William Thomson's *The Land and the Book* (first published in 1859), Henry Jessup's *Fifty-Three Years in Syria* (published in 1910, but based on a diary written over the course of the 19th century's second half), and Harry Emerson Fosdick's *A Pilgrimage to Palestine* (written and published in 1927) all include descriptions of their authors' pilgrimage experiences in the Holy Land. They also all incorporate science as way of seeing the land and scientific language as a tool for description. Each of these men was a cyborg pilgrim. Their physical bodies worked in tandem with their bodies of knowledge, and with scientific instruments like the surveyor's measuring chain or geologist's rock hammer, to produce their experiences and descriptions of a physical place which, to them, also had a powerful imagined sacred geography.

I wish to examine how science did spiritual work in these men's pilgrimages and their narratives. Here, I am inverting a (relatively) old history of science tradition of exploring the ways that religious beliefs shaped science and by examining how science, operating outside of its “official” discursive and professional boundaries, shaped religious life.¹ In that project, I am joining scholars like Sujit Sivasundaram, who recently explored the ways that scientific thinking helped to structure the way that British Evangelical missionaries working the Pacific understood and talked about their spiritual project.² Two of the three writers whose work I discuss here were missionaries, and all three viewed themselves as “civilized” Christians traveling among “backward” peoples. However, unlike Sivasundaram's missionaries, who could assign altogether novel sacred significances to places that were only just being discovered by Europeans, these three Protestants were visiting and writing about

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places that already held a special place in their religious communities' sacred geography. Their narratives had to build ties between the actually existing contemporary Levant and the imaginary Biblical Holy Land. They had to integrate their use of science into an already-thick web of sacred significance which engulfed their communities' conception of Palestine and Syria.

I will argue that these American Protestants' incorporation of scientific instruments and scientific language into their writings about this spiritually overdetermined place offered them three major religious benefits. First, the use of science reconciled an important conflict between official Protestant theology and popular Protestant practice by making pilgrimage to the Holy Land an act of Biblical interpretation. Second, it gave these sacred travel writers a precise way of communicating their pilgrimage experiences to readers, thus offering a “virtual” pilgrimage to American readers who could not afford a steamship vacation in the Eastern Mediterranean and enhancing their own credibility. Finally, it gave these writers a way to protect themselves from threatening associations with the spiritual “Others” who shared the physical space of Palestine and Syria with them.

Before I launch into an analysis of scientific language in these three texts, I will provide relevant background information about their authors, their structures, their purposes and the circumstances of their production. Thomson's book was the oldest, the most popular, and the most influential of these three texts. In his introduction, Thomson presented the book as a guide to understanding the Bible by understanding the lands where it was produced. Thus, his implicit audience was other Bible-focused Christians-- in other words, Protestants like himself. Aspects of the book's conceit make Thomson's imagined audience even more clear. He presents his description of the land as an imagined dialogue between himself and an American visitor, who he is taking on a trip around Palestine. The imaginary visitor is a white, Protestant man from Ohio, who knows the Bible

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well and is eager to explore the Holy Land, but arrives there with little knowledge and a bunch of false presuppositions. While he's there, the visitor often is unable to recognize or makes incorrect assumptions about the people, ruins, plants, and animals that he sees. Each time, Thomson gently and patiently informs and corrects him, and in doing so, communicates most of the book's informational content. It's abundantly clear in this context that Thomson intended for his reader to identify with his fictitious traveling companion (suggesting that his text's implicit reader is also white, American, non-expert Protestant), and that he positioned himself as an expert on the Bible, the Holy Land's geography, geology, flora, fauna, and people, and people. Thomson presented this narrative of an imagined pilgrimage (which he asserts is based on a composite of many journeys he took in real life) as a way to spiritually educate his reader by acquainting them with an actually existing Holy Land.

Of course, Thomson's text likely had another motive as well. He was intimately acquainted with the Levant's lands because he lived and worked there. He was a member of the small group of missionaries who the American Board for the Commission of Foreign Missions had dispatched to the Levant to convert its inhabitants to Protestantism. Three decades after they embarked on their quest, the missionaries, who made their headquarters in the rapidly expanding port city of Beirut, had little to show for their efforts. They had made only a tiny number of converts, and the churches that they established were not self-sufficient. By bringing the Holy Land to his readers' attention as a present-day place mostly inhabited by Muslims, Thomson probably hoped to raise more funds and manpower for the failing Christianization of his mission field, which included the Holy Land.

