Herbert R. Swanson

Origins of the Nineteenth Century Transformation of Cosmology in Northern Siam: The Nan Inta-McGilvary Debates on Science and Religion

Introduction

Over the course of the years 1867 and 1868, in the city of Chiang Mai, two men carried on a wide-ranging debate on religious and scientific subjects. Nan Inta was a northern Thai, well-educated in the precepts of Buddhism and of some social standing in his community; although not a member of Chiang Mai's educated class, he possessed intellectual skills and sensibilities in fair measure. Dr. Daniel McGilvary was an American Presbyterian missionary, well educated in the precepts of Protestant Christianity and only recently a resident of Chiang Mai. While he also did not have the marks of an "intellectual" as such, he had a strong background in philosophy and science, as well as theology. Their discussions, on one level, represented simply a debate carried on by two men who shared an interest in cosmological and religious questions. At a deeper level, those conversations mark the earliest recorded encounter in northern Siam between the indigenous worldview of the northern Thai and the Western scientific understanding of the world. The Nan Inta-McGilvary dialogue, thus, foreshadowed and contributed to the reconfiguration of northern Thai cosmology as it came face to face with a Western Newtonian account of physical reality.

The personal dialogue between these two religionists, however, has to date gone unnoticed in the scholarly study of northern Thai modernization and Westernization, perhaps due in part to the fact that it is buried away in missionary literature and seems, on a first reading, to have more to do with missionary proselytization than questions of cosmology and world view. Nan Inta, after all, did convert to Christianity because of their discussions. A closer reading, however, reveals an intriguing situation in which two men of considerably different backgrounds worked through their intellectual and cultural differences to achieve a shared worldview based on Western science. The story of that dialogue, set in the United States as well as in northern Siam, deserves attention in its own right.

The Contexts

The dialogue between Daniel McGilvary and Nan Inta began not long after the McGilvary family arrived in Chiang Mai in April 1867,

when Nan Inta learned that the McGilvarys were teaching a new religion and approached them to learn more about that teaching. In the process, he initiated an encounter not only between two individuals but also between two worldviews, worldviews that had already encountered each other in Bangkok well before the McGilvarys landed in Chiang Mai. Reynolds, noting that nineteenth-century Theravada Buddhists shared the same cosmography, argues that the Thai intellectual elite in Bangkok responded to the introduction of Western scientific and religious thought by Western missionaries by accepting the science and rejecting the religion. The publication of a book entitled *Kitchanukit*, by the Minister of Foreign Affairs, Chaophraya Thiphakorawong, in 1867 represented the culmination of that response. Thiphakorawong concluded that traditional Thai cosmography, encapsulated in the *Traibhumi*, provided an adequate guide to moral behavior but could no longer be relied upon for understanding the natural world in the face of Newtonian science's superior powers for explaining natural phenomenon. Reynolds argues that the publication of *Kitchanukit* reflected Siam's adjustment to the larger processes of Westernization and the perceived differences between its own and Western societies, a powerful set of processes that influenced Siam cognitively as well as technologically. He concludes, "One might go so far as to say that the publication of *Kitchanukit* in 1867 encapsulates the ending of one world and the beginning of another one."[1]

The old world and Theravada cosmology in northern Siam had not yet come to an end in 1867, but it can be argued that the establishment of a permanent missionary presence in Chiang Mai in that same year initiated the process of cognitive change in the North, which had already progressed so far among Bangkok's intellectual and political elite. In Chiang Mai, the old cosmology still stood. Davis describes that cosmology as consisting of a hodge podge of beliefs and ideas taken from a number of cultural sources, the most central being Theravada Buddhism including the *Thainyaphuum* (*Three Worlds*), the northern Thai version of the *Traibhumi*. According to the *Thainyaphuum*, the cosmos is made up of innumerable universes, each universe centered on a huge mountain inhabited by the god, Indra. The universe we inhabit contains great chains of mountains and seas as well as four continents. The whole cosmos, according to northern Thai thought, is divided vertically into three divisions or worlds, the World of Desire, World of Form, and World Without Form; these three worlds are further subdivided into 31 levels, lowest to highest. In addition to this cosmology, the northern Thai universe is inhabited by a variety of non-human powers and beings, all fitting into a grand scheme of birth and rebirth. Davis concludes that, "The Muang [northern Thai] themselves see very little in the way of system in their cosmos, nor do they pretend to understand its workings."[2] Davis emphasizes the fact that the northern Thai preserved this sense of a lack of order to their cosmos as a cognitive and psychological strategy for preserving their ability to interpret the powers around them while eschewing their ability to take control of their own destiny. He claims, "An ordered universe is a controllable one; an incoherent universe not only takes responsibility for people's welfare out of their own hands, but also provides an inexhaustible supply of explanations for the misfortunes which afflict them."[3]

