.[20] Thus, the fact that CSR scholarship to date has not properly addressed the historical nature and role of colonialism is a major lacuna. Moreover, with rare exceptions,[21] such scholarship has yet to examine how specific religious traditions were transformed under colonialism. I suggest that CSR opens up a new viewpoint which is highly relevant to the study of colonialism. I refer to it as the 'Cognitive' perspective. The Cognitive perspective incorporates two important CSR claims:

1. One claim is that humans naturally incline towards a number of religious beliefs and non-utilitarian norms. Recall that the Modernist perspective holds that humans naturally incline towards science and utilitarianism, while the Post-structuralist perspective disavows the view that humans have natural inclinations. Both of these perspectives agree that religious beliefs and non-utilitarian norms only exist because they are maintained by powerful traditional institutions. In contrast, the Cognitive perspective asserts that religious beliefs and non-utilitarian norms exist *partly* because they are maintained by powerful traditional institution, and *partly* because they are maintained by (evolved) natural inclinations.

2. The other claim is that humans have evolved specialised psychological mechanisms for learning. These mechanisms produce a type of natural 'faith' in group 'tradition'. As a result, humans naturally copy the beliefs, norms and practices of their social groups. This copying process entails observing and imitating others, especially in their performance of rituals and musical chants. As indicated above, the Modernist and Post-structuralist perspectives hold that institutions use coercive power to transmit tradition (e.g., group beliefs, norms,

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[16]I.e., These traits are 'maturationally natural'. See Justin Barrett, *Cognitive Science, Religion, and Theology* (West Conshohocken, PA: Templeton Press, 2011), 21–39; Robert McCauley, *Why Religion is Natural and Science is Not* (New York: Oxford University Press, 2011), 5.

[17]See e.g., Harvey Whitehouse, *Arguments and Icons* (New York: Oxford University Press, 2000); Pascal Boyer, *Religion Explained* (New York: Basic Books, 2001); Barrett, *Cognitive Science*; Jesse Bering, *The Belief Instinct* (New York: W.W. North & Co., 2011); Ara Norenzayan, *Big Gods* (Princeton: Princeton University Press, 2013); Dominic Johnson, *God is Watching Us* (New York: Oxford University Press, 2016).

[18]See e.g., Ellen Goldberg, 'Cognitive Science and Hinduism,' in *Studying Hinduism,* eds. Sushil Mittal and Gene Thursby (New York: Routledge, 2007), 59–73. Iikka Pyysiainen, *Supernatural Agents* (New York: Oxford University Press, 2009); John Teehan, *In the Name of God* (Malden, MA: Wiley-Blackwell, 2010).

[19]Scott Atran, *Talking to the Enemy* (New York: HarperCollins, 2010); Jonas Svensson, 'God's Rage: Muslim Representations of HIV/AIDS as a Divine Punishment from the Perspective of the Cognitive Science of Religion,' *Numen* 61, no. 5–6 (2014): 569–93; Aria Nakissa, 'The Cognitive Science of Religion and Islamic Theology: An Analysis based on the works of al-Ghazālī,' *Journal of the American Academy of Religion* 88, no. 4 (2020): 1087–120; Aria Nakissa, 'Cognitive Science of Religion and the Study of Islam: Rethinking Islamic Theology, Law, Education, and Mysticism Using the Works of al-Ghazālī,' *Method & Theory in the Study of Religion* 32, no. 3 (2020): 205–32.

[20]Later on, differences between modernisation and colonialism will be addressed in more depth.

[21]E.g., Whitehouse, *Arguments*.

practices). In contrast, the Cognitive perspective holds that the transmission of tradition is only *partly* due to coercive institutional power. Transmission is also *partly* due to uncoerced natural copying and natural faith in tradition.

This article makes the case for a Cognitive perspective on colonialism. More specifically, it argues that colonial power sought to weaken non-Western religious beliefs and non-utilitarian norms. This was done to advance an ideology of supposed progress and to remove resistance to European rule. Strategies used by colonial power were not limited to the suppression or replacement of traditional institutions.[22] Colonial strategies also aimed to suppress natural non-scientific and non-utilitarian inclinations through fostering habits of 'analytic thinking'. Furthermore, colonial strategies involved weakening the faith of colonised peoples in their (largely non-scientific and non-utilitarian) traditions by disrupting the natural copying process which transmitted these traditions. The Modernist and Post-structuralist perspectives do not allow for the possibility that colonial power might have operated through such strategies.

To develop my argument, I examine colonial efforts to transform the minds of Muslim populations across the world through the promotion of a 'modern' 'liberal' education. I focus in particular on Egypt's famed al-Azhar University. Al-Azhar has been for centuries one of the world's most influential institutions of Islamic learning and scholarship. During the colonial era, British and Egyptian liberals succeeded in transforming al-Azhar. This entailed fostering habits of analytic thinking associated with a modern liberal education. It also entailed marginalising the traditional pedagogy of al-Azhar. This Azharite pedagogy emphasised observing and imitating religious teachers, while performing rituals and musically chanting the Qurʾān. Alongside marginalising this pedagogy, al-Azhar was also made the centre of a momentous global Islamic reform movement, which promoted the view that properly understood Islam is a religion championing progress, science and utilitarianism. While there exist many studies of colonial-era Islamic reform at al-Azhar and elsewhere[23], this article is the first study to utilise CSR insights.

Natural intuitions, faith and copying processes

CSR asserts that humans possess natural inclinations towards certain beliefs. These inclinations take the form of 'intuitions'. Intuitions are largely unconscious and simply felt to be correct. Humans have a range of religious intuitions. Psychological experiments suggest that these intuitions emerge spontaneously in young children regardless of their upbringing and persist into adulthood. They include intuitions that: (1) 'spirit beings' exist (i.e., beings which possess a mind but lack an ordinary physical body);[24] (2) there exists a God (i.e., a supremely powerful spirit being) who created the universe with a purpose;[25] (3) the soul is immortal, and there is life after death[26] and (4) doing a bad deed will somehow cause one to experience harm, and doing a good deed will somehow cause one to experience benefits (which are attributes of a 'just world').[27] These

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[22]E.g., Suppressing/replacing Sharīʿa courts, traditional religious schools. See Mitchell, *Colonising Egypt*; Brinkley Messick, *Calligraphic State*; Brenner, *Controlling Knowledge*.

[23]See e.g., Malcolm Kerr, *Islamic Reform* (Berkeley: University of California Press, 1966); Albert Hourani, *Arabic Thought in the Liberal Age* (New York: Cambridge University Press, 2007 [1983]); Francine Costet-Tardieu, *Un réformiste à l'université al-Azhar* (Cairo: CEDEJ, 2005); Mark Sedgwick, *Muhammad Abduh* (Cairo: American University in Cairo Press, 2009); Indira Falk Gesink, *Islamic Reform and Conservatism* (New York: I.B. Tauris Publishers, 2010); Aria Nakissa, *The Anthropology of Islamic Law* (New York: Oxford University Press, 2019); Messick, *Calligraphic State*; Brenner, *Controlling Knowledge*.

[24]Boyer, *Religion Explained*, 137–67; Justin Barrett, *Why Would Anyone Believe in God?* (Lanham, MD: AltaMira Press, 2004), 31–60.

[25]Barrett, *Why*, 75–93; Deborah Kelemen, '"Are Children 'Intuitive Theists?": Reasoning about Purpose and Design in Nature,' *Psychological Science* 15, no. 5 (2004): 295–301; Olivera Petrovich, *Natural-Theological Understanding from Childhood to Adulthood* (New York: Routledge, 2019).

[26]Bering, *Belief Instinct*, 111–30; Johnson, *God is Watching*, 121–2.

[27]Johnson, *God is Watching*, 138–73.

four intuitions may be thought of as building blocks. Different religious traditions incorporate some or all of these building blocks and mould them into culturally specific forms. The phenomenon is exemplified by the Islamic tradition.[28]

Islam holds that God sent a line of prophets to guide mankind. The last prophet was Muḥammad (570-632 CE). Teachings revealed by God to Muḥammad are preserved in Arabic-language scriptural texts (*nuṣūṣ*). These come in two forms: (1) the Qurʾān and (2) *ḥadīths*. The Qurʾān is a collection of statements made by God to the Prophet Muḥammad. These statements include theological doctrines and norms. *Ḥadīths* report the Prophet's actions and statements, collectively known as the *Sunna*. Through these actions and statements, the Prophet adds to and clarifies the theological doctrines and norms found in the Qurʾān. Scriptural texts articulate theological doctrines which centre on the four above-mentioned intuitions.[29] They affirm belief in an array of spirit beings. These include angels, *jinn*, and a God who created the universe with a purpose (*ḥikma*). Scriptural texts likewise affirm belief in an immortal soul and belief that individuals will experience harm or benefit depending on their deeds. These deeds will be reviewed and assessed by God on the Day of Judgement (*Yawm al-Qiyāma*). He will punish evil-doers by placing their immortal souls in Hell (*jahannam*), and he will reward the righteous by placing their immortal souls in Paradise (*janna*).

This brings us to the issue of morality. CSR asserts that humans have evolved a number of natural moral intuitions, along with a set of emotions to help motivate actions in keeping with these intuitions. Once again, psychological experiments indicate that these intuitions and emotions emerge spontaneously in children regardless of their upbringing. These interconnected intuitions and emotions can be thought of as building blocks out of which different systems of morality are constructed. Such systems of morality are often combined with religion,[30] as exemplified by Islam. Thus, Islamic scriptural texts lay out a system of morality, which consists in a corpus of norms (including many laws) known as the Sharīʿa. Sharīʿa norms are linked to emotions like 'love' (*ḥubb*), 'gratitude' (*shukr*) and 'shame' (*ḥayāʾ*). These emotions receive limited treatment in treatises on the Sharīʿa, which instead focus on outer actions. However, they are extensively analysed in treatises on ethics (*akhlāq*) and Sufism.[31]

Although humans have many moral intuitions,[32] I restrict my attention to four. I use these to show how the Sharīʿa incorporates interlinked moral intuitions and emotions. One basic moral intuition concerns '(direct) reciprocity' and is tied to emotions of love and gratitude. Thus, humans intuitively believe that there is a moral obligation to repay benefits and to express recognition and gratitude for these benefits.[33] Hence, if X gives a benefit to Y, Y intuitively believes that he should give or repay an equivalent benefit to X, while expressing recognition and gratitude (e.g., Y says: 'I recognize the benefit you have given me, thank you'). Moreover, X's act of giving triggers within Y emotions of love and gratitude towards X through evolved psychological mechanisms. Such love and gratitude help motivate Y to repay X. CSR

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[28]See Nakissa, *Cognitive Science of Religion and Islamic Theology*.