Henry Jessup also wrote as a member of the ABCFM's mission in Palestine. His Fifty-Three

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\text{Ibid, p. 62.} \\
\text{Ibid, basically the entire book.} \\
\text{Thomson further alludes to this presumed audience in his preface, where he makes it clear that “The Land and the Book is designed for general and popular reading rather than for the professional student,”} \\
\text{Ibid, vii.} \\
\text{Ibid, p. 190.}
\]
Years in Syria, unlike Thomson's tome, was a memoir, purporting to offer its author's experiences directly rather than as a fictionalized composite. The book is clearly cobbled together from Jessup's diary entries. With a few exceptions (including a hagiographic account of the missionaries who preceded him in Palestine and an account of an 1860 civil war between Lebanon's Maronite and Druze sects which spilled over into Damascus), his account is only loosely narrativized. Most of it is a chronologically-ordered list of entries detailing what Jessup did and saw and felt on particular days, with commentary about the missionary community, the churches they had set up in the area, and regional political events. Pilgrimage activities thus play a smaller role in Fifty-Three Years in Syria than The Land and the Book. Jessup presents them not as the focus of his narrative, but as events in his life as a missionary. He presents his account of them, them in 1910, as a reflection of feelings which he experienced and described in his diary in the 19th century.

A naïve reader might assume that the pilgrimage accounts that Jessup presents in his memoir are more authentic and transparent than Thomson's fictionalized, tightly constructed account. But I am not a naïve reader, and so, I noticed that although Fifty-Three Years in Syria was culled from Jessup's diary, it shows traces of an editor's hand. As a younger man, Jessup was a fierce Islamophobe. In the 19th century, he used his position as a missionary ministering to a mostly-Muslim population to pen thunderous screeds about the imposture of the Muslim faith, the ignorance of Muslim thinkers, and the moral depravity of Muslim life for the American public. But the 20th century Jessup's attitude towards Islam seemed more charitable and cautious. In the early chapters of Fifty-Three Years in Syria, which he ostensibly wrote as diary entries in the 19th century, Jessup makes many of the same negative

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11 A term which then referred to the present-day countries of Syria, Lebanon, Palestine, and Jordan
observations as he did in his pamphlets. However, he frequently couched them in favorable comparisons to Arab Christians, who made up a significant part of Lebanon's population, and French Catholics, who maintained a large missionary and military presence in Beirut and Lebanon after they intervened to stop the killing of Christians in the Druze-Maronite War of the 1860s. Although he still deplored Islamic gender roles and “ignorance,” this text's version of the young Jessup favorably noted their aversion to alcohol and their iconoclasm.\textsuperscript{14} And, as the text goes on, Jessup's unfavorable references to Muslims gradually drop off. The older Jessup-- or perhaps, his presumed audience in the United States-- had developed a less uniformly hostile view of Islam over the half-century he spent in the Levant. It seems likely that when he sculpted his diaries into a memoir, he smoothed away a little of his youthful self's anti-Islamic vitriol. So, although Jessup did not write a composite account like Thomson's, he reshaped and re-narrated his life with an audience in mind.

And Jessup did have an audience in mind and motivations for reaching out to them, because otherwise, he would not have gone to the trouble to compile his memoir and make it public. His most important motivation was probably his desire to defend and promote the mission in the Levant, which, by 1910, had made little progress toward the conversion of the Middle East.\textsuperscript{15} Jessup complained that unlike their counterparts in Korea, Ottoman Protestants had not established financially self-sufficient churches or schools, so the missionary institutions which he managed depended on continued support from Americans.\textsuperscript{16} Jessup's memoir was published in New York and sold in the United States, where he had previously traveled on recruitment and thus, he likely hoped to draw more support and income for a mission which had been far from completely successful.\textsuperscript{17}

Jessup also wished to enshrine his own reputation and that of his mission. One early section of

\textsuperscript{14} Jessup, pp. 28 (negative comments on Islamic gender roles) 85 (respect for Muslim opposition to “idolatry,” 233 (discussion about alcohol).
\textsuperscript{15} Ussama Makdisi agrees with me about this account's apologetic and promotional nature. Makdisi, pp. 168-169
\textsuperscript{17} See Ibid, p. 341, where Jessup stayed as a guest of the wealthy New York financier William Dodge, who the ABCFM's missionaries depended on for financial support.
*Fifty-Three Years in Syria* narrates the lives and good works of the Protestant missionaries who worked in Syria before him, who he referred to as “saints.”18 Jessup did not apply that label to himself, but because he worked alongside these men and women and participated in their endeavors, he implicitly claimed sainthood by offering it to them. The rest of the text supports that claim by describing his missionary endeavors in Syria. Jessup proudly described the schools and colleges he helped to establish, and mentioned that that their graduates went on to serve as missionary teachers in Lebanon and colonial administrators in Egypt.19 His memoir is a record of his own philanthropic and spiritual merit. Finally, Jessup also probably wanted his life story to offer spiritual instruction and present possibilities for spiritual growth to his readers. Jessup's own Christian and missionary zeal were awakened by a missionary's speech about field work.20 A man who gave up life as the scion of an affluent and politically powerful family, who were friends and peers of the Roosevelts, to serve in the mission field would want to spread those religious feelings to others through his tale of long service.21