Reynolds presents quite a different picture, arguing that Theravada Buddhist cosmology presented an ordered universe and provided a system of classifications of that universe that shows some parallels with Western scientific thought. It contains, for example, "a taxonomy of all animate existence" just as science includes the branches of botany and zoology. Or, again, the concept of *karma* gives order to the world and regularity in much the same way that Newtonian laws give order and regularity to the physical universe. Reynolds maintains that one can look on the *Traibhumi* as being like a science textbook that explains "planetary motion and the recurrence of the seasons" and covers subjects such as geography, biology, and meteorology.[4] The differences between Reynolds and Davis may be accounted for in part, at least, by the fact that they studied Buddhist cosmology in quite different locales and eras, Reynolds looking at the belief system of an intellectual elite in the nineteenth century while Davis studied the cosmological beliefs of a rural village in the 1960s. These differences are

important to understanding Nan Inta's participation in his dialogue with Daniel McGilvary. As far as we can tell within the limitations of the historical record, it seems that he articulated a relatively well-ordered cosmology—more along the lines of Reynolds than Davis—and did so with a fair degree of intellectual skill and insight. We can only surmise that his cosmology was a version of the northern Thai cosmology held by better-educated, religiously well-trained individuals, such as Nan Inta himself.

Assuming that Nan Inta did hold a relatively orderly, analytical cosmology, he would have (and did) find McGilvary's worldview at once incredibly alien and yet not without points he could readily grasp. McGilvary was an "Old School" American Presbyterian, who received his theological training at Princeton Theological Seminary, graduating from that well-known institution in 1856. McGilvary's religious, academic, and cultural heritage combined to provide him with a clearly defined scientific understanding of the physical universe that has become known in scholarly circles as "Baconianism." Named after Sir Francis Bacon (1561–1626), Baconianism actually grew out of the eighteenth-century Scottish Enlightenment philosophical school known as Common Sense Philosophy, or Common Sense Realism; Thomas Reid (1710–1796) was the most important of its several progenitors. The Scottish school, in brief, took strong exception to David Hume's (1711–1776) radical attack on the certainty of human knowledge, both of the physical world and of God. It argued that God has created an orderly, understandable world and given humanity the senses necessary to understanding the world as it actually is. Most importantly, God has planted within humanity a universal, timeless "common sense" that gives the whole human race the assurance that the physical world is real. Common Sense Philosophy was first transported to the United States in last half of the seventeenth century and soon exerted a profound influence on American thought, not least of all among Old School Presbyterians.[5] McGilvary's denomination shared thus in the Baconian understanding of science, which argued that science must proceed in an inductive fashion by carefully collecting a great mass of factual data, collating that data, and extracting from it principles and laws. The true scientist, according to Baconianism, recognizes that the Bible contains its own set of facts, which science cannot contradict. Science is the "handmaiden" of Theology.[6]

McGilvary, it should be emphasized, had a serious interest in science and cosmology, an interest that came almost naturally to him as an Old School Presbyterian. When McGilvary died in 1911, a colleague recalled that he gave place to none "in reverence for the truths of science" and in his respect "for the discoveries of research." McGilvary, he writes, "took pleasure in speaking and teaching the people of the revelations of science with which he kept in close touch for one living on the very borders of civilization." That colleague also noted, however, that McGilvary had no patience "for the advanced theories and acrimonious statements of criticism." He was "unmoved and unannoyed" with "advanced theories and iconoclastic speculations of extreme criticism."[7] This is an almost classic description of American Baconianism.

