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Sera-Shriar, E. (2018). Credible witnessing: A. R. Wallace, spiritualism, and a "New branch of anthropology". *Modern Intellectual History*. XX(X)

Credible Witnessing: A. R. Wallace, Spiritualism, and a "New Branch of Anthropology"

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Abstract:

This paper situates Alfred Russel Wallace's spiritualist writings from his book *Miracles and Modern Spiritualism* (1875) against the backdrop of Victorian anthropology. It examines how he constructed his argument, and the ways in which he verified the trustworthiness of his evidence using theories and methods drawn from anthropology. Spirit investigations relied on personal testimony. Thus the key question was: who could be trusted as a credible witness? While much has been written on Wallace's inquiries into spirit phenomena, very little scholarship has taken seriously his remark about how his studies of spirits and mediums were a "new branch of anthropology". Wallace's aim of aligning his spirit investigations to the practices of British anthropology fed into larger disciplinary discussions about the construction of reliable anthropological data. Most notably, like many of his Victorian anthropological counterparts, Wallace grounded his research in a double commitment to first-hand observation and Baconian inductivism.

> Up to the time when I first became acquainted with the facts of Spiritualism, I was a confirmed philosophical skeptic… I was so thorough and confirmed a materialist that I could not at that time find a place in my mind for the conception of spiritual existence, or for any other agencies in the universe than matter and force.[1]
>
> - A.R. Wallace (1875)

Alfred Russel Wallace (1823-1913) – famously known as the co-discoverer of evolution by natural selection – was a self-proclaimed skeptic of spiritualism before attending his first séance on 22 July 1865 at the home of a friend.[2] Like most men of science during the Victorian age, he did not believe that there was sufficient evidence available to confirm that spirits or psychical forces were real. This event in 1865 proved to be a transformative moment in Wallace's life, and his stance began to change. Over the course of the next year he was immersing himself in the study of the supernatural, becoming a vocal proponent of modern spiritualism.[3] On 22 November 1866, Wallace wrote a letter to his friend the biologist Thomas Henry Huxley (1825-1895), about an exciting "new branch of anthropology" that he had been working on – the investigation of spirit phenomena. Wallace continued by inviting Huxley to join him on a Friday evening so that he too could witness the curious displays and perhaps contribute to this budding field of scientific enquiry.[4] Huxley rejected the invitation by stating, "I have half-a-dozen investigations of infinitely greater interest to me which any spare time I may have will be devoted."[5] Wallace's exchange with Huxley brings to the fore a key problem that he faced as a proponent of spirit investigations – gaining scientific credibility.

Wallace believed that if he could go from being a skeptic to a convert, so too could other men of science. He argued that the key to achieving scientific legitimacy for spirit investigations was through the establishment of reliable witnesses, and trustworthy evidence.[6] As Janet Oppenheim argued, "[Wallace] was convinced that the testimony of his own sense, combined with the records of countless other investigators over the centuries, provided an adequate empirical base on which to establish the validity of spiritualism."[7] It was a cause that he was committed to for the remainder of his life, and to accomplish this goal he borrowed observational techniques from anthropology – a science that relied quite heavily on credible witnessing.[8] What it meant to observe something anthropologically for Wallace, was not simply the physical act of looking at something; rather it is much more nuanced process of collecting, analyzing and representing anthropological data.[9] It is a way of knowing and understanding the world through a specialized framework – what Daniela Bleichmar calls, "visual epistemology."[10]

This paper will situate Wallace's spiritualist writings from his most significant book on the subject *Miracles and Modern Spiritualism* (1875) against the backdrop of Victorian anthropology. It will examine how Wallace constructed his argument, and how he verified the trustworthiness of his evidence using theories and methods drawn from anthropology.[11] While much has been written on Wallace's inquiries into spirit phenomena, very little scholarship has taken seriously his remark about how his studies of spirits and psychical forces were a type of anthropology.[12] When connections are drawn between Wallace's twin interests in

spiritualism and anthropology, it is usually to examine his research on extra-European conceptions of spiritualism.[13]

While there is no doubt that many of the practices that Wallace used in his spirit investigations were shared by other sciences, most notably physics and natural history, it is telling that Wallace identified anthropology as being the best fit for developing his research program. It was fairly common during the middle of the nineteenth century for anthropologists to borrow techniques from the more established sciences. Physics, geology and natural history provided a means to an end for achieving more authority within the larger scientific community. Nevertheless, when methods from the physical and natural sciences were employed in Wallace's spirit investigations, they were typically reframed along anthropological lines.