The last of our three authors, Harry Emerson Fosdick, though he was an American Protestant minister like the previous two men, wrote from a very different perspective. Unlike Thomson and Jessup, who were longtime residents of the Levant and fluent Arabic speakers, Fosdick was a tourist in Palestine and Lebanon, only visiting for about a month. Thus, his account is a record of a brief trip. It is not a straightforward travelogue, however. Fosdick cut and spliced moments of his trip so that his account followed the progress of Biblical figures. Like Thomson, he was using his account to elucidate Scripture for his readers. But because he lacked Thomson's intimate knowledge of the land, he had to borrow significantly more of his authority from other researchers and writers. He frequently cited archaeologists, Orientalists, historians, and Biblical textual scholars, and mentioned many of them in a

18 Ibid, p. 31
19 Ibid, pp. 651-652
20 Ibid, p. 16
21 Jessup fondly recounted how the future President Roosevelt made a boyhood visit to the Syrian mission along with his family. Ibid, pp. 407-408.
list of reference works at the end of his volume.\textsuperscript{22}

Of course, Fosdick had motives beyond mere spiritual edification for producing this text. Back in the United States, he was a major protagonist in a raging religious controversy between Fundamentalist and Modernist Protestants (which, ironically, was ignited by conflict over missionary work in China).\textsuperscript{23} He used this narrative to advance the Modernist position, and I'll explain more about his role and how his book related to it below. The other agenda which \textit{A Pilgrimage to Palestine} advanced was anti-imperialism. Fosdick explicitly advanced a critique of the violence on the French and British colonial regimes in Lebanon and Palestine, and condemned them as anti-Christian. He asserted that “French guns bombarding Damascus and British airplanes menacing Arab villages” represented the same form of shameful, bloodthirsty militarism as the Crusades, which he considered Christianity's greatest past shame.\textsuperscript{24} Jessup's pilgrimage narrative was, in part, motivated by his need to establish the moral authority and credibility which he needed to advance these arguments.

All three of these men's pilgrimage stories thus shared common goals. Each needed ways to make his journeys spiritually relevant for his audience, assert his own piety, and establish his credibility. Each of them was also used his pilgrimage to fulfill personal spiritual needs. Below, I will explore how science, deployed as a way of seeing and describing the Holy Land helped them to meet these needs. First, I will discuss the ways that science helped these men to reconcile the practice of pilgrimage, and their own eagerness to undertake it, with their personal theologies.

Pilgrimage to Palestine occupied a paradoxical position in the religious imaginations of American Protestants. On one hand, most Protestants considered the Holy Land to be a special, blessed place. References to it pepper the hymnals of most major Protestant denominations.\textsuperscript{25} Seekers of both

\textsuperscript{22} Harry Emerson Fosdick. \textit{A Pilgrimage to Palestine}. New York: MacMillan, 1927. p. 295.
\textsuperscript{24} Ibid, pp. 258-259
\textsuperscript{25} I know this intimately from my experience growing up in an observant mainline Protestant family. Our hymnal held
personal religious fulfillment and social justice made Jerusalem a metaphor for the goals they wanted to attain. And the Holy Land was not just meaningful as a metaphor. Once steamship lines to the Eastern Mediterranean opened up, thousands of Protestant Americans made the journey for spiritual reasons. William Thomson's imagined visitor expressed deep joy and excitement upon his arrival, proclaiming that he finally found “life's long dream a beautiful reality,” and was “ready to prosecute our pilgrimage with cheerful courage and high hope.” Because Thomson's visitor was an audience surrogate, he clearly assumed that his audience would share this enthusiasm. His book's staggeringly high sales suggest that he was absolutely right. A journey Palestine carried deep emotional and spiritual meanings for American Protestants.