McGilvary, however, was not merely a Baconian. As an Old School Presbyterian trained at Princeton Seminary, he also stood heir to the religious tradition of Protestant Reformed orthodoxy, more popularly known as "Calvinism." That tradition generally emphasized a rational, cognitive approach to religion that emphasized right thinking and correct interpretations of the Bible; it valued education and, thus, complimented rather than contradicted the Old School's Baconian and Newtonian worldview.[8] Finally, McGilvary shared with American Protestants of many backgrounds in a form of piety usually styled as "evangelicalism." American evangelicalism came in many shapes and varieties, but most evangelicals shared in a desire for a warm-hearted piety and emphasized the importance of the Bible as the perfect, infallible Word of God for humanity.[9]

One is struck by the wide cultural and intellectual gulf that lay between Nan Inta and Daniel McGilvary. Nan Inta's eventual conversion suggests, however, that they were able to build bridges across that chasm, bridges that were as much cosmological as they were religious. Nan Inta, in the process, did not simply accept a Calvinistic theology dressed up in Old

School American Presbyterian garb. He also "converted" to a Baconian and Newtonian worldview that had profound implications for the future course of northern Thai history where the converts to Calvinism were as few as the converts to Newtonianism were many.

The Debate[16]

Among the great number of people who visited the McGilvary family in their first weeks in Chiang Mai, McGilvary recalled most clearly Nan Inta, a tall, handsome, thoughtful looking man, who called on them ostensibly to obtain medicine for a severe cough. He actually came more out of curiosity about their strange religious message than anything else. He was roughly forty-nine years old, had seven children, and had been an abbot at one time; people knew him to be a devoutly religious individual with a studious, logical, active mind and a personality that McGilvary described as honest, frank, and sincere. After his first visit, Nan Inta began to drop by frequently and to read manuscript copies of the few tracts that the missionaries had translated into northern Thai. Although he had ceased to find his own religion satisfying, he also found it difficult to accept the patently alien religious message of the missionaries. McGilvary reports, "We had some arguments, also, on the science of geography, on the shape of the earth, on the nature of eclipses, and the like. What he heard was as foreign to all his preconceived ideas as was the doctrine of salvation from sin by the death of Christ."[17] Over the course of this debate, Nan Inta grew increasingly intrigued by the plausibility of the biblical account of the creation of the world as well as the Christian "plan of salvation," but he could not decide how true they were. McGilvary, meanwhile, continued to argue that Christianity provided a better understanding of the physical world, under the assumption that if he could prove that point Nan Inta would accept the religious truth of Christianity as well.

Having failed to bring Nan Inta to a definite decision concerning the truth of Western religion and science, McGilvary employed a new tactic in place of debating cosmology. He knew from his almanacs that Siam would experience a solar eclipse on 18 August 1868, and about a week before the event, he informed Nan Inta of the coming eclipse. McGilvary wrote that Nan Inta later stated his feelings about this prediction as follows,

> His sacred books had taught him that it [the eclipse] is occasioned by a huge monster devouring the sun. Of course therefore such a thing as predicting before-hand the day and the hour is impossible. We accounted for it on natural principles, and as an evidence of their correctness told beforehand the very hour of its occurrence. . . . It seemed to him a bold venture in us as if we were staking all on a single event, and were willing to rest the falsity of Buddhism on the issue.[18]

Nan Inta agreed that a correct prediction would disprove his former beliefs about the nature of the world because McGilvary could not possibly predict when a huge monster would devour the sun. He also allowed that a correct prediction of the solar eclipse would suggest that he had been misled in religious as well as scientific matters.