Wallace's aim of aligning his spirit investigations to the practices of British anthropology fed into larger disciplinary discussions about the construction of reliable anthropological data. Most notably, Wallace – like many of his Victorian anthropological counterparts – grounded his research in a double commitment to first-hand observation and Baconian inductivism. His insistence on "fact-based," experiential knowledge echoed the disciplinary rhetoric of the physician and speech therapist James Hunt (1833-1869), who co-founded the Anthropological Society of London (ASL) in 1863, along with the orientalist, explorer, and military officer Richard Francis Burton (1821-1890).[14] It is hardly surprising that many of the methods and theories that Wallace imposed on his studies of spirit phenomena included core aspects of Hunt's anthropological vision. After all, Wallace was

conducting much of the research for *Miracles and Modern Spiritualism*, while he was regularly attending ASL meetings during the height of the anthropological schism of the 1860s. His spirit investigations were written at a time when he was engrossed in the debates and discussions on how to build a new anthropological science in Britain.[15]

This was a key period in the disciplinary history of British anthropology, where two rival groups of researchers were vying for control of the race sciences. Much has been written about the anthropological schism of the 1860s in the secondary literature, and it is not necessary to examine the full details of the controversy here. It can be best described as a contest for cultural authority between two competing forms of scientific naturalism.[16] On the one hand, there were the anthropologists led by Hunt, who generally speaking promoted a form of polygenesis that was grounded in biological determinism, and emphasized directly observable "facts" to support its suppositions. On the other hand, there were the ethnologists led by Huxley at the Ethnological Society of London (ESL), who generally speaking promoted a form of monogenesis that was grounded in a mixture of older Prichardian historicism, and newer Darwinian evolutionary theory.[17] During the course of this dispute – which raged between 1863 and 1871 – both sides published several essays in the pages of their societies' journals on the scope of their respective research fields. Although both camps claimed to be doing distinct forms of scientific investigation, there were many overlapping topics, theories and practices in their respective research programs.[18] Even the membership lists of the two societies contained many of the same names. The focuses of anthropology and

ethnology during this period were quite broad, and for the most part it comprised of any study that examined the cultural and physical aspects of human groups. Eventually, after several attempts to reconcile the grievance, an agreement was reached, and in 1871 the two societies merged to form the Royal Anthropological Institute of Great Britain and Ireland (RAI). This new learned body brought together the methods and theories of researchers from both camps.[19]

Underlying many of these disciplinary debates were discussions on how to observe something anthropologically or ethnologically, and this preoccupation maps onto Wallace's researches into spiritualism. The ability to observe spirit phenomena as a credible witness was a central concern for Wallace. In many respects it underscores the primary objective of his book *Miracles and Modern Spiritualism*. Like his peers at the ASL who were striving for proper recognition within the British scientific world, Wallace too was fighting for the scientific legitimacy of his spirit investigations. Anthropology provided a tactical blueprint for achieving this status. If Wallace were to prove scientifically that humans transcended into spirits upon death, anthropology was the ideal discipline to anchor his spirit investigations in. After all, figures such as Hunt purported that anthropology was the only discipline to examine all aspects of human life, and for Wallace that would include the afterlife.[20]By bringing spiritualism into anthropology the discipline would be justly able to argue that it studied the "entirety" of human existence.

Wallace and the Making of a Spiritualist and Anthropologist

Our starting point is to take seriously Wallace's assertion that his study of spirits and psychical forces was a "new branch of anthropology."[21] In order to determine why Wallace viewed his research as a type of anthropology, as opposed to physics, biology, or natural history, to name a few examples, it is necessary to map the core aspects of his spirit investigations against the key criteria for a study to be considered anthropological during the middle of the nineteenth century. These criteria can be synthesized as follows: first, it had to focus on humans (broadly construed), second, there should be some elements of historicism or evolutionism in it, third, it should use the Baconian method of induction, fourth, it should be derived from experiential knowledge based on directly observable "facts." Wallace's spirit investigations tick each of these main boxes.[22]

His twin interests in spiritualism and anthropology developed over a twenty-five year period, and tracing this process allows for a more sophisticated understanding of Wallace's spirit investigations. Although he credits his first séance in 1865 as a transformative moment in redefining his views on spiritualism, Wallace had encountered what he believed to be supernatural phenomena much earlier in his life.[23] His first experience with supernatural forces occurred in 1844 when he was a schoolteacher in Leicester. It was there that Wallace witnessed the curious effects of mesmerism during a lecture delivered by the renowned phrenologist and mesmerist Spencer Timothy Hall (1812-1885).[24] The spectacles that he had observed intrigued him, and Wallace set about conducting some rudimentary experiments with mesmerism on his students. He later recalled in *Miracles and*

Modern Spiritualism that he was able to influence some of his students using techniques similar to those employed by Hall in his lecture.[25] These alleged "positive results" had a lasting impression on him, and as Martin Fichman has argued, Wallace's early research on mesmeric forces "predisposed him to remain open to claims relating to psychic phenomena." Nevertheless, he was a skeptic for the time being.[26] Other incidences such as near death experiences during his travels to both South America in 1848-1852, and the Malay Archipelago in 1854-1862, further exposed Wallace to what he believed to be supernaturalism. For example, Wallace stated,

> At least three times within the last twenty-five years I have had to face death as imminent or probable within a few hours, and what I felt on those occasions was at most a gentle melancholy at the thought of quitting this wonderful and beautiful earth to enter on a sleep which might know no waking. In a state of ordinary health I did not feel even this. I knew that the great problem of conscious existence was one beyond man's grasp, and this fact alone gave some hope that existence might be independent of the organized body.[27]

According to Wallace, nearly dying on these three occasions sensitized him to a feeling of a deeper existence beyond the mortal world – one that would be essential to his later "theory of spiritualism."[28]

It was also during Wallace's travels that the modern spiritualist movement arose. The first high-profile mediums were the American Fox sisters, Leah (1831–1890), Margaret (1833–1893) and Kate (1837–1892). In 1848 while the siblings were living with their parents in Hydesville, New York, the two younger sisters