However, this was a case where Protestant practice could be at odds with Protestant theology. Traditionally, Christian pilgrims believed that places and objects and relics could heal visitors, and that pilgrimage was a “good work” which would bring the pilgrim closer to salvation. In an account of an apparition of the Virgin Mary in a small German town in 1876, which attracted many pilgrims, David Blackbourn noted that poorer German Catholics still sought grace and cures at holy sites, despite the skepticism of middle-class Catholic doctors and scientists. The Protestant reformation, or at least, the parts of it that spawned America's most popular churches, rejected both of these doctrines. Martin Luther argued that salvation came only through faith and the grace of God, not through the accumulation of merit, and his arguments were and are still accepted by almost all Protestants. And the Calvinist tradition, which spawned America's Congregationalist and Presbyterian churches, rejected

27 Thomson, p. xvi.
the veneration of relics and locations as idolatrous. The authors who I profile here shared these beliefs, and their description of Christians who venerated tombs, relics, and icons dripped with contempt. So, the attachment that these writers and their audiences had to pilgrimage threatened to contradict their theological positions on salvation and idolatry.

William Thomson's *The Land and the Book* offered a solution to this dilemma by making pilgrimage a hermeneutic act. For him, the Bible was a text deeply grounded in the environment of the Holy Land: “The Land where the Word-made-flesh dwelt with men is, and must ever be, an integral part of the Divine Revelation... Even the trees of her forests speak parables, and rough brambles bear allegories.” Thus, exploring Palestine's natural history, geography, and anthropology could serve as an interpretive aid to the devout, Bible-believing Protestant. One of the land's hermeneutic functions was rendering seemingly confusing passages of the Bible sensible. For example, Thomson noted that a scene in which a small man named Zacchaeus climbed up a sycamore tree to see Jesus made much more sense to a reader familiar with the sturdy, thickly-branched sycamores of the Levant rather than the significantly smaller and thinner trees of the same genus which grew in the United States.

Similarly, he argued that an actual fast-growing bean plant well known in the Levant grew to shade Jonah from the sun while he stayed neared Nineveh. Evoking concepts from the discourse of natural theology, he suggested that God used this plant because he preferred to work through the most efficient means possible. However, Thomson was significantly more concerned with offering explanations for the Bible's figurative languages and Jesus's parables. Thomson found that two sciences, zoology and botany, proved particularly useful for this purpose. He identified trees, other plants, and species of birds mentioned in the bible. By examining their properties, he could better explain what the metaphors that employed them meant, or at least, explain why those particular plants and animals

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32 Thomson, p. xv.
33 Ibid, p. 22
34 Ibid, pp. 95-96
served the metaphorical purposes that they did. For example, in an extended discussion of the olive tree's botanical properties, Thomson explained metaphors used by the prophets Hosea and Moses, the poet of the parable of Job, and St. Paul.\(^ {35} \) By exploring the land, Thomson found that he could enhance his understanding of scripture-- and the sciences gave him a more intimate understanding of the land.

Henry Jessup's account highlights another way that scientific practice could make pilgrimage meaningful. This was science-as-sacred meditation. In the early 19\(^{th} \) century, during the decades that Jessup pursued his theological explanation, many English-speaking religious people embraced the concept of natural theology. As William Paley asserted in the movement's eponymous codifying text, believers in natural theology considered the natural world a source of important evidence about God's nature, and thus considered science a religious activity which promoted spiritual growth.\(^ {36} \) Sujit Sivasundaram notes that natural theology was popular among the members of the London Missionary Society, an English, majority-Congregationalist organization which trained missionaries and dispatched them first to the South Pacific, then to the rest of the globe.\(^ {37} \) Henry Jessup had extensive contact with the London Missionary Society's members. He traveled to Britain on multiple occasions to seek funding for the mission that he helped to run in Beirut, and as the 19\(^{th} \) century progressed he worked with a number of Presbyterian and Congregationalist missionaries in his own field.\(^ {38} \) Thus, even in the unlikely event that he hadn't been exposed to Paley's ideas while studying at Yale Seminary or doing his own reading, he almost certainly would have encountered them through his British contacts.

Unsurprisingly, then, Jessup's discussion of how missionaries like himself should relate to science deeply reflects these ideas. He “would cordially recommend to every young man going out as a missionary to study some branch of natural science... as a means of recreation, mental invigoration,

\(^ {35} \) Ibid, pp. 71-73
\(^ {37} \) Sivasundaram, pp. 42-43.
\(^ {38} \) Jessup, pp. 651-652
relief from the routine of regular duties, and a means of gaining enlarged ideas of the power, wisdom, and goodness of God, who created alike the Book of Nature and the Book of Revelation.”

This passage follows his narrative's most significant discussion of a pilgrimage, a trip to Mt. Lebanon (which held sacred significance for Biblical Hebrews and appears in many Biblical metaphors) which was ostensibly a geological and paleontological expedition. However, it also allowed Jessup to collect specimens which served as “a monument of the most ancient pre-Adamite inhabitants of Syria,” a record of God's early creation. For Jessup, paleoontology and geology were themselves form of meditation or prayer, a route to further understanding God, and one which connected him to the first moments of creation and to the Hebrew patriarchs, who also looked on Mt. Lebanon, which he noted was still “as ancient and majestic as thine own glorious past.”