McGilvary's correct prediction threw Nan Inta into an even deeper quandary, facing him with the probability that his whole worldview, including his religious faith, was wrong. McGilvary claimed that he faced "a sea of uncertainty," because his trust in his own merit and the foundation of his religious faith had shown themselves built not on rock but on "the drifting sand." Nan Inta then had to deal with the question of whether or not he should accept the Christian message and diligently set himself the task of finding an answer to that question.[19] He studied all of the literature the missionaries could provide him and learned to read central Thai so he could study the Bible and other literature the Siam Mission had produced in that script. McGilvary observes,

> He soon gave evidence that he sought by prayer to be guided into the knowledge of the truth. Having need of a teacher and writer I employed him in that capacity, with the design in part, of having him under our immediate instruction. He accompanied me on a tour to Lampoon, the 1st of November. This gave us more opportunities of conversation, than we had even at home. During

> that tour he expressed his full conviction on the truth of Christianity."[9]

Nan Inta received baptism in January 1869 and in later years proved to be the most important northern Thai leader of the church. He died in 1882.

McGilvary, of course, expressed his personal sense of joy with Nan Inta's conversion, writing, "Well may we exclaim, What hath God wrought! It is well calculated to inspire us with faith in God's promises that he can and will gather in his own chosen ones."[10] It was not so much, however, the simple fact of that conversion that impressed McGilvary as the role his cosmological arguments, capped by the prediction of the eclipse, played in Nan Inta's decision. McGilvary wrote of Nan Inta,

> The explanation of it [the eclipse] seemed to him so natural and beautiful and rational compared with what their books teach, that it led him to a clear and firm foothold on which he feels and knows that he is safe. And now almost daily he uses the same argument to his countrymen. He feels in reference to it as you do when you have been deceived once by an individual, that you cannot be caught again. So Nan Inta argues, Buddh has lied *there* I know. How can I believe him in more important matters? If he has deceived me when he teaches me that an eclipse is caused by a huge monster devouring the sun—how can I trust him when he tells me that the worship of his image will save me? When I come to think of it, the one is as ridiculous and as absurd as the other.[11]

Whether or not these sentiments accurately summarize Nan Inta's own interpretation, they do accurately reflect the Baconian message McGilvary delivered to him. McGilvary challenged Nan Inta with a choice between what he presented as the unconditional, a-historical, and enlightened truth of Christianity and the false superstitions of the northern Thai, such as the belief in sun-eating monsters.[12] In the process, he exhibited a Baconian faith in the truth of science and its value as a "handmaiden" to Christian faith, particularly relying on Newtonian principles to demonstrate the rational nature of both science and the Christian religion. The whole process was a cognitive one based on McGilvary's favorable impression of Nan Inta's intellectual qualities and on his own fundamental trust in human cognition, a trust based on his Enlightenment and Common Sense Philosophy background. He, thus, argued with Nan Inta on epistemological grounds that further demonstrated McGilvary's quiet confidence in the human intellect to discern the truth and make rational, methodological choices based on a careful weighing of evidence.

McGilvary based his stance in his debates with Nan Inta, however, on his Reformed religious heritage as much as on his Enlightenment trust in human cognition. Implicit in not only the method of his delivery of the Christian message to Nan Inta but also in McGilvary's attitude was the assumption that the transfer of knowledge should go in only one direction. He believed that he knew and preached the one, universal, and objective truth that leads to salvation, and it surely never entered his mind that Nan Inta's perception of reality had anything positive to teach him. "The Buddh," after all, had "lied" to Nan Inta about the nature of the physical world, a "fact" that threw into serious doubt the whole belief system of northern Siam. In that sense, McGilvary lived in a doubly Newtonian world in which both physical and religious reality could be understood and events in each predicted. He also lived in a doubly Calvinistic world whereby he equated the activity of God with the fact that he persuaded Nan Inta to change his beliefs regarding both natural reality and religious truth. What, he asked in wonder and astonishment, had *God* wrought? Daniel McGilvary did not attempt to enter into a dialogue with Nan Inta, and all of his cosmological-theological discussions with Nan Inta involved a one-way transfer of data that Nan Inta eventually found compelling. Newton the Scientist and Paul the Apostle were both right, and the only way one could become a Christian was to cross over the sharply defined boundary between northern Thai cosmology and religion on the one hand and the Newtonian-Pauline-Augustinian system of doctrines and meanings on the other.