Margaret and Kate allegedly began communicating with spirits through rapping.[29] News of these spirit communications spread quickly across the USA, Britain, and continental Europe. Within a few years more psychic mediums were coming to prominence through private and public performances. There was also a proliferation of spiritualist literature being published, and many popular lecturers on the subject toured around North America and Europe. During the 1850s proponents of spiritualism were clearly on the ascent.[30] Wallace had been hearing about this social phenomenon while travelling abroad, and according to Fichman he was determined to investigate the matter himself upon returning to England.[31]

While travelling through South America and the Malay Archipelago, Wallace also developed a strong interest in ethnography and ethnology. Like most scientific travellers of the nineteenth century, Wallace immersed himself in travel literature, particularly accounts written by Europeans who had visited the same regions as him. Here Wallace was following a practice of informed-reading that was an important preparatory exercise for journeys into relatively unknown lands.[32] It provided travellers with essential information on the peoples, plants, animals and landscapes they were going to confront abroad. Moreover, knowledge of these works made it possible for someone such as Wallace to establish himself as a credible observer of natural history data.[33] It was also through travelling that Wallace's interests in ethnography and spiritualism began to intersect. His cross-cultural encounters with Indigenous peoples, exposed him to various forms of spiritualism that would later influence his spiritualist beliefs, and as Sherrie Lynne

Lyons has argued, 'Wallace's view of native people provides an important clue to his later conversion to the spiritualist hypothesis.'[34]

For many early ethnologists, travel narratives provided a crucial source of data for their studies. These narratives contributed to a growing archive that made possible the verification, expansion, and correction of ethnographic knowledge. One's reputation as a reliable scientific traveller was based on the ability to either confirm the earlier observations of travellers who had visited the region, or correct those reports based on newer information. In both cases direct experience was essential to this process.[35] Being able to state that the data was acquired first-hand added greatly to one's truth-claims. Impartiality was also an essential element of this process, and in many respects the method of verifying ethnographic observations was closely link to what Lorraine Daston and Peter Galison have termed "truth-to-nature" objectivity, where the accepted representation of a human group was a compilation of reports, or the archetype of a pattern within various accounts.[36]

When substantiating the trustworthiness of his observations of spirit phenomena, or those of other witnesses that he deemed credible, Wallace utilized similar ethnographic techniques. Although not explicitly mentioned in his writings, much of Wallace's analysis was influenced by the work of the German naturalist and traveller, Alexander von Humboldt (1769-1559), who combined Baconian and Linnaean principles with his own ideas on how scientific travellers could systematically catalogue the natural world. Humboldt argued for a *physique du*

monde – a universal natural science based on observational study, measurement and experimentation.[37]

The verification of direct observations through the use of ethnographic methods was a core aspect of Wallace's later anthropological writings on spiritualism. These investigations were further enhanced by Wallace's knowledge of ethnological and anthropological theories. For instance, Wallace had read important ethnological works by the physicians James Cowles Prichard (1786-1848), and William Lawrence (1783-1867) while travelling throughout the world. Both men were seminal figures within the discipline, and outlined theoretical frameworks for studying human races.[38] Once Wallace returned to Britain in 1862 he joined the ESL, and when the ASL formed a year later, Wallace also began attending their meetings too. This further immersed Wallace in discussions on how to do ethnological and anthropological research. His first major contribution to anthropological studies occurred in 1864 when he published what is widely considered to be the first anthropological work to apply Darwinian evolutionary mechanisms onto humans.[39] It was clear that in the early 1860s, much of Wallace's scientific activities were grounded in ethnological and anthropological research. Thus, by the time Wallace attended his first séance in July 1865, he was primed for approaching the event as a skilled ethnographic observer. In many respects his later descriptions of his experiences at séances can be seen as a kind of ethnographic reporting, informed by his deep knowledge of ethnological and anthropological theories.

The "Theory of Spiritualism" and Evolutionism

Miracles and Modern Spiritualism contained three substantially reworked versions of essays that Wallace had produced between 1866 and 1874.[40] As he immersed himself in the modern spiritualist movement, his knowledge deepened, and he was able to incorporate even more information from his readings of the extant spiritualist literature, and his personal experiences at séances. Thus the book represents the culmination and maturation of his early spirit investigations. In his book, Wallace recognized that the nature of his investigations meant that many of his readers would be skeptical of the genuineness of the phenomena he described.[41] He wrote, "Many of my readers will no doubt, feel oppressed by the strange and apparently supernatural phenomena here brought before their notice. They will demand that, if indeed they are to be accepted as facts, it must be shown that they form a part of the system of the universe, or at least range themselves under some plausible hypothesis."[42] It was for this reason that Wallace carefully articulated a "theory of spiritualism."[43] Through the conceptualization of his theory, Wallace believed that he was strengthening the scientific pronouncements of his research. Crucial to this process was grounding his spirit investigations in naturalistic laws, and providing conceivable explanations for psychical forces.[44] This enabled him to align his spiritualism with the core principles of scientific naturalism that was dominant during the period. It was a tactic that other ethnologists and anthropologists were using as they strove for recognition in the larger Victorian scientific scene. Wallace was following this approach. However, the version of scientific naturalism that he employed differed from the more biologically

determined model of Hunt, and the Darwinian inspired model of Huxley and other X Club members. Wallace was far less committed to hard-lined verificationist assumptions, allowing him to be more receptive to extraordinary phenomena such as spirit and psychic forces.[45]

At the crux of Wallace's theory was a fundamental principle that underlined all spiritualist phenomena – every human was made of two parts: the spirit and the material body. Wallace believed that the material body was the "machinery and instruments by means of which [humans]…act upon other beings and on matter," and the spirit "feels, and perceives, and thinks."[46] While the material body would eventually perish, the spirit was immortal. Once the spirit entered into the afterlife, it began a developmental process, which Wallace termed "progression of the fittest."[47] It was a new form of human developmentalism that attempted to reconcile his evolutionary and anthropological ideas with his spiritualist ones.