Using science to understand this particular land let him meditate not just on God's plan for the universe, but on the lives and actions of the Biblical exemplars he had read about since childhood. Practicing natural science in Palestine gave him an meditative opportunity available to relatively few Christians in his time period, and he wanted to share it with his readers.

For Harry Emerson Fosdick, our 1920s-era pilgrim, pilgrimage's hermaneutic function held even more importance-- it helped him make arguments for the future of Christendom. By the time Fosdick wrote, the comfortable cohesion between scientific discovery and literal Protestant faith, the “natural theology” explained by thinkers like William Paley, had begun to fall apart in the years following the publication of The Origin of Species. The faculty of the Syrian Protestant College, which both Thomson and Jessup had helped to found, fell into acrimonious controversy over discussions of Darwin's theories, which led to the firing of several instructors. More historians and other thinkers advanced a thesis positing conflicts between science and literal interpretation of

39 Ibid, p. 128
40 Ibid, pp. 125-128
41 Ibid, p. 133
42 Turner, pp. 91-93
scripture. In this climate, Fosdick became a major leader of the “Modernist” movement within American Protestantism, which argued that believers should eschew literal interpretations of the Bible in favor of more scientifically consistent beliefs. From his influential position as the minister to one of New York's wealthiest Presbyterian churches, he delivered an address entitled “Shall the Fundamentalists Win?,” which lost him his position, but gained him fame as he reprinted it and spread it across the country. He later became the pastor at the Rockefeller-funded Riverside church, and, as spiritual adviser to John Rockefeller Jr., America's wealthiest man, he found a national audience, for whom he produced 22 books and many radio broadcasts.

Fosdick was reaching this level of influence when he took a trip to Palestine. Unsurprisingly, then, his travelogue was an unabashed intervention in the fundamentalist/modernist debate. Like Thomson, whose The Land and the Book he read in preparation for his trip, praised multiple times in the body of his text, and cited in his bibliography, Fosdick used the land to read the Bible. But unlike Thomson, he often used the land to argue that Biblical phenomena had natural explanations. While in Sinai, he offered natural explanations the “manna” which the Jews ate during Numbers, and posited meteorological explanations for the prominence of Mount Sinai as a place where people experienced prophecies. At the same time, he tried to situate the Holy Land's peoples in historical context by invoking a relatively new science: archaeology. Fosdick wryly noted that recently excavated Philistine ruins suggested that those chronic Biblical Others were likely Greeks-- the perceived ancestors of Western Civilization-- and that modern Westerners would likely have perceived them as more “civilized” than the Hebrews. He also argued that the ancient Hebrews were unexceptional among the peoples of their region by citing the text uncovered on a recently uncovered Moabite stele, which

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45 Fosdick, pp. 50-54
closely resembled some of the Old Testament's bloodier passages. In a darker turn, he invoked the orientalist arguments of Anthropologists and figures like TE Lawrence to argue that the current Arab inhabitants of Palestine, particularly those who lived as nomads in the desert, were much like ancient Hebrews. He used a visit to a Bedouin camp in the Sinai and a very literal interpretation of common Arabic expressions to argue that both groups were both proud, irrational peoples who resolved conflicts with violence, practiced misogyny and slavery, and invoked miracles to explain mundane events. Thus, he argued, that the Old Testament was a text written by primitive, barbaric Bronze Age people, whose worldview and limited interpretive powers deeply shaped its contents— not something that modern-day American Protestants should take seriously. Applying the language of archaeology and other sciences to Palestine's land made Fosdick's pilgrimage a powerful argument for his modernist position.

But Fosdick's narrative had continuities with Thomson's other than a shared invocation of science and focus on the land. After arguing that the Biblical Hebrews were a typical ancient Eastern Mediterranean people who, by modern standards, were vicious savages, he turns from the Old Testament to the New, and asserts that the limitations and barbarity of ancient Hebrews made the rise of Jesus (who Fosdick argues promoted a far more wise and humane code of ethics than his ancient counterparts) among them all the more remarkable, and worthy of veneration. Fosdick's modernist scientizing description of Palestine moved through an odd spiritual dialectic: tearing down the Old Testament not just to challenge fundamentalism, but to help the pilgrim and his readers further understand the value of Christianity. By embracing sciences, Fosdick made his pilgrimage into a valuable spiritual experience as well as a hammer in his polemical toolbox.