In this mix of doctrine and cosmology, Nan Inta eventually achieved what can only be called an evangelical conversion experience, one laid on the foundation of many hours of intellectual

struggle with a new world view. McGilvary remembers,

> While the truth dawned gradually on his mind, the full vision seemed to be sudden. His own account was that afterwards when walking in the fields and pondering the subject, it all became very plain to him. His doubts all vanished. Henceforth for him to live was Christ; and he counted all things but loss for the excellency of the knowledge of Him.[18]

Nan Inta knew the truth. He had no doubts. He had become a man of faith, a conservative evangelical cut from the same mold as McGilvary himself, or so McGilvary leads us to believe. McGilvary alluded to his own Reformed heritage once again by observing, as we saw above, that in his conversion Nan Inta demonstrated that he was one of God's chosen people.

Nan Inta was the Laos Mission's first baptized convert, and his conversion marked an important step forward in the mission's history, ranking second in importance only to the founding of the mission itself. More immediately, it confirmed for McGilvary that his Baconian approach to evangelizing the northern Thai was a useful, correct one. Where the Presbyterian Siam Mission required some nineteen years to gain its first Thai convert, the Laos Mission achieved that same end in less than two years.[19] McGilvary had every reason, thus, to continue to use scientific information to convince northern Thais that they should convert to Christianity.

Reflections and Conclusion

The nineteenth century encounter between Nan Inta and Daniel McGilvary confounds 21st century expectations of how that event should have taken place. McGilvary, on the one hand, did not at all fit the image of a pulpit-thumping, rabid missionary evangelist. By the standards of his own day, he was well educated, a theological moderate, and interested in scientific issues, using that interest as an avenue for spreading his religious beliefs in northern Siam. Nan Inta, however, was not the simple-minded, superstitious native who eagerly jumped at belief in Newtonian Christianity. He was not the junior partner in his dialogue with McGilvary. He tested McGilvary's cosmological and theological assertions in every way that he could think of. He insisted on evidence. He devoted a good deal of thought and study to his investigation of the Newtonian-Calvinist world view and religion that McGilvary claimed was true both theologically and cosmologically. Nan Inta went so far as to learn to read central Thai so that he could study the whole Bible.

One is impressed not only with the integrity of Nan Inta's intellectual struggle with the Western scientific and religious worldview but also with his open-mindedness and his curiosity. While he initially found McGilvary's various assertions of fact incredible and highly unlikely, he did not simply reject what he heard out of hand. He was able to balance his incredulity with a willingness to investigate those assertions. Nan Inta was what we might style a "competent doubter," one who had the wherewithal to think through his doubts and use them as the means for gaining new information and insights. He could doubt McGilvary and he could also doubt his own worldview.

From McGilvary's correspondence, we know that Nan Inta was not the only northern Thai to demonstrate this level of intellectual competency and curiosity.[20] One person, for example, with whom McGilvary carried on a long, intense series of debates was Chao Mae Tip Keson, the wife of the "Prince" of Chiang Mai, Chao Intanon.[21] It would appear, if the records of the Laos Mission are any indication, that northern Thai intellectuals did not approach the challenge of Western science to northern Thai cosmology from a position of intellectual inferiority. Some of them, at least, were equipped to consider, test, and eventually accept as their own the Newtonian cosmology imported and promoted initially by the American Presbyterian missionaries. Those missionaries, particularly McGilvary, surely facilitated the process through their reasoned, intellectually grounded presentation of both Western science and religion, an approach that did not rely on emotional and revivalist strategies. It would seem that Reynolds observations that Theravada Buddhists believed in an orderly, structured cosmology that had parallels to the Newtonian scientific worldview does apply also to northern Thai Buddhism. The cognitive chasm that divided McGilvary

and the West from Nan Inta and the East was neither as broad nor as impassable as it might appear at first.