Wallace wanted to map his theory of spiritualism onto his own evolutionary paradigm. The inclusion of evolutionism into ethnological and anthropological research was essential for many scientific naturalists during the 1860s and 1870s. Figures such as Huxley, who was President of the ESL during the 1860s, the archaeologist, entomologist, and politician John Lubbock (1834-1913), who was the first President of the RAI, and Edward Burnett Tylor (1832-1917), who is widely regarded as the founder of cultural anthropology, and the first researcher in Britain to be appointed as Reader in Anthropology, all trumpeted the importance of evolutionary theories for the advancement of the discipline.[48] Wallace was part of this general movement in anthropology, and it was an underlying theme in his first

major contribution to anthropological research: his 1864 article, "On the Origin of Human Races and the Antiquity Man Deduced from the Theory of Natural Selection."[49] Given that Wallace viewed the study of spirits and psychical forces as a type of anthropological pursuit, evolutionism also formed a key aspect of his strategy for ensuring that his spirit investigations gained acceptance within scientific circles.[50]

For Wallace, non-directional evolutionary processes, guided by natural selection, may have accounted for human diversity when studying the living, but upon death a different sort of evolutionary process began that was directional and progressive. He wrote, "The organic world has been carried on to a high state of development, and has been ever kept in harmony with the forces of nature, by the grand law of 'survival of the fittest' acting upon every varying organizations. In the spirit world, the law of the 'progression of the fittest' takes its place, and carries on in unbroken continuity…"[51] According to Wallace the spirit was a mind without body that retained all the knowledge (both intellectual and moral) it had acquired during life, including the experiences, thoughts, feelings and tastes of the former self.[52] With this knowledge the spirit could progress through successive stages toward the highest level of enlightenment. That was humanity's true purpose. It was a theistic framework, and as Fichman has observed it "explicitly maintains that the Divine Being continues to sustain relations to His creation" even after death.[53] Because the spirit retained knowledge of its former self, Wallace argued it was able to communicate with the living. How else would it be possible for spirits to verify their identities to living loved ones during séances?[54]

Wallace's incorporation of a developmental model into his theory of spiritualism was an essential part of his aim to gain scientific legitimacy for his spirit investigations. Because it combined both familiar aspects of Darwinian evolution with monogenesis and progressivism, his theory of spiritualism could be incorporated into larger ethnological and anthropological discussions about human evolution. However, it moved beyond these discussions into new ground, and unlike the standard forms of monogenesis (or even polygenesis for that matter) it provided an alternative framework that not only accounted for the evolution of the living, but also for the dead. Nevertheless in order to support this spiritualist evolutionary paradigm, Wallace required data that proved the existence of spirits and psychical forces. This led him to an emphasis on "fact-based" knowledge and Baconian inductivism, further tying his spirit investigations to the techniques of ethnologists and anthropologists in the mid Victorian period.

Direct Observation and "Fact-Based" Knowledge

When Hunt co-founded the ASL in 1863, he wanted anthropologists to distinguish themselves from ethnologists by prioritizing research that was based on direct observation, and "fact-based" knowledge. One of the main criticisms his opponents such as Huxley and Lubbock leveled at him, was that it was unnecessary for there to be two disciplines that essentially studied the same materials. Hunt had to rationalize the formation of anthropology as being distinctly different to that of ethnology, and to substantiate the scientific criteria on which anthropologists based their analyses, he argued for the application of the Baconian method of induction.[55]

Using Baconianism to strengthen the scientific pronouncements of a discipline was by no means distinct to anthropology, and many emerging disciplines in the nineteenth century, appealed to Baconian principles as a way of gaining scientific legitimacy within the larger community.[56] It was primarily a rhetorical strategy, where the Baconian method of induction was championed as a means to knowledge. More often then not, though, the application of Baconian ideas was never fully implemented into research programs.[57]

In the case of anthropology, Hunt asserted that Baconianism, with its emphasis on "facts," was the most reliable way to do scientific research. He wrote,

> "It has been solely the application of this [Baconian] method which has given such weight to our deliberations and our deductions. Loyalty to facts with regard to … anthropology brought us face to face with popular assumptions, and the contest has resulted in victory to those who used the right method. Having then seen the advantage of conducting our investigations …according to the inductive method…"[58]

Under this model the Baconian method of induction was strategically used as the cornerstone of his anthropological framework. Observable "facts" such as anatomical and physiological data lay at the foundation of any good study of humans. There were three steps to using the Baconian method of induction. First, researchers were to collect materials and describe the "facts." Second, they were to tabulate or classify the "facts" into three categories: a) instances where a specific characteristic was observed, b) instances where the characteristic was absent, and c) instances where a variation of the observed characteristic was present. Third, in

light of what the tabulated materials demonstrated, researchers were to draw conclusions based on the data and determine which phenomena (physical or cultural) were connected to it, and which phenomena were not.