[29]For general overviews of (Sunni) Islamic theology, see Tim Winter, ed., *The Cambridge Companion to Islamic Theology* (New York: Cambridge University Press, 2008); Al-Ghazālī, *al-Iqtiṣād fī al-Iʿtiqād* (Beirut: Dar al-Kutub al-ʿIlmiyya, 2004).

[30]See Boyer, *Religion Explained*, 169–202; Teehan, *In the Name of God*; Jonathan Haidt, *The Righteous Mind* (New York: Pantheon Books, 2012); Norenzayan, *Big Gods*.

[31]Nakissa, *Anthropology*, 91–122. For an argument that Sharīʿa is less linked to *akhlāq* than is commonly thought see Marion Holmes Katz, 'Shame (*ḥayāʾ*) as an Affective Disposition in Islamic Legal Thought,' *Journal of Law, Religion, and State* 3, no. 2 (2014): 139–69.

[32]See e.g., Haidt, *Righteous Mind*; Wilhelm Hoffman, Daniel Wisneski, Mark Brandt, and Linda Skitka, 'Morality in everyday life,' *Science* 345, no. 6202 (2014): 1340–3; Oliver Scott Curry, Matthew Jones Chesters, and Caspar Van Lissa, 'Mapping Morality with a Compass: Testing the Theory of 'Morality-as-Cooperation' with a New Questionnaire,' *Journal of Research in Personality* 78 (2019): 106–24.

[33]See Curry et al., *Mapping*; Teehan, *In the Name of God*, 9–42; Robert Emmons and Michael E. McCullough, eds., *The Psychology of Gratitude* (New York: Oxford University Press, 2004); Robert Roberts and Daniel Telech, eds., *The Moral Psychology of Gratitude* (London: Rowman & Littlefield International, 2019), esp. 1–12, 197–216.

suggests that direct reciprocity[34] is central to worship.[35] This phenomenon is exemplified in Islamic worship ('*ibāda*).[36] Islamic worship is premised on the belief that God has purposely created the world to supply humans with many benefits (*ni'am*) like food, health and shelter. In worship, Muslims recognise these benefits, while expressing love and gratitude towards God. Believers also pledge to reciprocate by striving to please God through obedience to His Sharī'a. Reciprocity is evident in the most important Muslim form of worship, namely, the five daily prayers (*ṣalāh*). The prayers incorporate fixed texts and formulae which express love, gratitude and recognition of God's benefits. Notably, many medieval Muslim treatises explicitly describe ritual worship as a process of 'thanking the benefit-giver' (*shukr al-mun'im*).[37]

A second moral intuition discussed in CSR relates to kinship. Humans intuitively believe that they are morally obligated to care for kin, with more closely related kin deserving more care.[38] This underlies many Sharī'a norms, which obligate Muslims to care for kin by providing goods such as food and shelter. Priority is given to kin who are more closely related. So, children, parents and siblings come before uncles and cousins. These obligations extend after death, as Sharī'a inheritance law requires assigning fixed shares of property to kin, with closely related kin receiving the largest shares.[39]

A third moral intuition discussed in CSR concerns 'in-group loyalty'. Any individual naturally perceives himself to be a member of a group defined in terms of shared characteristics. These characteristics may be religious, cultural, racial or some mixture thereof. Humans intuitively believe that they are morally obligated to assist their groups against other groups in situations of conflict over power and resources.[40] Drawing on this intuition, the Sharī'a asserts that Muslims are one community (*umma*) defined by a shared religion. This community is obliged to cooperate in competing against other groups for power and resources. Ideally, Muslims 'strive' as a group to establish dominance and imperial rule over competing groups, using warfare where necessary. The famous term '*jihād*' applies to such striving.[41]

A fourth moral intuition discussed in CSR concerns 'disgust'. Humans naturally react with feelings of disgust when encountering certain types of substances and behaviours, which are likely to cause disease. Disgust reactions are triggered, for instance, by bodily secretions like vomit, pus, semen, faeces and urine as well as certain sexual behaviours like incest, promiscuity and bestiality. Humans are also inclined to develop disgust reactions towards specific types of animals. Humans avoid interacting with such animals or eating their meat, milk and eggs. Generally speaking, disgust-inducing animal species are those not customarily eaten by one's group or those especially likely to transmit disease, like insects and rodents. Hence, three major domains of disgust are bodily secretions, sex and animal interaction or consumption.[42] Substances or behaviours that

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[34]I.e., as a form of 'social exchange'.

[35]See Boyer, *Religion Explained*, 200–02; Emma Cohen, *The Mind Possessed* (New York: Oxford University Press, 2007), 166–72.

[36]For general accounts of Islamic worship see Wael Hallaq, *Sharī'a: Theory, Practice, Transformations* (New York: Cambridge University Press, 2009), 225–38; Marion Katz, *Prayer in Islamic Thought and Practice* (New York: Cambridge University Press, 2013); Ibn Rushd, *Bidāya al-Mujtahid wa Nihāya al-Muqtaṣid*, 6th ed. (Beirut: Dār al-Ma'rifa, 1982), vol. 1, 88–380.

[37]See A. Kevin Reinhart, *Before Revelation* (Albany: SUNY Press, 1995), 107–20; Marion Katz, *Prayer*, 78, 101–02; Al-Ghazālī, *Iḥyā'*, 1422–6.

[38]See Teehan, *In the Name of God*, 9–42; Curry et al., *Mapping*.

[39]See Hallaq, *Sharī'a*, 271–95; Ibn Rushd, *Bidāya*, vol. 2, 338–66.

[40]See Atran, *Talking to the Enemy*, 295–317; Haidt, *Righteous Mind*, 138–41; Pascal Boyer, *Minds make Societies* (New Haven: Yale University Press, 2018), 33–65.

[41]Hallaq, *Sharī'a*, 324–41; Atran, *Talking to the Enemy*; Ibn Rushd, *Bidāya*, vol. 1: 380–407.

[42]See Joshua Tybur, Debra Lieberman, and Vladas Griskevicius, 'Microbes, Mating, and Morality: Individual Differences in Three Functional Domains of Disgust,' *Journal of Personality and Social Psychology* 97, no. 1 (2009): 103–22; Valerie Curtis, Micheal De Barra, and Robert Aunger, 'Disgust as an Adaptive System for Disease Avoidance Behavior,' *Philosophical Transactions of the Royal Society B: Biological Sciences* 366, no. 1563 (2011): 389–401; Haidt, *Righteous Mind*, 146–53; Paul Rozin and Peter Todd, 'The Evolutionary Psychology of Food Intake and Choice,' in *The Handbook of Evolutionary Psychology*, ed. David Buss, 2nd ed. (John Wiley & Sons, 2016), 183–205.

are not disgusting are regarded as 'pure'. Humans intuitively believe that they are morally obligated to maintain purity, while avoiding and washing off that which is disgusting. Sharīʿa norms condemn disgusting things (*qadhir, najis, qabīḥ*) and demand that Muslims keep their bodies, behaviours and physical spaces pure (*ṭāhir*).[43] Thus, Muslims are required to remove bodily secretions by washing themselves before the five daily prayers (*wuḍūʾ*), after going to the bathroom (*istinjāʾ*), and after sex, menstruation or childbirth (*ghusl*). Purity concerns are also a major component of Sharīʿa norms regarding sex and animal interaction or consumption. This is seen through the bans on incest, promiscuity, bestiality and eating pork or dog, and the requirements that Muslim spaces be kept free of pigs, dogs and their saliva.

Turning to natural faith and the natural copying process, CSR maintains that humans have evolved specialised psychological mechanisms for learning.[44] These mechanisms operate through a natural copying process. In this process, an individual observes others and then automatically and unconsciously copies them. Consider imitation, the copying of behaviour. Between ages one and three, children develop into 'imitation machines',[45] constantly imitating sounds, gestures, movements and object use. Adults retain an automatic tendency to imitate but possess some capacity to inhibit it.[46] Notably, in 'imitation syndrome', this capacity is impaired, with the result that a person involuntarily imitates the gestures of others regardless of whether they are odd or inappropriate.[47] The natural copying process does not simply involve copying behaviour. It also involves automatic unconscious copying of beliefs, norms, desires and character traits.[48] However, such copying proceeds in a selective fashion. Experiments indicate that evolved learning mechanisms cause an individual to preferentially copy behaviours, beliefs, norms, desires and character traits which are (1) displayed by a majority of his social group and/or (2) displayed by individuals noted for their prestige and success.[49] For instance, when a woman sees a majority of her group display a belief that it will rain or that angels exist, this increases the chances she will accept the belief.[50]

CSR posits that the natural copying process is tied to a natural 'faith' in 'tradition'. Thus, innate to individuals is a significant level of faith in the correctness of group beliefs, norms and behaviours. This is why they are copied in a largely automatic and uncritical manner.[51] Group beliefs, norms and behaviours become tradition as they are passed down from one generation to another. Each generation observes and copies the preceding generation, transmitting tradition in an unbroken chain. Individuals who have received tradition in this way will naturally have some degree of faith in it. Those engaging in the natural copying process frequently place special emphasis on copying others, while they perform rituals and sing or chant memorised texts. Experiments suggest that unique psychological effects are produced by synchronised group performance of rituals and musical singing or chanting. Participation in such activity strengthens relationships between group members and makes them more willing to help one another.[52] There is evidence that such

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[43]See Marion Katz, *Body of Text* (Albany: SUNY Press, 2002); Ibn Rushd, *Bidāya*, vol. 1, 7–88, 428–76.

[44]I.e., 'social learning' mechanisms. See Peter Richerson and Robert Boyd, *Not by Genes Alone* (Chicago: University of Chicago Press, 2005); Alex Mesoudi, *Cultural Evolution* (Chicago: University of Chicago Press, 2011); Joseph Henrich, *The Secret of our Success* (Princeton: Princeton University Press, 2016).

[45]Michael Tomasello, *The Cultural Origins of Human Cognition* (Cambridge: Harvard University Press, 1999), 52, 159–60.

[46]Susan Hurley, 'The Shared Circuits Model (SCM): How Control, Mirroring, and Simulation can Enable Imitation, Deliberation, and Mindreading,' *Behavioral and Brain Sciences* 31, no. 1 (2008): 5; Henrich, *Secret*, 18–20.

[47]Hurley, *Shared Circuits*, 5.

[48]See Richerson and Boyd, *Genes*, 5–6, 62–3; Mesoudi, *Evolution*, 2011: 2–3.

[49]Richerson and Boyd, *Genes*, 120–6; Mesoudi, *Evolution*, 71–6, Henrich, *Secret*, 34–53.

[50]See e.g., Joseph Henrich, *The WEIRDest People in the World* (New York: Farrar, Straus, and Giroux, 2020), 36–8.