That chasm, nonetheless, did exist. There was no quick and easy way across it. As we have seen, Nan Inta gave a great deal of energy and concern to his investigation of Western science and the Christian religion. He resisted the new world view until McGilvary finally provided him with incontrovertible evidence by using Newtonian physics to predict what Nan Inta believed could not be predicted, a solar eclipse. In other cases, McGilvary used a small globe and a small telescope that he had brought with him to demonstrate the sphericity of the world and to prove that the North Star does not move in the night sky, phenomenon also at odds with northern Thai cosmology.[7] It is perhaps a measure of the difficulty Nan Inta had to overcome in accepting the Newtonian universe that, once he did accept it, he became a fervent enthusiast. As we also saw above, after his conversion he immediately began to share both his new religion and his new cosmology with others, arguing as had McGilvary that Buddhism was untrustworthy both as a cosmology and a religion. Nan Inta became an ardent disciple of more than just the "Jesus Religion." He accepted the Western scientific description of reality with an equal passion, which was born out of his struggle to resolve of his initial resistance and hesitancy.

As far as we can tell from missionary records, other northern Thai thinkers failed to share his enthusiasm for the Christian religion. After the mid-1870s, McGilvary ceased relying on the scientific presentation of the Christian message, possibly because there were relatively few people who could dialogue with him at the level required to successfully make his case for the Western world view and its religion. When northern Thais converted, in any event, it was seldom for strictly religious reasons and, after Nan Inta, never for cosmological ones—as far as we know. Although we have no comments on the matter from him, McGilvary must have been surprised that the northern Thais could accept his Western science without also converting to his religion. In an article published in the aftermath of his debates with Nan Inta, McGilvary makes a case for the teaching of science as an element in Presbyterian missionary evangelism. He argues that Christianity and science are so "intimately connected that they cannot be separated" and that the teaching of science in conjunction with Christianity will overthrow the "gigantic systems of error" of other religions. He contends that,

> ... when we take into consideration that teaching the very first principles of geography and astronomy that matter has not existed from all eternity, and the true theory of the motions and revolutions of the heavenly bodies, the very foundation of Buddhism and other false systems is effectually undermined, who would advocate the rejection of these invaluable handmaidens of religion?

He concludes, "Some of the simplest truths of western science, when taught to the adult overthrow his system of idolatry, when to the young they can no longer embrace it."[8] Actual events proved him wrong. Northern Thai thinkers apparently had little trouble maintaining their faith in Buddhism in their encounter with the new scientific worldview of the missionaries.

The Nan Inta-McGilvary debates of 1868, in sum, open an important window on the earliest stages of the transition from the northern Thai Theravada Buddhist cosmology with its grand mountains, vast seas, and hierarchy of worlds to the Western scientific world view and its carefully ordered heavens. Those discussions indicate that the American Presbyterian missionaries were well equipped intellectually to act as "Newtonian evangelists" in northern Siam. They held to a particular scientific worldview, Baconianism, which valued science as a handmaiden of their religious faith and were happy to encourage northern Thais to accept that worldview. It was part of the larger Christian message that they wanted to communicate in the North. It also shows that northern Thais, such as Nan Inta, were equally well-equipped to study the world view of the missionaries and that they did not simply fall into line once they heard it. They studied it, thought it through, and accepted it only after the evidence of its veracity overcame their resistance and skepticism. Their skepticism, finally, served to allow them to treat issues of

science separately from their religious faith, something McGilvary never did. The discussions and debates between McGilvary and Nan Inta, at the last, indicate that the process by which northern Thailand first began to consider and accept a Western Newtonian world view was a surprisingly complex one involving centuries' old intellectual and religious traditions on both sides born of strikingly different contexts. That complexity, however, did not prevent a "meeting of minds" that led to Nan Inta's personal conversion to Christianity and which portended northern Siam's eventual acceptance of a Western scientific worldview.

Notes

[1] Craig J. Reynolds, "Buddhist Cosmography in Thai History, with Special Reference to Nineteenth-Century Culture Change," *Journal of Asian Studies* 35, 2 (February 1976), 217.

[2] Richard B. Davis, *Muang Metaphysics: A Study of Northern Thai Myth and Ritual* (Bangkok: Pandora, 1984), 77.