Even within the human sciences Hunt's emphasis on "fact-based" knowledge was not distinct, and despite his claims to the contrary ethnologists such Prichard and Lawrence had been using Baconian methods in their research programs for several decades prior to the emergence of anthropology. The only difference was that Hunt explicitly identified its importance, because he was attempting to legitimize his methodological approach as being more refined than the practices of the researchers who preceded him.[59] Tylor also used a similar "fact-based" argument in the opening pages of his magnum opus *Primitive Culture* (1871). Tylor was constructing an evolutionary model that traced the development of cultural attributes from what he believed to be the lowest stages of human societies to the most advanced. Because he was primarily working with non-physical forms of data, he argued that it was essential to stockpile his "facts", and show multiple examples of similar cultural phenomena. Such an approach would verify the trustworthiness of his evidence and support his suppositions. Tylor stated that "Should it seem to any readers that my attempt to reach this limit sometimes leads to the heaping up of too cumbrous detail, I would point out that the theoretical novelty as well as the practical importance of many of the issues raised make it most unadvisable to stint them of their full evidence."[60]

There is a similar sort of rhetoric in Wallace's *Miracles and Modern Spiritualism*. Like Hunt and Tylor, Wallace strategically argued that spirit

investigations had to be grounded in first-hand knowledge and reliable "facts." He placed great emphasis on direct observation, and he stated, "In this manner only could all sources of error be eliminated, and a doctrine of such overwhelming importance be established as truth. I propose now to inquire whether such proof has been given, and whether the evidence is attainable by any one who may wish to investigate the subject in the only manner by which truth can be reached – by direct observation and experimentation."[61] Wallace's visual epistemology, to borrow the term from Bleichmar, began with first-hand experience, and for him seeing was knowing.[62]

Direct observation was only part of establishing the credibility of one's investigations. A single observation could be fabricated, erroneous, or accidental. Therefore, it had to be cross-compared against similar reports. Wallace wrote, "A single new and strange fact is on its first announcement, often treated as a miracle, and not believed because it is contrary to the hitherto observer order of nature."[63] It was for this reason that Wallace insisted on finding multiple examples of similar accounts to verify the credibility of a single observation. If one of the "facts" from a collection of similar accounts were proven to be real, the rest by extension would also be taken as factual. Wallace argued, "If but one or two of them are proved to be real, the whole argument against the rest of 'impossibility' and 'reversal of the laws of nature,' falls to the ground."[64]

The influence of Baconianism is noticeable in Wallace's *Miracles and Modern Spiritualism*. As was the case with Hunt and others, Wallace organized his "facts" into groupings for analysis. For example, he sorted physical and mental spirit

phenomena into different typologies. Each grouping included short descriptions to assist researchers in correctly identifying the types of phenomena that they were witnessing. Wallace believed that he was articulating a system that allowed for more accurate observations. If every spirit investigator used his system in their studies, it would create a standardized method, which in turn would make it easier to cross-compare reports. The replication of results would also be possible under such a model, which added further authority to the method.[65]

Under "physical phenomena types," Wallace included six categories: "simple physical phenomena," such as sounds being produced without a known source, or people being moved without any human agency involved, "chemical" where mediums could hold burning hot objects without getting hurt, "direct writing and drawing," which allegedly included pencils and pens rising on their own, "musical phenomena," where instruments played without any human intervention, "spiritual forms," such as the appearance of ghosts orbs or specters, and finally, "spirit photographs," which purported to include manifestations of ghosts in them. [66] There were five types of mental phenomena described in Wallace's system and they included "automatic writing," when mediums wrote information down involuntarily, "seeing or clairvoyance," such as premonitions or voice hearing, "trance speaking," when a medium communicated the thoughts or feelings of a spirit, "impersonation," which is closely linked to trance speaking, but is more about speaking or acting like the spirit, and finally, "healing," such as a medium detecting an unknown illness in a person.[67]

Whereas physical phenomena did not necessitate a medium in order to occur, mental phenomena did. It was for this reason that Wallace argued that mental phenomena were usually considered less evidential by skeptics of spiritualism. He wrote, "The purely mental phenomena are generally of no use as evidence to non-spiritualists, except in those few cases where rigid tests can be applied." Wallace continued by arguing that the two kinds cannot be separated so easily and that "they are so intimately connected with the physical series, and often so interwoven with them, that no one who has sufficient experience to satisfy him of the reality of the former, fails to see that the latter form part of the general system, and are dependent on the same agencies."[68] For Wallace, proving the existence of spirit forces meant using all forms of data and seeing how the sum of the parts came together to show the reality of spiritualism.

Wallace's commitment to direct observation and "fact-based" knowledge was essential for establishing the credibility of his spirit investigations. Like Hunt and Tylor before him, he had to justify his "new branch of anthropology" as a legitimate scientific pursuit. It was not enough to have a comprehensive theory of spiritualism and a few examples of direct observations that purported to show genuine examples of spirit phenomena. Wallace asserted that proponents of spiritualism had to show that the sheer volume of credible witnesses collecting data on spirit forces were impossible to ignore, and therefore had to be taken seriously. He stated,

> I maintain that the facts have now been proved, in the only way in which facts are capable of being proved – viz., by the concurrent testimony of honest, impartial, and careful observers.