[51]Will Gervais, Aiyana Willard, Ara Norenzayan, and Joseph Henrich, 'The Cultural Transmission of Faith: Why Innate Intuitions are Necessary, but Insufficient, to Explain Religious Belief,' *Religion* 41, no. 3 (2011): 389–410; Henrich, *WEIRDest People*, 68.

[52]See e.g., Scott Wiltermuth and Chip Heath, 'Synchrony and Cooperation,' *Psychological Science* 20, no. 1 (2009): 1–5; Sebastian Kirschner and Michael Tomasello, 'Joint Music Making Promotes Prosocial Behavior in 4-Year-Old Children,' *Evolution and Human Behavior* 31, no. 5 (2010), 354–64.

participation also stimulates the release of oxytocin, a neurotransmitter and hormone which makes people more likely to adopt group beliefs, norms and behaviours.[53]

The natural copying process produces a recurring pattern in religious learning. This pattern can be observed in non-literate hunter–gatherer societies.[54] In modified form, it also characterises literate religions like Buddhism, Hinduism, (pre-Protestant) Christianity and Islam.[55] According to the pattern, a religious tradition is ideally passed down in an unbroken chain. Individuals directly observe and copy or imitate teachers. There is special emphasis on imitating teachers performing rituals and musically singing or chanting memorised texts. The memorised texts in question often exhibit versification, rhyme, alliteration, assonance and internal repetition to facilitate memorisation and singing or chanting.

As we will see, the phenomenon of tradition takes on specific meanings in an Islamic context. For the time being, Islamic tradition may be defined as beliefs, such as beliefs concerning theology and the Sharīʿa, texts articulating these beliefs and practices based on these beliefs. Islamic beliefs, texts and practices are transmitted through the natural copying process.

As a general principle, Islamic theological beliefs and Sharīʿa norms are only partly based on religious and moral intuitions. They are also partly based on faith in tradition. Such faith is known as *īmān*. So, general belief in spirit beings is based to an extent on religious intuition, but more specific belief in *jinn* is based on tradition. General belief in care for kin is based to an extent on moral intuition, but more specific inheritance rules are based on tradition.

To further understand Islamic tradition, we must turn to al-Azhar and Islamic education.

Al-Azhar and traditional Islamic education

Traditional Islamic education is closely tied to worship (especially the daily prayers) and study of the Qurʾān (which is chanted in the daily prayers).[56] For the daily prayers, Muslims assemble at a mosque (*masjid*) and stand in rows behind a prayer leader (*imām*). The prayer leader musically chants the Qurʾān from memory while performing a series of prayer rituals, which involve standing, bowing and prostrating. Those behind the prayer leader observe and imitate him, quietly chanting the Qurʾān and moving their bodies.

Islamic education took place at two basic institutions in premodern times, namely, the *kuttāb* and the *madrasa*. Education at these institutions was deeply shaped by the natural copying process. Children often joined the *kuttāb* between five and ten years of age, where they focused on memorising the Qurʾān (*ḥifẓ*). The Qurʾān is characterised by features that facilitate memorisation, such as versification, alliteration and internal repetition. A *kuttāb* teacher would chant the Qurʾān in a sitting position while swaying back and forth, which was believed to facilitate memorisation. The children would imitate his chanting and swaying motion.[57] The children also learned basic Arabic, necessary for pronouncing and understanding the Qurʾān, and special rules

[53]Carsten De Dreu and Mariska Kret, 'Oxytocin Conditions Intergroup Relations Through Upregulated In-Group Empathy, Cooperation, Conformity, and Defense,' *Biological Psychiatry* 79, no. 3 (2016): 165–73; Franny Spengler, Dirk Scheele, Nina Marsh, et al., 'Oxytocin Facilitates Reciprocity in Social Communication,' *Social Cognitive and Affective Neuroscience* 12, no. 8 (2017): 1325–33.

[54]See e.g., Iain Morley, *The Prehistory of Music* (New York: Oxford University Press, 2013), 11–31; Lynne Kelly, *Knowledge and Power in Prehistoric Societies* (New York: Cambridge University Press, 2015), 36–61.

[55]See e.g., Joel Mlecko, 'The guru in Hindu tradition,' *Numen* 29, Fasc. 1 (1982): 33–61; Jeffrey Samuels, 'Toward an Action-Oriented Pedagogy: Buddhist Texts and Monastic Education in Contemporary Sri Lanka,' *Journal of the American Academy of Religion* 72, no. 4 (2004): 955–71; Ronald Begley and Joseph Koterski, eds. *Medieval Education* (New York: Fordham University Press, 2005), 20–49.

[56]For general accounts of premodern Islamic education see George Makdisi, *The Rise of Colleges* (Edinburgh: Edinburgh University Press, 1981); Jonathan Berkey, *The Transmission of Knowledge in Medieval Cairo* (Princeton: Princeton University Press, 1992); Daphna Ephrat, *A Learned Society in a Period of Transition* (Albany: SUNY Press, 2000).

[57]Starrett, *Islam*, 34–9.

for musically chanting the Qurʾān (*tajwīd*). Finally, children learned basic Sharīʿa norms, concerning, for example, rules for prayer and fasting.

After memorising the entire Qurʾānic text, interested students moved on to the *madrasa*. This often occurred in their early teens. A *madrasa* is a school for higher religious learning. A typical *madrasa* consists of a mosque with an endowment (*waqf*). The endowment funds stipends for students and religious scholars who teach these students.

Established in the 970s, al-Azhar is a mosque and *madrasa* located in Cairo. From the time of its founding, al-Azhar was a prominent *madrasa*, and by the eighteenth century, it was one of the most important *madrasas* in the world. Consequently, students who began their studies at other *madrasas*, inside or outside Egypt, came to al-Azhar to pursue more advanced studies. Al-Azhar was comparatively large for a *madrasa*, having at the beginning of the nineteenth century forty to sixty teachers who served between 1,500 and 3,000 students.[58]

Al-Azhar and other premodern *madrasas* subscribed to a particular theory of learning centred on direct observation (*mushāhada*) and imitation (*iqtidāʾ*).[59] It was believed that the first generation of Muslims learned by (1) directly observing the Prophet's actions and statements (*Sunna*) and (2) imitating the Prophet. The second generation of Muslims then learned from the first generation by observing and imitating them. The third generation did the same, and so on until the present. It was believed that a scholar can only be legitimate if he has learned through observation and imitation from other scholars who have done likewise in a chain (*sanad*, *isnād*, *silsila*) stretching back to the Prophet. At al-Azhar and other *madrasas*, students were forbidden to pursue knowledge merely by reading religious texts on their own.[60] Rather every student was obliged to study these texts under the supervision of qualified scholars. A given scholar (*shaykh*) imparted knowledge of a text by reading it aloud and commenting on its contents. His students gathered before him in a circle, sitting on the ground and taking notes. This lesson format is known as a study circle (*ḥalaqa*). Study circles were scheduled around the five prayer times, with students and teachers regularly praying together between sessions. A great deal of emphasis was placed on memorising religious texts (*ḥifẓ*).[61] These included the Qurʾān, *ḥadīth* compilations, as well as treatises on subjects like theology, the Sharīʿa, and Arabic grammar. Such treatises frequently took the form of short and/or rhymed texts (*matns*, *mukhtaṣars*).[62] Short rhymed texts were prized because they were easier to memorise.

At al-Azhar and other *madrasas*, teachers obliged students in their study circles to observe and imitate them as a condition of learning. The best and most committed students were invited to become a teacher's disciples and form a bond of personal 'companionship' (*suḥba*) with him.[63] In addition to attending the teacher's *madrasa* study circles, these students accompanied the teacher during his other activities, such as worshipping, eating and travelling. This allowed students to observe and imitate him constantly. During their years or even decades together, the teacher would impart further religious knowledge, while overseeing his students' behaviour and training them to live in accordance with the Sharīʿa. It was believed that through this process, students acquired (or successfully copied) behaviours, beliefs, desires and character traits endorsed by Islamic tradition (*adab*, *akhlāq*).[64] The teacher would give the student a permit to teach (*ijāza*) once he was satisfied that the student was sufficiently knowledgeable and committed to a lifestyle compliant with the Sharīʿa. In this way, selected students were promoted and became the next generation of teachers. It should be noted, however, that this ideal of discipleship was only ever realised imperfectly in practice.

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[58]Gesink, *Islamic Reform*, 41.
[59]Nakissa, *Anthropology*, 123–78.
[60]Berkey, *Transmission*, 26–30; Daphna Ephrat, *Learned Society*, 68–9.
[61]Makdisi, *Colleges*, 99–102; Messick, *Calligraphic State*, 21–30.
[62]Messick, *Calligraphic State*, 17–30; Hallaq, *Sharīʿa*, 138.
[63]See Berkey, *Transmission*, 21–43; Hallaq, *Sharīʿa*, 137–8; Nakissa, *Anthropology*, 123–48.
[64]Nakissa, *Anthropology*, 91–178.

The Modernist and Post-structuralist perspectives do not provide an adequate framework for analysing the content of *madrasa* texts or the behaviour of *madrasa* students and teachers. Consider the specific texts taught at al-Azhar in the early nineteenth century, for example, the notable theological texts *Jawhara al-Tawḥīd*, *Umm al-Barāhīn* and *Maqāṣid al-Ṭālibīn*, or the notable Sharīʿa texts *Matn Abī Shujāʿ*, *Minhāj al-Ṭālibīn*, *Nūr al-Īḍāḥ*, *Mukhtaṣar al-Qudūrī*, *Risāla Ibn Abī Zayd al-Qayrawānī* and *Mukhtaṣar Khalīl*.[65] These texts prescribe specific beliefs, like belief in God and the immortal soul, as well as specific norms, like care for kin and self-purification with water. These beliefs and norms shaped the behaviour of Azharite students and teachers. For instance, belief in God caused students to pray in al-Azhar mosque, and norms of purification caused them to perform prayer ablutions. For the Modernist and Post-structuralist perspectives, there is no evident reason why Azharite texts do not prescribe an alternative set of beliefs and norms, like belief in flying plants and invisible hats, or prescriptions to harm kin and wallow in faeces. It is also not evident why such alternative beliefs and norms do not shape the behaviour of Azharite students and teachers. For example, why don't students search for invisible hats and wallow in faeces? By contrast, the Cognitive perspective suggests that the content of Azharite texts and the behaviour of Azharite students and teachers were not arbitrary. Rather, they reflected natural religious and moral intuitions.