Scientific language and description offered these authors another benefit as well. It was a

46 Ibid, pp. 86-88
47 Ibid, pp. 75-76, pp. 136-138
48 Ibid, p. 228
literary technology which helped them to mass-reproduce, commodify, and convincingly transmit their experiences to large audiences in the United States. In their classic *Leviathan and the Air-Pump*, Steven Shapin and Simon Schaffer described how Robert Boyle and the other fellows of the Royal Society developed a set of literary technologies allowing them to describe their experiments in a way that allowed readers to imagine and, it was hoped, replicate them, increasing the experimenter's credibility by appending a crowd of “virtual witnesses” to those who attended the real-life experiment. Since then, almost all scientific disciplines have developed standard linguistic repertoires for describing their objects of study, which frequently offer systemic taxonomies of the world's objects. As Daston and Gallison noted in their account of scientific visualization, *Objectivity*, these written descriptive languages were and are complemented by conventions for visual depictions, which are paired with taxonomies in scientific atlases. These conventions allowed (and still allow) scientists to both establish their credibility with audiences and compress information so that readers could make use of it-- a map is almost infinitely more understandable and helpful than a lengthy description of coastline.

These aspects of scientific description-- credibility-production and information-compression-- were also useful to the authors of pilgrimage narratives. An educated Ohioan might have trouble imagining the cedars or stones on Mount Lebanon even with the help of detailed, but nonstandardized descriptions. If she was particularly hard-headed, she might suspect that the authors' descriptions were poetic or fanciful to the point of infidelity. (Jessup and Thomson frequently employed the very worst sort of Victorian purple prose, so this particular conclusion would not have been a major leap). However, if the author included woodcuts of the cedars which, in conventional botanical fashion, showed the whole tree, its leaves, and its seeds in separate images, or described how Mount Lebanon


was formed of soft limestone and dense with fossils of sea-dwelling animals, the additional precision could both help the reader better grasp what the traveler had seen (thus extending the Biblical hermeneutic benefits of the journey to their readers) and believe that the traveler's account matched reality. William Thomson used both meticulous technical descriptions (which sometimes included Linnean taxonomical language) and detailed botanical and zoological woodcuts produced by his son, a skilled artist, to depict the plants and animals which played important roles in Biblical parables.\(^51\)

Henry Jessup gave detailed geological and paleontological descriptions of Palestine's landforms. For example, he offered this detailed list of fossil bivalves he found in Lebanon limestone: “There are Ammonites, Strombus, Arca, Nerinea, Nerita, Cerithium, Scalaria, Natica, Corbula, Cardium, Trigonia, Hippurites, Perna, Lima, Trochus, Terebratula, Nummulines, and whole mountains of the Oolite.”\(^52\)

Fosdick achieved a different sort of precision than they did through archaeology. Using that science, he could go beyond tradition in identifying the sites of specific Biblical events on Jerusalem's Temple Mount.\(^53\)

These men also increase the precision and credibility of their pilgrimage narratives by quantifying their descriptions. Among the things that all of them describe with numerical precision are the distances between towns, the length and height of rock formations, cliffs, and hills, the size of ruins, and the heights of trees. These numerical descriptions pervade all three narratives. As Theodore Porter noted in his *Trust in Numbers*, quantification, like scientific description generally, makes direct comparisons more possible, further increasing the legibility and versimilitude of descriptions.\(^54\) Our hypothetical Ohioan could compare the mountains of the Holy Land to the hills near her family farm, and be more likely to comprehend and believe these accounts.

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\(^51\) Thomson, p. 73 is the source of the image.

\(^52\) Jessup, p. 125

\(^53\) Fosdick, pp. 110-130

And, just as Boyle increased the credibility of his experimental accounts by describing the motions of his body and his sensory experiences while conducting his experiment (while erasing those of the workmen who helped him to operate his laboratory), all of these authors augment their descriptions of the Holy Land by describing their own embodied vision. Jessup described standing atop the mountain Metaiyyer and gazing over the gorges and canyons of Lebanon's landscape.\textsuperscript{55} Fosdick describes similar vistas from the Temple Mount and the Mount of Olives.\textsuperscript{56} Thomson, the only one of the three who is not claiming that his account is a record of any specific pilgrimage, makes both his own vision and that of an imagined (white, male, Protestant, American) witness part of his narrative by framing all of his descriptions as dialogues between the two men.