> Most of the facts are capable of being tested by any earnest inquirer. They have withstood the ordeal of ridicule and of rigid scrutiny for twenty-six years, during which their adherents have year by year steadily increased, including men of every rank and station, of every class of mind, and of every degree of talent; while not a single individual who has yet devoted himself to a detailed examination of these facts, has denied their reality. These are characteristics of a new truth, not of a delusion or imposture. The facts therefore are proved.[69]

In sum, the success of Wallace's methodological approach to achieving scientific legitimacy for his spirit investigations rested on the trustworthiness of his sources. The bulk of *Miracles and Modern Spiritualism* was devoted to establishing the credibility of his eyewitnesses, and once again ethnological and anthropological theories and methods were essential to this process.

Credible Witnessing and Spirit Investigations

Ethnographic reports from the narratives of travellers were the *modus operandi* of ethnological and anthropological research during the nineteenth century. Because most practitioners never left the shores of Europe, they were reliant on travellers for their data. Narratives provided essential information on the peoples who inhabited the world, and the personal testimony of someone who had seen different races directly *in situ* always had more authority than second-hand descriptions based on *a priori* knowledge. Ethnographies of Europe used similar techniques – especially when verifying personal testimonies from historical periods. Thus, there was a long tradition in both ethnology and anthropology of establishing the credibility of first-hand observers. Figures such as Prichard, Lawrence, Robert

Gordon Latham (1812-1888), Hunt and Tylor all worked tirelessly to prove the accuracy and trustworthiness of their sources.[70] Wallace was building on this tradition in his spirit investigations, and he had a broad knowledge of both ethnological and anthropological methods from his participation at both the ESL and ASL during the 1860s.[71]

There were several ways of establishing the reliability of a source in ethnology and anthropology. First, if the observer possessed comprehensive training in a field that was considered to be requisite to ethnology or anthropology, such as medicine or natural history, they were considered to be a credible witness. Similarly, if an observer had a sound knowledge of subjects such as law, physics, or philosophy, they were also deemed as trustworthy because of their analytical and discerning mind. Second, if there were multiple accounts that contained analogous information on the same objects, topics, events, or peoples, they collectively reinforced the validity of one another. It was a sort of "collective empiricism" – to borrow the term from Daston and Galison.[72] Any inconsistency that appeared within the dataset would be identified as atypical and subsequently removed. Third, if a researcher could reinforce the claims of other observers through their own similar first-hand experiences, this added further credibility to an account. Fourth, if multiple witnesses were present at the same incidence, and produced corresponding reports, they too were deemed trustworthy observers. We see examples of all of these modes of verification in Wallace's spiritualist writings.[73]

A reliance on personal testimonies to substantiate one's scientific suppositions was of course a tried and trusted method in most scientific disciplines.

Practitioners in various fields regularly appealed to different forms of collective empiricism to support their research activities. However, Wallace gave particular credence to researchers working in the life sciences, because he believed that they were less predisposed to imposing set conditions onto the study of unexplained phenomena.[74] When it came to observing spirit activity, physicists could make important and valuable observations, but the analysis of these reports was left to scientists with more detailed understandings of the organic world. In a sense, we can think of this method as a two-part process. First information had to be observed and recorded by credible witnesses. Second the meaning of the phenomena that was witnessed in the reports had to be interpreted and explained by a researcher with a strong grounding in natural history and the human sciences. Because experiential knowledge of human societies was the backbone of ethnological and anthropological research, its practitioners were particularly well suited for synthesizing these kinds of evidentiary materials. This approach to making sense of observational accounts, which Wallace was employing in his spiritualist writings, was a staple of early armchair-based ethnological research.[75] Wallace saw himself as the quality controller of the data, weeding-out any anomalous evidence, and highlighting examples that best supported his suppositions.

In *Miracles and Modern Spiritualism*, Wallace made a case for the credibility of his sources. He argued that despite the number of skeptics of spiritualism rising over an eighteen-year period (i.e. between the 1850s and 1870s), there was still a growth in the numbers of believers.[76] He asserted that the kinds of data, and rigor of experimentation purporting to prove the existence of spirits and psychical forces,

were improving, and much of this was the result of a general increase in the number and quality of reports that were produced by so-called respectable observers of spirit phenomena. Wallace stated,

> I shall call chiefly persons connected with science, art, or literature, and whose intelligence and truthfulness in narrating their own observations are above suspicion; and I would particularly insist, that no objections of a general kind can have any weight against direct evidence to special facts, many of which are of such a nature that there is absolutely no choice between believing that they did occur, or imputing to all who declare they witnessed them, wilful and purposeless falsehood.[77]

Wallace's avowal of the credibility of his sources was grounded in three key points: first, all of his witnesses were leaders in science, art, or literature, and therefore represented some of the greatest minds known. Second, the reports were directly observed, and were not based on *a priori* assumptions. Wallace argued that this meant they were stronger sources of evidence. Third, because the information was acquired through first-hand experience, all of the observations were founded in "fact-based" knowledge. As sources of data, Wallace believed they should be considered as of the highest caliber.