What about al-Azhar's traditional *madrasa* pedagogy? The Modernist perspective dismisses *madrasa* pedagogy as irrational indoctrination in tradition. The Post-structuralist perspective is more insightful.[66] It, like the Cognitive perspective, recognises that minds do not function as independent entities. Rather every individual's mind is fundamentally shaped by the tradition in which he is raised. He unconsciously and uncritically copies beliefs and norms from this tradition, whether or not he admits this. Additionally, the Post-structuralist perspective suggests that *madrasa* pedagogy can be conceptualised as a form of discipline, employed by powerful institutions, to coercively transmit tradition.[67] This view is partially true. However, there are countless other conceivable forms of discipline. Many of these forms, like those characteristic of the modern factory, clinic and prison,[68] lack the distinctive features of *madrasa* pedagogy, such as rituals, musical chanting, observation and imitation. Hence, *on its own*, the general notion of discipline cannot adequately explain the features of *madrasa* pedagogy. The Cognitive perspective takes us a step further. It explains these features by positing that they derive, at least in part, from a natural copying process with parallels in other religious traditions.

Modern liberal education compared with traditional Islamic learning

Psychological experiments indicate that human thought generally falls into two basic modes: intuitive and analytic.[69] This is in keeping with 'dual process theory'.[70] While all humans utilise both modes, intuitive thought is the default one. It is easy, automatic and unconscious. Analytic thought, on the other hand, is utilised at specific times to solve complicated or unprecedented problems. As a mode of thinking, it is more difficult, requiring careful and conscious effort.

These two modes of thought have different relationships to intuition and emotion. Intuitive thought is guided by largely unconscious intuitions and emotions. For instance, intuitive thought

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[65]See J. Heyworth-Dunne, *An Introduction to the History of Education in Modern Egypt* (London: Frank Cass & Co., 1968), 41–67.

[66]See e.g., Asad, *Formations*; Mahmood, *Politics of Piety*.

[67]See e.g., Asad, *Formations*; Mahmood, *Politics of Piety*.

[68]See e.g., Michel Foucault, *Discipline and Punish* (New York: Vintage, 1995).

[69]Other terms used include: 'intuitive and reflective', 'System 1 and System 2'.

[70]See Jonathan Evans and Keith Frankish, eds., *In Two Minds: Dual Processes and Beyond* (New York: Oxford University Press, 2009); Jonathan Evans and Keith Stanovich, 'Dual-Process Theories of Higher Cognition: Advancing the Debate,' *Perspectives on Psychological Science* 8, no. 3 (2013): 223–41; Barrett, *Cognitive Science*, 44–53; McCauley, *Religion is Natural*; Norenzayan, *Big Gods*, 180–5.

produces the various religious and moral intuitions considered above. Analytic thought is more independent from intuitions and emotions. It presupposes that claims should be based on explicit and systematic arguments. Accordingly, it generates doubts and criticisms about claims that are not supported by such arguments. Thus, it gives rise to doubts and criticisms about claims based on unconscious intuitions and emotions. Likewise, it gives rise to doubts and criticisms about claims accepted on the basis of faith in tradition. For instance, intuitive thought might initially generate a claim that immortal souls exist. Yet, analytic thought could place this claim in doubt, by suggesting that it is not underpinned by a proper argument. CSR holds that the distinction between intuitive and analytic thought is key to understanding religion and morality.[71]

The extent to which individuals rely on a particular mode of thought depends on several factors.[72] Among the most important of these is education. All educational systems employ some combination of intuitive and analytic thought, yet they differ in the relative emphasis given to each. Many studies note that modern Western liberal education is structured so as to heavily emphasise analytic thought over intuitive thought.[73] Thus, students are trained to carefully and consciously think about claims, to criticise and doubt claims and to endorse only those which can be justified through explicit and systematic arguments.

Psychological experiments indicate that intuitive and analytic modes of thought are associated with specific views on religion and morality. Individuals inclined towards analytic thought exhibit decreased belief in religion. As such, they tend to endorse a more strictly scientific view of the universe.[74] Psychological experiments also indicate that individuals inclined towards analytic thought tend to be more favourable to utilitarianism.[75] Deontological morality, which is arguably linked to intuitions, insists that certain acts and norms, say caring for kin or committing incest, are inherently good or bad. In contrast, utilitarianism insists that the effects of an act or norm determine whether it is morally good or bad. Acts and norms are morally good if they have the effect of increasing happiness or decreasing suffering. Bad ones have the opposite effect.

In the studies reporting the preceding experiments, it is typically suggested that analytic thought fosters a scientific or utilitarian worldview by suppressing intuitions and perhaps faith in tradition, thereby making thinking patterns less complex. It is well known that humans develop many of their beliefs through empirical observation, for example that the sky is blue. However, religious intuitions and faith in tradition generate additional beliefs that are not based on empirical observation. Analytic thought gives rise to doubts and criticisms about these additional beliefs, serving to suppress them. Once this occurs, empirical observation and, by extension, positivistic science become the dominant or even exclusive fount of truth. A similar argument is applied to utilitarianism. Humans are naturally inclined towards some form of utilitarian thinking. Consequently, they tend to endorse the general utilitarian principle that it is morally good to increase happiness and decrease suffering. Nevertheless, various moral intuitions and faith in tradition generate additional norms which go beyond utilitarianism. Analytic thought gives rise to

[71]See studies listed below.

[72]See Evans and Stanovich, *Dual-process theories*, 229; Norenzayan, *Big Gods*, 180–85.

[73]See Norenzayan, *Big Gods*, 52–4, 180–5; Joseph Henrich, Steine Heine, and Ara Norenzayan, 'The Weirdest People in the World?' *Behavioral and Brain Sciences* 33(2010), esp. 120.

[74]See Norenzayan, *Big Gods*, 180–5; Hasan Bahçekapili and Onurcan Yilmaz, 'The Relation Between Different Types of Religiosity and Analytic Cognitive Style,' *Personality and Individual Differences* 117 (2017): 267–72; Michael Stagnaro, Robert Ross, Gordon Pennycook, and David Rand, 'Cross-Cultural Support for Link Between Analytic Thinking and Disbelief in God: Evidence from India and the United Kingdom,' *Judgment & Decision Making* 14, no. 2 (2019): 179–86.

[75]See Joshua Greene, Leigh Nystrom, Andrew Engell, John Darley, and Jonathan Cohen, 'The Neural Bases of Cognitive Conflict and Control in Moral Judgment,' *Neuron* 44, no. 2 (2004): 389–400; Joseph Paxton, Leo Ungar, and Joshua Greene, 'Reflection and Reasoning in Moral Judgment,' *Cognitive Science* 36, no. 1 (2012): 163–77; Indrajeet Patil, Micaela Maria Zucchelli, et al. Wouter Kool, 'Reasoning Supports Utilitarian Resolutions to Moral Dilemmas Across Diverse Measures,' *Journal of Personality and Social Psychology* (2020).

doubts and criticisms about these additional moral norms and so often manages to suppress them. Once this occurs, utilitarianism becomes the preeminent or sole source of morality.

One further point should be made about modern liberal Western education. As mentioned above, humans by their very nature learn through a copying process and have faith in tradition. Humans must be actively trained to abandon the copying process in learning and to repudiate faith. Modern Western education is designed to achieve those very ends. It assumes that proper learning does not centre on observing and copying teachers, or imitating them while they perform rituals and musically chant memorised texts. Such behaviour is often condemned as indoctrination antithetical to proper analytic thought.[76] Recall that individuals acquire faith in a particular tradition through a natural copying process. Western education suppresses the copying process and thereby suppresses faith in tradition. Rather than consciously or overtly accepting faith and tradition, each student is led to suppose his mind operates independently of the tradition in which he was raised. He supposes that, through independent thinking, he arrives at his own beliefs and accesses a universalistic objective reality outside of, and above, all historical traditions. In summary, modern Western education inculcates analytic thinking habits. These habits weaken intuitive thought as well as faith in tradition. Faith in tradition is further undermined through suppression of the natural copying process.

It has already been noted that the Modernist perspective posits that humans are naturally inclined towards a scientific-utilitarian worldview. CSR takes the position that this stance is fundamentally mistaken. Psychological experiments and surveys undertaken across the globe indicate that modern Western societies are highly unique, in statistically measurable ways. So, Westerners have uniquely strong inclinations towards analytic thought, a scientific-utilitarian worldview, and an anti-traditional individualist epistemology. These unique characteristics derive in large part from the character of education provided by the schools and universities of the Western world in the modern period.[77] At the same time, one must avoid simplistic generalisations which diametrically oppose modern Western societies and either premodern or modern Muslim societies. As indicated above, human thought is multifaceted. Thus, humans naturally derive their beliefs and norms through a combination of (1) analytic thought, (2) intuitive thought and (3) faith in tradition. These three elements are found in all societies, albeit to differing degrees. Moreover, within any given society, individual groups will place varying degrees of emphasis on a given element. To be clear, for CSR, analytic thought is just as natural as intuitive thought and faith in tradition. What is unique, at least statistically, about the modern West is not the presence per se of analytic thought, but the overwhelming emphasis placed on it. Furthermore, analytic thought is certainly not a preserve of the modern West. One can readily find in a range of premodern Muslim societies both analytic thinking and particular groups which placed heavy stress on it. This point is important for understanding premodern Muslim intellectual life inside and outside the *madrasa*.

Premodern Muslim thinkers generally theorised knowledge with reference to a dichotomy between *naql* and *ʿaql. Naql* has the general meaning of 'transmitted tradition' but often conveys the more specific meaning of transmitted scriptural texts interpreted in a fairly literal manner. It is held that there exist certain types of knowledge which an individual cannot arrive at through independent thought. Such knowledge may only be acquired through *naql*. Consider Prophet Moses' miraculous parting of the Red Sea, or Muslims' normative duty to fast during Ramadan. An individual can only learn about such matters through *naql*. Knowledge based on *naql* is contrasted with knowledge based on *ʿaql. ʿAql* can be translated as 'reason'. For premodern Muslims, *ʿaql*

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[76]See e.g., Starrett, *Islam*, 23–86.

[77]See Norenzayan, *Big Gods*, 52–4, 180–5; Henrich et al., *Weirdest People*; Henrich, *WEIRDest People*, 36–8, 198–204; Haidt, *Righteous Mind*; Ronald Inglehart and Christian Welzel, *Modernization, Cultural Change, and Democracy* (New York: Cambridge University Press, 2005); Shalom Schwartz, 'A Theory of Cultural Value Orientations: Explication and Applications,' *Comparative Sociology* 5 (2006): 137–82.

referred to independent thought that is not reliant upon tradition. This encompassed both intuitive and analytic thought, which were not explicitly distinguished by premodern Muslims, at least in any simple straightforward manner.[78]

The forms of knowledge produced by *ʿaql* were classed as *al-ʿulūm al-ʿaqliyya* and included mathematical and scientific knowledge. Some Muslim thinkers, such as the Muʿtazilites and certain Ḥanafīs and Māturīdites, also asserted that *ʿaql* endorses a broadly utilitarian moral principle,[79] namely, that it is morally good to increase happiness and decrease suffering by procuring benefits and warding off harms (*jalb al-maṣāliḥ wa darʾ al-mafāsid*). So, *ʿaql* is linked to analytic thought which produces scientific knowledge and utilitarian morality.