Two of the three men also accentuate their embodied presence in the landscape by describing how they came into conflict with it during the process of travel itself. Thomson and Jessup both discuss the difficulty of scaling slippery, narrow mountain paths on horseback.\textsuperscript{57} Thomson further increases his embodied scientific credibility by describing his own acts of measurement. Several times, Thomson describes observations he had made himself with his measuring cord-- a common surveying instrument, related to the measuring-chain, which, in the 19\textsuperscript{th} century, was the best available instrument for small-scale measurement when the surveyor did not have access to the kind of large-scale baseline measurements necessary for the reliable use of trigonometric optical surveying instruments like the theodolite or repeating circle.\textsuperscript{58} Thomson mention help from local porters on his journey trips, but like Boyle, exclude these men from their descriptions of measurement-making. This practice allowed him to assert his position as an educated white Christian man capable of making reliable observations, increasing his credibility through an implicit contrast with with Palestine's Arab, Turkish, and Muslim

\begin{itemize}
\item\textsuperscript{55} Jessup, p. 382
\item\textsuperscript{56} Fosdick, pp. 90-125
\item\textsuperscript{57} Thomson, pp. 106-109 (amusingly, this doubles as an explanation for bits of Mosaic law about path-maintenance and for Biblical metaphors about slippery places) and Jessup, p. 127
\item\textsuperscript{58} Thomson, p. 120. For more about measuring cords and measuring chains, see Rachel Hewitt. Map of a Nation: A Biography of the Ordnance Survey. London: Granta, 2010. pp. 21-29
\end{itemize}
inhabitants. Other aspects of scientific language, including denigration of “superstition” and anthropological description offered he and his fellow Protestant pilgrimage-writers even more mechanisms for creating that distance.

The language of science offered Protestant pilgrims another benefit: a barrier between themselves and other believers. Some of those believers were fellow-pilgrims. Palestine, and its city of Jerusalem in particular, is holy ground for Jews, Christians of all stripes, and Muslims. Many of its most noteworthy sites, including the Church of the Nativity, which marks Jesus's alleged birthplace in Bethlehem, and the Church of the Holy Sepulchre were and are administered cooperatively by Christians of several different denominations.59 Others are controlled by Muslims-- most notably Jerusalem's Temple Mount, which has been occupied by the Dome of the Rock for more than a century. So, visiting traditional holy sites required American Protestants to share space with people who they saw as threatening religious others.

It is also important to note that most of these religious others were also non-European. The 19th century saw the growth and codification of Orientalism, which emphasized the distance between Europeans and Arabs. Scholarly arguments like Richard Burton's description of the Mediterranean, the Middle East, and much of Asia as a “Sotadic Zone” where homosexuality was normal and prevalent made identification with “Eastern” people particularly threatening for Europeans who were religious actors.60 Living in or even visiting the Middle East tended to bring American Protestants into intimate contact with “Eastern” men. Although Fosdick spent far less time in Syria than Jessup or Thomson, his own contact with Arabs slipped into the homoerotic. His account spends several rapturous paragraphs describing a “handsome, strapping, youthful Arab armed to the teeth,” who Fosdick bathed with in a spring and compared to a young King David.61 The spiritual danger which came with this possible

59 Fosdick notes this with some distaste, pp. 240-246.
60 Burton advances this argument in the “Terminal Essay” of his translation of The Book of the Thousand Nights and a Night. UK: Kama Shastra Society, 1885.
61 Fosdick, pp. 103-105
closeness made it particularly important for American Protestants to draw barriers between themselves and Palestine's native peoples. This differentiation helped to protect them from anxieties about their own identities--and possibly even more importantly it also helped to protect their credibility when talking to an American audience which was often deeply anti-Catholic, deeply anti-Semitic, deeply suspicious of Islam, and deeply racist. Scientific and science-inspired discourses offered American Protestants important defenses against identifying and being identified with their religious Others.

The most prominent of these was a differentiation between “rational” and “superstitious” religious practices. Science offered American Protestants a strong mechanism for dismissing the practices of other religious groups as “superstitious.” Soon after helping his imagined friend from the United States off of his ship at Beirut, Thomson sarcastically discusses local legends about the city—noting the sites where locals alleged that St. George killed his dragon and disposed of its body, calling them products of “facile faith.” With an implicit acknowledgement the dragon’s absence from the scientific natural historical record, sarcastically stated that St. George must have killed the dragon because “he has never been seen since that time, and all agree that he is dead.”

Jessup, after hearing claims that Muslims had found one of the Prophet's shoes in Diyarbakir, expressed disdain for Islamic worship of relics and tombs, calling them idolatrous and superstitious practices. Fosdick employed archaeological findings to argue that the Church of the Holy Sepulchre, which Catholics and “Eastern Christians” venerated in Jerusalem as the site of Jesus's tomb, were fraudulent. By labeling Muslims and non-Protestant Christians superstitious, these three writers could assert their superiority to and difference from their fellow pilgrims.