The pages of *Miracles and Modern Spiritualism* were littered with copious amounts of observations recorded by figures that Wallace deemed to be credible witnesses of spirit phenomena. He was particularly favorable toward reports that described séances led by eminent mediums such as Kate Fox, Daniel Dunglas Home (1833-1886), and Agnes Elisabeth Guppy (1838-1917). Each of these mediums was

celebrated by spiritualists as possessing genuine psychic powers, and therefore attracted the attention of many high-profile spirit investigators (both skeptics and believers). There had been multiple attempts to detect fraudulent activities in the séances and performances of Fox, Home and Guppy, yet according to Wallace none of them had ever been caught cheating. It was for this reason that Wallace placed so much weight on the investigations that examined their alleged powers.

In the case of Fox, Wallace began by asserting that she was the first prominent medium of the modern spiritualist movement. Her powers were discovered at the age of nine when she and her sisters allegedly communicated with spirits at their family home in New York State.[78] Since then, Fox's career had blossomed, and she travelled around North America and Europe performing for both private and public audiences. Wallace argued that for twenty-six years "skeptic after skeptic, committee after committee, endeavored to discover 'the trick;' but if it were a trick this little girl baffled them all."[79] By claiming that Fox had confounded skeptics for nearly three decades, Wallace was attempting to establish the legitimacy of her powers, but he did not stop there, and he included the reports of prominent spirit investigators who had observed and confirmed her mediumistic abilities first-hand.

One of those investigators was the Scottish-American social reformer Robert Dale Owen (1801-1877) who wrote two well-known works on spiritualism, *Footfalls on the Boundary of Another World* (1859), and *The Debatable Land Between this World and the Next* (1872). Owen had extensive experience investigating spirit

phenomena and mediums, and he gained a reputation as a leading expert in the field.[80] Wallace recounted,

> Mr. Owen had many sittings with Miss Fox for the purpose of test; and the precautions he took were extraordinary. He sat with her alone; he frequently changed the room without notice; he examined every article of furniture; he locked the doors and fastened them with strips of paper privately sealed; he held both the hands of the medium. Under these conditions various phenomena occurred, the most remarkable being the illumination of a piece of paper (which he had brought himself, cut of a peculiar size, and privately marked), showing a dark hand writing on the floor. The paper afterwards rose up on to the table with legible writing upon it, containing a promise which was subsequently verified.

Owen's authority as a credible observer of psychical forces was established through the following means: first, he had multiple sittings with Fox so that he could conduct tests several times in order to reproduce his results. Second, only Owen and Fox were in the room at the time of the experiments, thus ensuring that no other human agency could aversely influence the testing. Third, the room where the tests were to be undertaken was regularly changed without notice so that any possible manipulation of the space in advance of the experiments by Fox would be avoided. Fourth, many precautions were taken to limit the ability of Fox cheating during any of the tests. Despite Owen's comprehensive experience in detecting fraud, and all of the safeguards in place during the experiments, Fox was still able to produce spirit phenomena. Wallace believed that her powers were legitimate, and Owen was a credible witness.

The Scottish publisher, naturalist, and anonymous author of the *Vestiges of the Natural History of Creation* (1844) Robert Chambers (1802-1871), also had the opportunity to investigate Fox's psychical abilities with Owen during a visit to the USA in 1860.[81] Chambers had a keen interest in spiritualism, possessing a sound knowledge of the literature, and extensive experience attending séances during the 1850s, which strengthened the case for him being seen as a trustworthy observer.[82] Together Chambers and Owen conducted some tests on Fox to determine whether her psychical powers were genuine. Wallace described some of the safeguards that Chambers and Owen used during their tests with Fox to ensure that there was little opportunity for deceit. This included the use of gas lighting so that the room was fully visible during the tests, weighing down the séance table with a heavy steelyard so that it was too difficult to move without being detected, and insisting that Fox's hands were held over her head and not touching the table. Nevertheless, despite all of these precautions, Fox was allegedly able to produce remarkable supernatural feats.[83] Wallace remarked that these measures were similar to the ones used by the staunch skeptic of spiritualism, the physicist Michael Faraday (1791-1867) during his investigations into table turning. According to Wallace, it was widely recognized by the scientific community that Faraday's experiments on spirit phenomena were reliable. This added further weight to the credibility of Chambers and Owen's claim, because if the method was deemed acceptable for Faraday's experiments, it should be acceptable for Chambers and Owen's experiments. In Faraday's case he showed that the phenomena were faked. For Wallace that did not matter, because Faraday was not an expert on spiritualism, nor had he attended sufficient séances. By

contrast Chambers and Owen were regular attendees of séances, and knew the spiritualist literature well. Their experiential knowledge, combined with their experimental testing, made them more credible witnesses. [84]