ʿAql is also linked to intuitive thought. Muslim philosophers and orthodox theologians frequently claimed that *ʿaql* (or *fiṭra*) establishes the existence of God. This claim draws on the religious intuition that there exists a God who purposefully created the universe.[80] Other Muslim thinkers, such as the aforementioned Muʿtazilites and certain Ḥanafīs and Māturīdites also asserted that *ʿaql* endorses specific deontological moral obligations, like the principle of direct reciprocity (*shukr al-munʿim*), and the duty not to lie or commit injustice.[81] Such obligations are likely rooted in evolved moral intuitions.[82]

Premodern Muslim thinkers adopted different stances on the relative value of *ʿaql* and *naql* as sources of knowledge. At one end of the spectrum were Muslim philosophers (*falāsifa*) and scientists, who were often one and the same. They emphasised the value of *ʿaql* and employed analytic thought in a relatively unfettered manner. The philosophers were of the view that *ʿaql* is superior to *naql* and criticised many traditional religious doctrines as inconsistent with *ʿaql*. Examples are the belief in miracles and *ex nihilo* creation of the universe. In rare cases, philosophers like Ibn al-Rāwandī, Abū Bakr al-Rāzī and al-Maʿarrī rejected *naql* and organised religion altogether.[83] More commonly, philosophers, such as al-Fārābī, Ibn Sīnā and Ibn Rushd remained Muslim but proposed reinterpretations of scriptural texts which seemed to conflict with *ʿaql*.[84] Meanwhile, Muslim scientists pursued new discoveries and wrote texts expressing doubts and criticisms concerning prevailing scientific views. Prominent examples include Abū Bakr al-Rāzī's *al-Shukūk ʿalā Jālīnūs* and Ibn al-Haytham's *al-Shukūk ʿalā Baṭlamyūs*. In this way, Muslim scientists were able to make substantial new contributions to fields like mathematics, medicine, optics and astronomy.[85]

In premodern Muslim societies, philosophers and scientists constituted a small, somewhat marginalised, elite. Orthodox religious scholars who dominated the mainstream were far more numerous and influential. Generally speaking, the only educational institutions found in Muslim countries, such as Egypt, were religious in character, above all *kuttābs* and *madrasas*. These institutions were run by orthodox scholars. Such scholars acknowledged the value of *ʿaql*, including analytic thought, as a source of knowledge. Indeed, they regularly employed it

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[78]Premodern Muslim texts on Sufism and philosophy do address 'ilhām' (intuition) as a source of knowledge. See e.g., Nakissa, *Anthropology*, 116–9. The concept of *ilhām* overlaps with the concept of 'intuitive thought' in cognitive science. However, the relation between these two concepts is complex, especially because *ilhām* is often viewed as a product of divine inspiration.

[79]See e.g., Reinhart, *Before Revelation*, 38–61; Ayman Shihadeh, 'Theories of Ethical Value in Kalām: A New Interpretation,' in *The Oxford Handbook of Islamic Theology*, ed. Sabine Schmidtke (New York: Oxford University Press, 2016), esp. p. 395.

[80]Nakissa, *Cognitive Science of Religion and Islamic Theology*.

[81]See Reinhart, *Before Revelation*, 38–61, 107–20; Shihadeh, *Theories*, esp. p. 395; Ulrich Rudolph, *Al-Māturīdī and the Development of Sunnī Theology in Samarqand* (Leiden: Brill, 2015), 296–300.

[82]See Curry et al., *Mapping*; Hoffman et al., *Morality*.

[83]See Sarah Stroumsa, *Freethinkers of Medieval Islam* (Leiden: Brill, 1999).

[84]See e.g., Carlos Fraenkel, *Philosophical Religions from Plato to Spinoza* (New York: Cambridge University Press, 2012), 144–75.

[85]See e.g., George Saliba, *Islamic Science and the Making of the European Renaissance* (Cambridge: MIT Press, 2007); Ahmad Dallal, *Islam, Science, and the Challenge of History* (New Haven: Yale University Press, 2010).

to criticise each other's ideas about theology[86] and law[87], and to criticise the philosophers. This may be seen in al-Ghazālī's *Tahāfut al-Falāsifa* and Ibn Taymiyya's *al-Radd ʿalā al-Manṭiqiyyīn*. Nevertheless, they do not emphasise ʿaql to the same extent as the philosophers and scientists and are more willing to stress faith in tradition.

The views of such orthodox scholars on knowledge shaped the institutional structure of premodern *madrasas*. Thus, al-Azhar and other premodern *madrasas* did not permit the type of wide-ranging criticism of traditional doctrines based on ʿaql characteristic of the philosophers. Criticism of this type was seen as blasphemous and could result in punishment or expulsion. As noted above, *madrasa* education strongly emphasised memorisation as well as observation and imitation. These forms of learning did not involve analytic thinking. Rather, they were tied to a copying process which instils faith in tradition. In keeping with such views, the curriculum in premodern *madrasas* was divided into two major parts: ʿaql-based subjects (*al-ʿulūm al-ʿaqliyya*) and *naql*-based subjects (*al-ʿulūm al-naqliyya*). ʿAql-based subjects included the sciences and mathematics, as well as aspects of philosophy.[88] So, among the ʿaql-based subjects taught at al-Azhar in the nineteenth century, there was logic (*manṭiq*), arithmetic, algebra, astronomy (*falak*) and the art of disputation (*ādāb al-baḥth wa-l-munāẓara*).[89] *Naql*-based subjects encompassed the full range of religious subjects, including Qurʾān, *ḥadīths*, Sharīʿa and theology. The fact that orthodox scholars put ʿaql-based subjects in the *madrasa* curriculum shows the value they placed on analytic thought. At the same time, this had limits. ʿAql-based subjects clearly occupied a subsidiary position in *madrasa* learning. By contrast, *naql*-based subjects dominated the curriculum. This reflected an emphasis on faith in tradition. Less obviously, it also reflected an emphasis on intuitive thought. Recall that theological doctrines and Sharīʿa norms derived partly from religious and moral intuitions. These partly intuitive doctrines and norms were taught primarily through *naql*-based subjects.

Reshaping Islamic learning at al-Azhar during the colonial period

Colonial governance in European Empires had many aims. One was to advance a project of civilisational progress centred on a scientific-utilitarian worldview. Spreading modern liberal education, and associated analytic thinking habits, was a major element of this project. Egypt and al-Azhar provide an instructive case study.

In 1798, Napoleon's forces invaded and occupied Egypt with the stated aim of bringing progress to the country. The British Empire compelled the French to leave in 1801. Nevertheless, the military successes of the French convinced Egypt's Muslim rulers that they could only defend the country if they acquired the type of knowledge, science and technology taught at contemporary European educational institutions. To this end, Egypt's rulers established European-style institutions for advanced education in military training (1816), engineering (1820), veterinary science (1827), medicine (1827), civil administration (1829) and translation (1836). During the 1860s and 1870s, a national system of European-style primary schools was established to bring education to the masses. With the spread of European-style education within the country, an increasing number of elite Egyptian government officials and intellectuals embraced aspects of liberal ideology and the related project of civilisational progress.[90] In 1882, the British occupied Egypt, initiating a period of colonial rule which would last until the 1950s. The British cooperated with liberal-minded Egyptian elites to push ahead the project of civilisational progress. This involved steadily

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[86]E.g., debates between the Muʿtazilites, Ashʿarites, Māturīdites, and Ahl al-Ḥadīth.
[87]E.g., debates between the ḥanafīs, Mālikīs, Shāfiʿīs, and Ḥanbalīs.
[88]E.g, logic, proofs of God.
[89]Heyworth-Dunne, *Education*, 41–67.
[90]See Mitchell, *Colonising Egypt*; Mona Russell, 'Competing, Overlapping, and Contradictory Agendas: Egyptian Education under British Occupation, 1882–1922,' *Comparative Studies of South Asia, Africa and the Middle East* 21, no. 1 (2001): 50–60.

expanding European-style education in the country, although the British took care to ensure this expansion proceeded at a measured pace, so as to pre-empt social and economic disruptions to colonial rule.[91] Nevertheless, many Egyptians expressed opposition to British colonialism. The British rulers were well aware that Egypt's conservative Muslims were sceptical of, or even hostile to, the project of civilisational progress, considering it a threat to their religion.[92] Such scepticism and hostility were encouraged by Egypt's religious elites centred at al-Azhar.[93]

British colonial officials in Egypt subscribed to a Modernist perspective. Accordingly, they viewed traditional Islam as an obstacle to progress. Similarly, they viewed traditional Islamic education as ritualistic indoctrination designed to kill off the rational intellect.[94] By the late nineteenth century, British officials had embraced an explicit project to 'reform Islam' across the world – or at least across their domains – by reforming Muslim educational institutions.[95] These reformed institutions would mix religious learning with Western education and promote the interlinked nineteenth-century notions of civilisational 'progress', 'science' and 'utilitarianism'. It was assumed that Muslim students would adopt these notions and then reinterpret their religious doctrine to produce a reformed Islam more consistent with these notions.[96] The British collaborated with liberal-minded Muslim elites to achieve these ends. In India, most well-known was Sayyid Aḥmad Khān, who established the Muhammadan Anglo-Oriental College in 1875 (later renamed Aligarh Muslim University). This institution was an exemplar of reformed Islamic education.[97] Taking their collaboration with Khān as a model, the British sought liberal-minded Muslim elites in Egypt to help them reform education at al-Azhar.[98] As described below, these elites included religious scholars like Muḥammad ʿAbduh and Muṣṭafā al-Marāghī.

The government-led process of reforming al-Azhar was gradual.[99] It began in the 1870s and was largely complete by the 1960s. Prior to the 1870s, al-Azhar had a very small bureaucracy. Education was relatively informal and decentralised, and teachers were given great discretion in choosing what materials to teach, and how to teach them. In 1872, al-Azhar's bureaucracy was expanded, a standardised curriculum was instituted consisting of religion-related subjects, standardised examinations were introduced and the *madrasa* bureaucracy assumed responsibility for issuing educational certifications. In 1896, al-Azhar's bureaucracy was further expanded and non-religious subjects, like arithmetic, geometry and geography, were added to the standardised curriculum. Three buildings with classrooms and offices were constructed in 1930, next to the mosque. The buildings hosted faculties devoted to religion-related subjects: an Arabic language faculty, a Sharīʿa faculty and a faculty for the study of the Qurʾān, *ḥadīths* and theology. At the same time, students studying in these faculties were required to take some classes in non-religious subjects. From 1961, al-Azhar gradually began to add faculties devoted to non-religious subjects. Buildings for these faculties were constructed on a new campus several miles from the mosque. These included faculties devoted to commerce, agriculture, foreign languages and translation, medicine, pharmacy, dentistry, engineering, science, education and media. Graduates of

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[91]See Russell, *Education;* Starrett, *Islam*, 23–86.