The language of the scientific discipline of anthropology and the semi-scientific body of knowledge which we now identify as Orientalism also offered these pilgrims a language which they

62 Thomson, p. 45
63 Jessup, p. 425
64 Fosdick, pp. 24-246
could use to produce further distance between themselves and the Levant's inhabitants. All three of these accounts regularly employed a register which I call the “Victorian Racist Singular.” Much as the 19th century's botanists and zoologists depicted a plant or animal with an image and description of a single ideal example, European and American anthropologists and travel writers reduced the peoples they encountered to ideal types represented by a single example-- in the Levant, this was “The Arab,” “The Bedouin,” “The Turk,” “The Eastern Christian,” or “the Mohammedan.” Of course, this practice made labeling a group as “superstitious” easy because the Victorian Racist Observer could generalize from the religious practices of any one of its members. It also abstracted away the real social relations between European visitors to the Holy Land and the locals they interacted with by eliding the relationships they had with visitors and concealing the agency they had in social interactions. Thus, the language of science served a double prophylactic function for these visitors, by marking local pilgrimage-related religious activities as categorically different from what Protestant visitors were doing, and protecting their narrative from intrusion by “natives” with preferences and agency of their own.

I have talked quite extensively here about how these three Protestant writers incorporated the language of science into their discussions of pilgrimage in order to perform piety, establish their credibility as witnesses, and convey spiritually relevant information to their audiences. By using science, they transformed their pilgrimages into hermaneutic acts, allowed their readers to virtually witness their journeys, and by distanced themselves from Palestine's inhabitants. But I have not explored all of the consequences of this scientific mood. The scientific revolution and the developments that succeeded it introduced new cosmologies to the Western world. I believe that incorporating science into ways of viewing and writing about the Holy Land helped to transform its

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place in the imagined cosmologies of these authors and their readers alike.

For each of these three men, science transformed the Holy Land into an assemblage of rock formations, trees, crops, birds, mammals, ruins, and “natives,” which they could easily be taxonomize, understand, and identify with objects described in the Bible. This allowed them to nail the geography they and their readers imagined for the Biblical Holy Land, with its vast sacred, eschatological, and metaphorical significance, to the actually existing environment and people of Palestine. As a consequence the physical and human terrain of Palestine, which, like all Earthly places, was disenchanted by Protestant theology, took on a more active place in their imagined cosmology. The ordering of its environment and people reflected the order of the world and the fate of Christianity. Thomson believed that the Levant's plants had sickened and failed and its ancient roads and infrastructure had fallen to shambles under Arab and Turkish rule, equating the land's decline with the power of Islam and the absence of Christianity. 67 Jessup assigned sacred significance to the friendly visit of a Protestant sovereign Kaiser Wilhelm II of Germany-- to the Levant, saying “And who know but that the emperor has come to his throne for some great and good end in this empire?...We do not put our trust in princes, but our God and King can use them as His own servants to accomplish His will on Earth.” 68 Fosdick repeated Thomson's argument about the land dying under Turkish misrule. But because Palestine and Lebanon had fallen under British and French mandates following the First World War, he had to offer additional commentary. On one hand, he praised how both the British and the Zionist settlers who had been coming to the region in larger numbers since the beginning of the mandate period had begun to increase Palestine's agricultural productivity. 69 But, as I mentioned earlier, he asserted that a long history of Christian violence in the holy land-- including both the crusades, and the British and French policies of shelling and bombing tribal peoples represented a

67 Thomson, p. 20
68 Jessup, p. 663. He died before 1914 rendered this prediction deeply ironic.
69 Fosdick, p. 9, p. 293
blight on Christianity, and a flaw in Christian civilization. Fosdick's account suggests that Christians strengthened their civilization by fixing the Holy Land's environment, but betrayed and damaged it through violence towards its people. The modernist minister, who was more suspicious of the supernatural than his missionary counterparts, was the most insistent that the ordering of things in present-day Palestine was important to the ordering of the Christian world-- perhaps because he was the most adamant that Biblical Holy Land was closely anchored to his own time's Palestine.

The belief that re-ordering the Holy Land would re-order the Christian world come to be taken very seriously and very literally by some American Protestants later in the 20th century, although that group generally did not overlap with Fosdick's Modernist flock. From the 1940s onward, America's fundamentalists became aggressive supporters of Zionism. Many among them believed that the restoration of Israel was a pre-condition for the Second Coming of Jesus.70 None of the three men I profiled here held that particular position. However, through their writing, they and other travelers to the Holy Land who invoked natural science, anthropology, and archaeology in their descriptions of it did the work of remaking the land into a collection of material objects intimately linked with their distant antecedents, but jumbled, dislocated, and damaged by time and neglect. Perhaps, ironically, the language of science, applied to the Holy Land, helped to shape the Fundamentalist imagination.