[3] Davis, Muang Metaphysics, 73.

[4] Reynolds, "Buddhist Cosmography," 206.

[5] For Common Sense Philosophy, see S. A. Grave, *The Scottish Philosophy of Common Sense* (Oxford: Clarendon Press, 1960); and, Keith Lehrer, *Thomas Reid* (1989; reprint, London: Routledge, 1999). For American Baconianism, see Herbert Hovenkamp, *Science and Religion in America, 1800–1860* (Philadelphia: University of Pennsylvania Press, 1978); and, Walter H.Conser, Jr. *God and the Natural World: Religion and Science in Antebellum America* (Columbia: University of South Carolina Press, 1993). See also, Elizabeth Flower, and Murray G. Murphey, *A History of Philosophy in America* (New York: Capricorn Books, 1977).

[6] See McGilvary, "Medical Missions and Missionary Physicians—No. V," *North Carolina Presbyterian* New Series 2, 81 (21 July 1869): 1.

[7] S. C. Peoples, "Rev. Daniel McGilvary, D.D. An Appreciation," *Laos News* 8, 4 (October 1911): 118.

[8] For a helpful introduction to Reformed theology and thought, see Alister E. McGrath, *A Life of John Calvin* (Oxford: Blackwell, 1990).

[9] The literature on American evangelicalism is vast and disparate. A fairly recent work, however, that is helpful in setting the stage for evangelicalism in the years that McGilvary was coming to maturity is Nathan O. Hatch, *The Democratization of American Christianity* (New Haven: Yale University Press, 1989).

[10] The following discussion is based on McGilvary to Brother Sherwood, 31 December 1868, *North Carolina Presbyterian* New Series 2, 77(23 June 1869): 2; McGilvary, "Our First Convert," *North Carolina Presbyterian* New Series 2, 85(18 Aug. 1869): 4; McGilvary, undated letter in *Foreign Missionary* 28, 3 (August 1869): 58–63; and Daniel McGilvary, A *Half Century Among the Siamese and the Lao* (New York: Revell, 1912), 96–99.

[11] McGilvary, *Half Century*, 97.

[12] McGilvary, "Our First Convert," *North Carolina Presbyterian* New Series 2, 85(18 Aug. 1869): 4.

[13] McGilvary, undated letter in *Foreign Missionary* 28, 3 (August 1869): 59.

[14] McGilvary, undated letter in *Foreign Missionary* 28, 3 (August 1869): 59.

[15] McGilvary, undated letter, *Foreign Missionary* 28, 3 (August 1869): 60.

[16] McGilvary, "For the Little Folks," *North Carolina Presbyterian* New Series 3, 106(12 January 1870): 4.

[17] See McGilvary, "For the Little Folks," *North Carolina Presbyterian* New Series 1, 26 (2 July 1868): 4, where McGilvary refers to the Buddha as an "idol-god." For a more detailed description on McGilvary's views on Buddhism as superstition, see McGilvary, letter dated February 21, 1876, *North Carolina Presbyterian* New Series 9, 440 (14 June 1876): 4. Also found in, McGilvary, "Warming of Buddh," *Foreign Missionary* 35, 4 (September 1876): 121–3.

[18] McGilvary, *Half Century*, 98.

[19] Concerning the Siam Mission, see McFarland, *Historical Sketch*, 50.

[20] See, for example, McGilvary, letter dated February 21, 1876, *North Carolina Presbyterian* New Series 9, 440 (14 June 1876): 4; McGilvary, "The Laos Mission, *North Carolina Presbyterian* New Series 10, 485 (25 April 1877): 1; and McGilvary, *Half Century*, 158ff.

[21] McGilvary, *Half Century*, 180–87.

[22] See McGilvary, *Half Century*, 79; and, McGilvary, "The Laos Mission," *North Carolina Presbyterian* New Series 10, 485 (25 April 1877): 1.

[23] McGilvary, "Medical Missions and Missionary Physicians—No. V," *North Carolina Presbyterian* New Series 2, 81 (21 July 1869): 1.