[92]See e.g., Lord Cromer, *Modern Egypt* (New York: MacMillan 1916), vol. 2, 228–9.

[93]See Gesink, *Islamic Reform*, 89–109, 165–96.

[94]See Starrett, *Islam*, 23–61.

[95]See David Lelyveld, *Aligarh's First Generation* (Princeton: Princeton University Press, 1978); Rainer Brunner, 'Education, Politics, and the Struggle for Intellectual Leadership: al-Azhar between 1927 and 1945,' in *Guardians of the Faith in Modern Times*, ed. Meir Hatina (Leiden: Brill, 2009), 109–40; Aria Nakissa, 'Reconceptualizing the Global Transformation of Islam in the Colonial Period: Early Islamic Reform in British-ruled India and Egypt,' *Arabica* (In press); Wilfrid Scawen Blunt, *The Future of Islam* (London: Kegan Paul, Trench & Co., 1882), esp. 132–73; Cromer, *Modern Egypt*, vol. 2, 180–1.

[96]Nakissa, *Global Transformation*.

[97]Lelyveld, *Aligarh*; Nakissa, *Global Transformation*.

[98]See Cromer, *Modern Egypt*, vol. 2, 180–1, including footnote 1. Blunt, *Islam*, esp. 132–73; Brunner, *Education*; Nakissa, *Global Transformation*.

[99]For general accounts of al-Azhar's reformation see Gesink, *Islamic Reform*; Nakissa, *Anthropology*.

these newer faculties take some classes in religious subjects but receive a degree certification in a non-religious subject.

So, over the course of al-Azhar's reformation, it has increasingly taken on features of modern liberal education. These include a progressive devaluation of memorisation, imitation and observation in favour of analytic thought. Whereas, premodern al-Azhar had very limited ʿaql or science-based subjects, these subjects have become ever more central to modern Azharite education. In parallel, analytic thought, doubt, criticism and argument have become ever more central. A turning point was the 1930s and 1940s, when there was a relaxation of older madrasa restrictions on doubts and criticisms directed towards traditional doctrines. Al-Azhar's reformation has also increasingly marginalised the natural copying process. Recall that traditional study circles were located in the mosque and scheduled around prayer times. Between sessions, students and teachers would pray together, copying the prayer leader's ritual and musical Qurʾān chanting. Much of what was learned in study circles consisted of memorising and chanting or reading aloud religious texts. In 1930, everyday teaching was moved out of the mosque and into classrooms with tables and chairs located in the newly built faculties. This eliminated the traditional study circle arrangement, which was deeply intertwined with the natural copying process. Moreover, classroom learning involved a new pedagogical model associated with modern Western education. According to this model, teachers generally interact with students only while teaching them in the classroom, and such interactions are of a largely impersonal nature. Unlike madrasa instructors, teachers are not expected to form long-term personal relationships with students, take them as disciples and allow these disciples to observe and imitate their behaviour for many years. Within al-Azhar, this new model of pedagogy further marginalised the natural copying process responsible for instilling faith.

Efforts to reform Azharite education were spearheaded by three religious scholars: Muhammad ʿAbduh (1849–1905), and his two students Rashīd Riḍā (1865–1935) and Muṣṭafā al-Marāghī (1881–1945). These figures also pioneered a doctrine of reformed Islam. The doctrine would be integrated into Azharite education and spread across the world by al-Azhar graduates and print publications. With strong British support, ʿAbduh and al-Marāghī were appointed to top-level administrative positions within the madrasa.[100] Meanwhile, Riḍā established the immensely influential journal al-Manār. Al-Manār was used to build support for Islamic reformist ideas in Egypt and other Muslim countries.

Born in Egypt and educated at al-Azhar, ʿAbduh was first exposed to European ideas as a student of Jamāl al-Dīn al-Afghānī. Al-Afghānī was a religious scholar and international political activist deeply concerned about the dangers that Western colonialism posed to Muslims. Reflecting on the situation of Muslims in the late nineteenth century, al-Afghānī stated:

'Islamic states today are unfortunately pillaged and their property stolen; their territory is occupied by foreigners and their wealth [is] in the possession of others. There is no day in which foreigners do not grab a part of the Islamic lands, and there is no night in which foreigners do not make a group of Muslims obey their rule. They disgrace the Muslims and dissipate their pride. No longer is the command of [the Muslims] obeyed or their word heeded. [The foreigners] chain up the Muslims, put around their necks a yoke of servitude, debase them, humiliate their lineage, and they do not mention their name but with insult. Sometimes they call them savages and sometimes regard them as hard-hearted and cruel and finally consider them insane animals. What a disaster! What an affliction! ... Out of fear of the Europeans and Westerners they [the Muslims] cannot sleep at night and have no peace in the daytime. The foreigners' influence has affected [even] their blood vessels to the extent that they shudder with fear when they hear the words of Russia and England; they become

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[100]See Cromer, *Modern Egypt*, vol. 2, 180–1; Gesink, *Islamic Reform*, 171–2; Brunner, *Education*; Nakissa, *Anthropology*, 72–3.

stupefied with dread when they hear the words of France and Germany . . . The foreigners are forever frightening these helpless people . . .'[101]

Al-Afghānī believed that the West derived its fear-inducing technological-economic power from its embrace of progress and associated scientific-utilitarian patterns of thought. Muslims could only acquire a similar power and fend off Western attacks, if they too embraced progress.[102] ʿAbduh came to adopt similar views. He argued that Western colonialism currently threatened Muslims with the same tragic fate as other non-Western peoples, including biological extermination and expulsion from their lands.[103] Hence, Muslims should embrace progress and then gradually build up enough technological-economic power to defend themselves. In the meantime, Muslims would need to temporarily submit to Westerners and request kind treatment from them.[104] ʿAbduh believed that if Muslims were to embrace progress, they would need to change or reform aspects of their religious doctrine which were incompatible with progress. ʿAbduh developed a better understanding of progress by learning French and spending time in Europe. He also cultivated relationships with British officials interested in reforming Islam, such as Wilfred Scawen Blunt and Lord Cromer.

ʿAbduh's writings suggest that he drew on analytic thought, intuitive thought and faith in tradition. However, he is similar to premodern Muslim philosophers in that he privileged ʿaql, including analytic thought, and was willing to criticise tradition (naql). Indeed, religious scholars at ʿAbduh's time rebuked him by labelling him a philosopher (faylasūf).[105] But unlike premodern philosophers, who were a small heterodox elite that consciously avoided promulgating their views among the masses[106] or within madrasas, ʿAbduh sought to publicise his views and integrate them into Azharite education. He also sought to blend premodern Islamic thought with nineteenth-century European thought.[107] Consequently, ʿAbduh's notion of reformed Islam incorporates key nineteenth-century European concepts like 'civilisational progress', 'reason', 'science' and 'utilitarianism'.

To understand ʿAbduh's ideas, it is necessary to elaborate several aspects of premodern Islamic thought. As noted earlier, premodern Islamic theology and Sharīʿa norms are partly based on faith in tradition. In many contexts, tradition (naql) takes on the specific meaning of scriptural texts understood in a fairly literalistic manner. For instance, the Qurʿān describes miracles. Reading the Qurʿān literally implies that miracles actually occurred (and are not to be understood as metaphors). Similarly, the Qurʿān bans wine drinking. Taken literally, this implies that no one may drink wine.[108] Orthodox scholars inclined towards literalism but recognised that scriptural texts required further interpretation in some cases, especially where there was ambiguity or a seeming conflict between texts. They believed that the early Muslim generations, including the founders of the four madhhabs ('schools of law'), had a uniquely high degree of knowledge due to their proximity to the time of the Prophet. Hence, their interpretations of scriptural texts were authoritative, and less knowledgeable later generations were obliged to defer to these interpretations.[109] Such deference is known as taqlīd. Early interpretations are recorded in religious texts, such as Sharīʿa treatises, and may be considered part of Islamic tradition in the broader sense.

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[101]Abdul-Hādī Hāʾirī, 'Afghānī on the Decline of Islam,' *Die Welt des Islams*, New Series, 13, no. 1/2 (1971), 121–5.

[102]For general analyses of al-Afghānī's thought see Nikki Keddie, *Sayyid Jamal ad-Din ʿal-Afghani'* (Berkeley: University of California, 1972); Margaret Kohn, 'Afghānī on Empire, Islam, and Civilization,' *Political Theory* 37, no. 3 (2009): 398–422.

[103]Rashīd Riḍā, *Tārīkh al-Ustādh al-Imām al-Shaykh Muḥammad ʿAbduh* (Cairo: Dār al-Faḍīla, 2006), vol. 2, 415–51; Nakissa, *Global Transformation*.

[104]Riḍā, *Tārīkh*, vol. 2, 415–51; Nakissa, *Global Transformation*.

[105]See Cromer, *Modern Egypt*, vol. 2, 180.

[106]Fraenkel, *Philosophical Religions*, esp. 144–75.

[107]For discussions of ʿAbduh's ideas see Kerr, *Islamic Reform*; Hourani, *Arabic Thought*, 130–60; Sedgwick, *Abduh*.

[108]I.e., excepting ḍarūra.

[109]Nakissa, *Anthropology*, 210–7.

Echoing the philosophers, ʿAbduh argued that reason takes precedence over tradition, stating: 'When reason conflicts with tradition, one adheres to what is indicated by reason' (*idhā taʿāraḍa al-ʿaql wa-l-naql ukhidha bi-mā dalla ʿalayhi al-ʿaql*).[110] He added that when reason and tradition conflict, it is either necessary to '(re)interpret tradition' (*taʾwīl al-naql*) such that it accords with reason, or simply confess that one cannot understand the true meaning of tradition.[111] When ʿAbduh spoke about reinterpreting tradition (*naql*), he had two things in mind. First, he believed that Muslims are entitled to doubt what is asserted by the literal meaning (*ẓāhir*) of scriptural texts if this conflicts with reason. In such cases, Muslims should be able to argue for non-literal interpretations of these texts, which are consistent with reason. Second, he believed that Muslims should be able to doubt interpretations of scriptural texts passed down from the early generations and argue for alternative interpretations. Hence, he rejected *taqlīd*, calling it a 'disease' (*maraḍ*).[112] He further asserted that his life's work had centred on 'liberating thought from the fetter of *taqlīd*'.[113]

For example, scriptural texts mention spirit beings called *jinn*. *Jinn* are described as invisible and as having the power to cause disease. ʿAbduh noted that science had recently discovered microbes, which are invisible to the human eye, and which cause disease. ʿAbduh argued that scriptural mentions of *jinn* should be reinterpreted as references to microbes.[114] Another example involves a Qurʾānic verse that discusses how the holy Kaʿba shrine in Mecca was saved from an invading foreign army. According to the verse, God worked a miracle, sending a flock of birds to destroy the army by pelting it with stones. ʿAbduh posited that the flying birds mentioned in the verse should be reinterpreted as flying insects bringing deadly microbes.[115] Thus, scriptural texts, read literally, affirm the existence of spirit beings and a miraculous event involving birds with stones. Yet, science rejects spirit beings and miracles. Hence, ʿAbduh raised doubts about these things, insisting that scriptural texts only refer to the scientifically confirmed existence of microbes.

In ʿAbduh's writings, reason is sometimes equated with science. However, it is also equated with utilitarianism. More specifically, ʿAbduh embraced the controversial Muʿtazilite and Māturīdite view that reason alone can discover moral norms, such as the utilitarian principle. Hence, he asserted that 'human reason' (*al-ʿaql al-basharī*) has the capacity to make moral judgements 'without relying on divine revelation' (*bidūn tawaqquf ʿalā samʿ*).[116] This can be done through utilitarian reasoning. ʿAbduh explained:

'[Among actions] are those which are bad (*qabīḥ*) because they cause pain (*alam*), and there are those which are good (*ḥasan*) because they either produce pleasure or prevent pain (*limā yajlib min al-ladhdha aw dafʿ al-alam*). The first is like beating, wounding, and all harm-producing human actions. The second is like eating when hungry and drinking when thirsty.'[117]

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[110]Orthodox theologians utilize a similar principle, but in a more conservative manner than the philosophers. See Frank Griffel, *Al-Ghazālī's Philosophical Theology* (New York: Oxford University Press, 2009), 111–22.

[111]Muḥammad ʿAbduh, 'Al-Radd ʿalā Faraḥ Anṭūn,' in *Al-Aʿmāl al-Kāmila li-l-Imām al-Shaykh Muḥammad ʿAbduh*, ed., Muḥammad ʿImāra (Cairo: Dār al-Shurūq, 2006), vol. 3, 303.

[112]Muḥammad ʿAbduh, 'Risāla al-Tawḥīd,' in *Al-Aʿmāl al-Kāmila li-l-Imām al-Shaykh Muḥammad ʿAbduh*, ed. Muḥammad ʿImāra (Cairo: Dār al-Shurūq, 2006), vol. 3, 414.

[113]Riḍā, *Tārīkh*, vol. 1, 11.

[114]Muḥammad ʿAbduh and Rashīd Riḍā, *Tafsīr al-Qurʾān al-Ḥakīm,* 3rd ed. (Cairo: Dār al-Manār, 1367h), vol. 3, 96.

[115]Muḥammad ʿAbduh, *Tafsīr Juzʾ ʿAmm.* 3rd. ed. (Maṭbaʿa Miṣr, 1341h), 157–8.

[116]ʿAbduh, *Risāla*, vol. 3, 417–18.

[117]ʿAbduh, *Risāla*, vol. 3, 416.

On these matters, ʿAbduh's thought cannot be easily disentangled from that of his student Riḍā[118]. Riḍā wrote more extensively than ʿAbduh on utilitarianism in the Sharīʿa, while claiming that his basic ideas came from ʿAbduh.[119] For Riḍā, scriptural texts on the Sharīʿa fall into two categories. First, there are texts that lay down norms related to ritual worship (ʿibādāt). Such norms are not meant to change, and texts concerning them should be interpreted in a literalistic fashion. Second, there are texts that lay down norms unrelated to ritual worship, which concern human social life (muʿāmalāt), like commercial law, criminal law and laws of war. These norms are mechanisms for increasing happiness and decreasing suffering. However, owing to social change, it may be necessary to adopt new norms, which are more effective in increasing happiness and decreasing suffering in new circumstances. This requires interpreting some scriptural texts as no longer applicable.[120]

For example, Riḍā observed that, owing to advances in medicine, post-mortem examinations are now important for detecting and preventing disease. Nevertheless, scriptural texts lay down a Sharīʿa law mandating immediate burial – an act which makes post-mortem examinations impossible. Riḍā argued that the law no longer applies, as a new law mandating examinations is now more effective in increasing happiness and decreasing suffering from disease.[121] In other words, there is a scriptural text, which, if interpreted literally, mandates immediate burial under all circumstances. However, drawing on utilitarian reasoning, Riḍā reinterpreted the text as not applicable to modern conditions. Riḍā adopted the same approach with respect to scriptural texts which mandate that Muslims prepare warhorses and practice archery. For Riḍā, the aim of these norms is to protect Muslims from the suffering associated with military defeat. But at present, Muslims can only effectively protect themselves with modern weapons like guns, planes, tanks, and warships. Hence, texts on warhorses and archery are no longer applicable.[122]

To appreciate Riḍā's views, a further observation is in order. In reality, premodern Sharīʿa norms are based partly on faith in tradition, partly on intuitive thought, and *partly on analytic thought, including the utilitarian principle*. Consider that orthodox religious scholars claim that God Himself based His norms to a degree on the utilitarian principle (*jalb al-maṣālih wa darʾ al-mafāsid*). Consequently, it is necessary to take this utilitarian principle into account when interpreting Sharīʿa norms.[123] Indeed, many studies have emphasised that, in actuality, orthodox premodern scholars were often guided by utilitarian or practical considerations when interpreting, codifying and applying the law in particular social contexts.[124] Nevertheless, orthodox scholars do not hold that the utilitarian principle, taken by itself, can be used to determine Sharīʿa norms. This is natural, as Sharīʿa norms are not only based on utilitarianism. They are also based on tradition and moral intuitions. What is unique about Riḍā is that he enlarged the scope of the utilitarian principle and implied that it alone can be used to determine Sharīʿa norms (with the exception of norms related to ritual worship).

Overall, ʿAbduh and Riḍā promoted a doctrine of reformed Islam, which uses scientific-utilitarian reason to reinterpret scriptural texts. This doctrine legitimates relaxing traditional restrictions on doubt and criticism, including restrictions on doubting and criticising the literal

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[118]For discussions of Riḍā's thought see Kerr, *Islamic Reform*; Hourani, *Arabic Thought*, 222–44; Wael Hallaq, *A History of Islamic Legal Theories* (New York: Cambridge University Press, 1997), 214–20.

[119]Rashīd Riḍā, 'Madaniyya al-Qawānīn,' *Al-Manār* 23 (1922): 548.

[120]See Riḍā, *Madaniyya*; Rashīd Riḍā, *Yusr al-Islām wa-Uṣūl al-Tashrīʿ al-ʿĀmm* (Minneapolis: Dar Almanar, 2007).

[121]Rashīd Riḍā, 'Istiftāʾ ʿan al-Kashf al-Ṭibbī,' *Al-Manār* 10 (1907): 358–9; Rashīd Riḍā, 'Al-Kashf al-Ṭibbī ʿala al-Mawtā wa Taʾkhīr al-Dafn,' *Al-Manār* 13 (1910): 100–2.

[122]Muḥammad ʿAbduh and Rashīd Riḍā, *Tafsīr al-Qurʾān al-Ḥakīm*, 2nd ed. (Cairo: Dār al-Manār, 1368h), vol. 10, 68–71.

[123]E.g., in the theory of *Maqāṣid al-Sharīʿa*, in the principles of *istiṣlāḥ* and *istiḥsān*.

[124]See e.g., Mohammad Fadel, 'The Social Logic of taqlīd and the Rise of the Mukhataṣar,' *Islamic Law and Society* 3, no. 2 (1996): 193–233; Sherman Jackson, *Islamic Law and the State* (Leiden: Brill, 1996), esp. 69–112. Ahmed Fekry Ibrahim, *Pragmatism in Islamic Law* (Syracuse: Syracuse University Press, 2015).

meaning of scripture or scriptural interpretations passed down from the early Muslims. By relaxing traditional restrictions, reformed Islam opens up considerable new space for analytic thought.

Initially, ʿAbduh's ideas were strongly resisted by the majority of al-Azhar's religious scholars. However, in the course of the 1930s and 1940s, his ideas came to dominate the institution. When al-Marāghī was appointed head of al-Azhar (*Shaykh al-Azhar*) for two separate terms (1928–1929) and (1935–1945), he used his position to promote ʿAbduh's reformed Islam and to relax traditional *madrasa* restrictions on doubt and criticism.[125] In the late 1940s, a grand new building called the Hall of Muhammad ʿAbduh was constructed next to al-Azhar mosque, to be used for major conferences and speeches. The Hall marked ʿAbduh's status as the father of the reformed al-Azhar.

Between the late nineteenth and early twentieth centuries, the European Empires spread Western education to Muslims across the world. Western-educated Muslims were highly receptive to ʿAbduh's brand of reformed Islam since it resonated with their thinking habits. As a result, ʿAbduh came to be regarded as the leading proponent of reformed Islam. Significantly, both ʿAbduh and al-Marāghī became supporters of European colonial rule. Though an opponent of colonial rule in his youth, ʿAbduh went on not only to cooperate with the British but also encouraged Muslims in Algeria and Tunisia to submit to French rule.[126] Because ʿAbduh and al-Marāghī believed that Islam (like Europe) valued progress, they could support European colonial rule as a mechanism for advancing what they conceived of as shared European–Islamic values. Meanwhile, the British promoted both of these reformers because their ideas served to legitimate Western hegemony.

Conclusion

In the foregoing sections, I have argued that nineteenth- and twentieth-century European colonialism sought to weaken non-Western religious beliefs and non-utilitarian norms. It involved amplifying analytic thinking tendencies to unprecedented levels, while suppressing religious and moral intuitions and faith in tradition.

This thesis is relevant to broader debates on colonialism and its relationship to modernity. Modernity may be defined as the era characterised by a certain kind of progress or development. This so-called modernisation has, as already mentioned, long been understood as a process centred on rising levels of science and utilitarianism.[127] Scholars have also identified a range of other phenomena associated with it, not least growing urbanisation, bureaucratisation and nationalism.[128] The question most salient to this article is: to what extent can modernisation be described as Western or as a product of Western dominance and imperialism? This important question has engendered two broad responses, one conventional, with roots in the Enlightenment, and the other critical, a product of the last four decades.

The conventional response associates modernity with relatively well-defined temporal and geographic boundaries. In this view, modernity marks a radical new historical era.[129] The modernisation defining it emerged in Europe, before spreading across the globe with the aid of European imperialism.[130] In that process, non-Western societies are understood as largely passive recipients

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[125]Discussions of Marāghī can be found in Costet-Tardieu, *Réformiste*; Brunner, *Education*, 109–40.

[126]Riḍā, *Tārīkh al-Ustādh*, vol. 1, 871–4.

[127]See Lukes and Urbinati, *Condorcet*; Mill, *Utilitarianism*; Stokes, *Utilitarians and India*.

[128]David Washbrook, 'From Comparative Sociology to Global History: Britain and India in the pre-history of modernity,' *Journal of the Economic and Social History of the Orient* 40, no. 4 (1997): 411; Philip Gorski, 'The Mosaic Moment: An Early Modernist Critique of Modernist Theories of Nationalism,' *American Journal of Sociology* 105, no. 5 (2000): 1428–68; Huri Islamoglu and Peter Perdue, 'Introduction,' in *Shared Histories of Modernity: China, India and the Ottoman Empire*, ed. Huri Islamoglu and Peter Perdue (New York: Routledge, 2009), 1–20.

[129]Zvi Ben-Dor Benite, 'Modernity: The Sphinx and the Historian,' *The American Historical Review* 116, no. 3 (2011): 638–52.

[130]Washbrook, *Comparative Sociology*; Chakrabarty, *Provincializing Europe*, 7–8; Benite, *Modernity*.

of a modernity generated by Europe and later the West. The critical response, in contrast, challenges these temporal and geographic boundaries by arguing that various elements associated with modernisation appeared in some recognisable form either prior to the modern period or outside the region of Europe.[131] Furthermore, these elements were a result of interconnected, often global-scale, technological, economic and cultural developments. In bringing together peoples and places, these developments allowed for mutual influences between distinctive individual societies.[132] Thus, many societies (including Muslim ones) actively participated in the process of modernisation. Each society thereby created an idiosyncratic version of modernisation reflecting its own cultural and religious heritage. The outcome is 'multiple modernities' which merit recognition by scholars. If such recognition has been slow in coming, this is mainly because the West has (until recently) leveraged its superior socio-economic power to promote or impose its own interpretation of modernisation.[133] In short, the critical response takes issue with the notion that the modernisation process is Western. It argues instead that non-Western societies played a central role in generating and directing modernisation initiatives. Thus, the modernisation that one finds in countries like Egypt was *not* in its fundamentals a product of Western hegemony or colonialism, but rather stemmed from a combination of path-dependent and exogenous factors.

The ways in which the Cognitive perspective relates to these conventional and critical responses are a complex matter. This is because it reinforces certain of their aspects, while undermining others. Consistent with the critical response, the Cognitive perspective claims that key elements of modernisation preceded the modern period and are not uniquely European or Western. This is because scientific and utilitarian modes of thought associated with modernisation derive from the biologically rooted psychology of humans. Thus, these modes are present in some form in all societies and in all eras. Consistent with the conventional response, the Cognitive perspective claims that there exist significant differences between societies, including between those considered Western and non-Western. However, it parts company in maintaining that these differences are largely psychological, that they should be understood in relationship to evolved mechanisms and that they are amenable to statistical measurement.

According to the Cognitive perspective, psychological differences between populations can be explained, to a large extent, by reference to socio-economic factors, which interact with evolved mechanisms to produce particular psychological tendencies. Statistical evidence shows that tendencies, like support for religion and tradition, are a function of factors including the form of subsistence or livelihood, the level of urbanisation, dependence on markets and average family size.[134] Premodern societies differed considerably from one another in terms of these socio-economic factors. It is thus likely that they also differed considerably in their collective psychologies. These socio-economic and psychological differences shaped the cultures and religions of premodern societies. It has been argued on both theoretical and empirical grounds that premodern cultures and religions continue to exert significant influence on populations today, contributing to

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[131]Washbrook, *Comparative Sociology*; Islamoglu and Perdue, *Introduction*; Benite, *Modernity*. Also see Gorski, *Mosaic Moment*.

[132]Washbrook, *Comparative Sociology*; Islamoglu and Perdue, *Introduction*; Wolin, *Modernity*; James McDougall, 'Modernity in 'Antique Lands': Perspectives from the Western Mediterranean,' *Journal of the Economic and Social History of the Orient* 60, no. 1–2 (2017): 1–17.

[133]S. N. Eisenstadt, 'Multiple Modernities,' *Daedalus* 129 (2000): 1–29; Washbrook, *Comparative Sociology*, 411–2; Chakrabarty, *Provincializing Europe*; Benite, *Modernity*; Wolin, *Modernity*; also see Peter van der Veer, 'The Global History of Modernity',' *Journal of the Economic and Social History of the Orient* 41, no. 3 (1998): 285–94; On-cho Ng, 'The Epochal Concept of 'Early Modernity' and the Intellectual History of Late Imperial China,' *Journal of World History* 14, no. 1 (2003), 37–61.

[134]See e.g., Pippa Norris and Ronald Inglehart, *Sacred and Secular* (New York: Cambridge University Press, 2004), 25–79; Rachel McCleary and Robert Barro, 'Religion and Political Economy in an International Panel,' *Journal for the Scientific Study of Religion* 45, no. 2 (2006): 149–75; Schwartz, Value *Orientations*; Jonathan Schulz, Duman Bahrami-Rad, Jonathan Beauchamp, and Joseph Henrich, 'The Church, Intensive kinship, and Global Psychological Variation,' *Science* 366, no. 6466 (2019); Henrich, *WEIRDest People*.

their distinctive collective psychologies.[135] For instance, one prominent line of research suggests that medieval Europe had a unique socio-economic profile, based on factors like low family size and high urbanisation, which has informed the unique culture and psychology of contemporary Westerners.[136]

The Cognitive perspective embraces the significance of interconnectivity and holds that socio-economic developments are intimately related to cultural and psychological developments on multiple scales. At the same time, it insists that there are important psychological (and behavioural) differences between populations which can be identified statistically. To give one example, even where the religiosity and fertility of Muslim populations have fallen, they still remain significantly higher than the religiosity and fertility of Western populations.[137] Existing evidence does not indicate that the distinctive psychological attributes underpinning such gaps are set to disappear in the near future, and it is possible they will never disappear. Thus, by adducing evidence of psychological differences which have persisted into the modern era, the Cognitive perspective provides support for the critical response's notion of multiple modernities. At the same time, it undermines that aspect of the critical response which stresses the commonalities between Western and non-Western societies due to their purportedly shared involvement in global developments.

Turning to the more specific matter of modernisation's relationship to colonialism, this article does not argue that modernisation should be equated with simple increases in scientific and utilitarian thought. After all, such increases have quite plausibly characterised many episodes in pre-modern times, such as the Graeco-Arabic translation movement. Rather, my argument is that the distinctiveness of modernisation lies in the unprecedented growth in the *intensity* of scientific and utilitarian thought. This growth has been rapid and continuous. Moreover, it is paired with a systematic repudiation and stigmatisation of non-scientific and non-utilitarian elements in human thought. Defined in this manner, modernisation is hostile to beliefs derived from religious or moral intuitions and faith in tradition.

As mentioned above, the Cognitive perspective affirms the existence of significant psychological differences between populations. It further posits that populations experience modernisation in dissimilar ways due to these psychological differences, resulting in 'devastating consequences' for many non-Western societies.[138] Modernisation may be regarded as Western in the sense that it conforms most closely to Western psychology.[139] Statistical evidence indicates that, relative to most or all other populations (including Muslim ones), Western populations incline more strongly towards a scientific-utilitarian worldview. As a counterpart, they tend to be more opposed to beliefs which derive from religious and moral intuitions and faith in tradition.[140] Thus, Westerners are inclined to support political projects which promote a 'strong' version of modernisation. This propels the modernisation of their own societies through, say, democratic elections. Likewise, Westerners are active in promoting the modernisation of other societies, via mechanisms such as development aid (and, in the past, colonialism).

Statistical evidence indicates that most non-Western populations, like the Egyptian population, are more strongly inclined towards beliefs which derive from religious and moral intuitions and faith in tradition.[141] This produces greater opposition to unfettered modernisation and its

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[135]See Richerson and Boyd, *Genes*; Henrich, *Secret*; Duman Bahrami-Rad, Anke Becker, and Joseph Henrich, 'Tabulated nonsense? Testing the validity of the Ethnographic Atlas,' *Economics Letters* 204 (2021): 109880.

[136]Schulz et al., *Church*; Henrich, *WEIRDest People*.

[137]See e.g., Pew Research Center, 'The Changing Global Religious Landscape,' 2017, https://www.pewforum.org/wp-content/uploads/sites/7/2017/04/FULL-REPORT-WITH-APPENDIXES-A-AND-B-APRIL-3.pdf. Downloaded May 2, 2021; Ronald Inglehart, 'Giving up on God: The Global Decline of Religion,' *Foreign Affairs* 99 (2020): 110–8.

[138]Henrich, *WEIRDest People*, 484–9.

[139]See Henrich, *WEIRDest People*, 484–9.

[140]See Henrich et al., *Weirdest People*; Henrich, *WEIRDest People*; Haidt, *Righteous Mind*; Norenzayan, *Big Gods*, 52–4, 180–5; Inglehart and Welzel, *Modernization*; Schwartz, Value *Orientations*.

[141]See Henrich et al., *Weirdest People*; Henrich, *WEIRDest People*; Haidt, *Righteous Mind*; Norenzayan, *Big Gods*, 52–4, 180–85; Inglehart and Welzel, *Modernization*; Schwartz, Value *Orientations*.

accompanying scientific-utilitarian worldview. Nevertheless, non-Western elites frequently expressed the opinion that political considerations necessitated efforts to increase the levels of scientific and utilitarian thought in their countries. This was considered the only means of acquiring sufficient technological-economic power to resist conquest and control by Western regimes. Hence, fear of the West, and relatedly opposition to Western dominance, has played a crucial role in the modernisation of non-Western countries. In the case of Egypt, efforts to restructure the polity in keeping with scientific-utilitarian thought began in the wake of the French invasion of 1798 and were directed towards preventing any such invasion in the future. Threats from the West also played an essential role in the genesis of Islamic reform there and elsewhere. Accordingly, figures like al-Afghānī and ʿAbduh did not advocate in favour of scientific-utilitarian thought merely because they viewed it as persuasive. Despite popular opposition, they also viewed it as necessary for defending Muslims against domination, humiliation and even extermination at the hands of Western colonialists.