Another high-profile medium that Wallace examined in *Miracles and Modern Spiritualism* was Home. As was the case with Fox, Home's psychical powers were allegedly discovered at an early age, and by the middle of the nineteenth century he was one of the most widely known mediums in the world. Spirit investigators regularly examined his amazing supernatural acts in order to determine whether or not his psychical powers were genuine.[85] One of the notable investigators to study Home's powers was the Scottish physicist and mathematician Sir David Brewster (1781-1868). Wallace included excerpts of Brewster's observations from a sitting with Home, showing examples of unexplainable phenomena. Brewster wrote, "The table actually rose from the ground when no hand was upon it," and he continued by stating that "a small-bell was laid down with its mouth upon the carpet, and it actually rang when nothing could have touched it."[86] Although, he was a skeptic of supernaturalism, Brewster was unable to detect any fraud during his investigation of Home's psychical abilities. He was therefore left baffled by the events that he had witnessed. For Wallace this sort of evidence was particularly valuable in establishing the legitimacy of spirit phenomena. If a skeptic such as Brewster, who had an extensive background in physical sciences, was unable to detect any fraud, Home's powers must have been real. To add further credibility to Brewster's account, Wallace noted that the lawyer and politician, Lord Henry Peter Brougham

(1778-1868), was also present during the investigation, and he confirmed Brewster's report.[87]

In an effort to assure his readers that Home was an honest and genuine medium, Wallace asserted that Home openly invited investigators to examine his powers, further showing that he had nothing to hide. Wallace remarked that the lawyer, journalist and publisher Edward William Cox (1809-1879), and the chemist and physicist William Crookes (1832-1819), both investigated Home's powers and detected no deceitfulness. He wrote, "The powers of Mr. Home have lately been independently tested by Sergeant Cox and Mr. Crookes, and both of these gentlemen emphatically proclaim that he invites tests and courts examination."[88] Both Cox and Crookes were reputable Victorian gentlemen, with backgrounds in law and science respectively. For Wallace, they were both credible witnesses. In each case Cox and Crookes observed what appeared to be authentic supernatural phenomena. For example, referring to Cox's experiments with Home, Wallace wrote, "Sergeant Cox, in his own house, has had a new accordion (purchased by himself that very day) play by itself, in his own hand, while Mr. Home was playing the piano. Mr. Home then took the accordion in his left hand, holding it with the keys downwards while playing the piano with his right hand, 'and it played beautifully in accompaniment to the piano, for at least a quarter of an hour.'"[89]

Another notable medium to be discussed in *Miracles and Modern Spiritualism* was Guppy.[90] It was Wallace who had first discovered Guppy's psychical powers during a séance at his home in November 1866. He soon arranged regular sittings with the young medium so that he could repeat his tests and trace her development.

He wrote that on one occasion he secretly tested Guppy's mediumistic abilities by "attaching threads or thin strips of paper beneath the claws [of a table], so that they must be broken if any one attempted to raise the table with their feet – the only available means of doing so."[91] Yet despite this safeguard, the table still rose without any damage to the strips that Wallace had carefully placed beneath it. For Wallace, this was evidence in favor of genuine spirit phenomena.

Wallace's personal testimony was sprinkled throughout his book, and he included long excerpts of his observations from the many séances that he had attended. This was a key component of his strategy for establishing himself as a credible witness of spirit phenomena. It demonstrated that he was not only familiar with the literature on modern spiritualism, but that he also possessed direct experience engaging with psychical forces. The emphasis on experiential knowledge was essential for establishing himself as an expert. His examination of spirit phenomena at séances can be treated as a kind of ethnographic study, and much like how scientific explorers verified the trustworthiness of their ethnographic observations in travel narratives, through detailed discussions of their daily activities, Wallace was using a similar method in his writings. This process of outlining the details of an experiment transformed his readers into what Steven Shapin and Simon Schaffer have called "virtual witnesses," allowing them to acquire an almost first-hand knowledge of his investigations. It was therefore a core aspect of Wallace's visual epistemology.[92]

One example that Wallace includes in his book is a description from his very first séance experience in July 1865. He wrote,

> Sat with my friend, his wife, and two daughters, at a large loo table, by daylight. In about half an hour some faint motions were perceived, and some faint taps heard. They gradually increased; the taps became very distinct, and the table moved considerably, obliging us all to shift our chairs. Then a curious vibratory motion of the table commenced, almost like the shivering of a living animal. I could feel it up to my elbows. These phenomena were variously repeated for two hours. On trying afterwards, we found the table could not be voluntarily moved in the same manner without a great exertion of force, and we could discover no possible way of producing the taps while our hands were upon the table."'[93]

There are several important points to unpack from the quote. First, Wallace states that the séance was conducted during the day, making the room fully visible so that any deceitful activity by the medium could feasibly be seen. Second, he was not alone, and there were multiple witnesses observing the same phenomena. Third, the spirit phenomena were repeated and sustained for a long period of time, making it possible for Wallace to carefully observe and take note of what he was witnessing. Fourth, all of the objects involved in the séance were inspected immediately afterward to determine whether any trickery was possible. The inclusion of sensory detail such as the "vibratory motion of the table," added a further layer of authenticity to Wallace's description, allowing for his readers to imagine the sensation on their own bodies.

Wallace continued to experiment with psychical forces, and he conducted repeated tests to determine whether or not he could consistently observe similar phenomena during séances. He stated,

> On other occasions we tried the experiment of each person in succession leaving the table, and found that the phenomena continued the same as before, both taps and the table movement. Once I requested one after another to leave the table; the phenomena continued, but as the number of sitters diminished, with decreasing vigor, and just after the last person had drawn back leaving me alone at the table, there were two dull taps or blows, as with a fist on the pillar or foot of the table, the vibration of which I could feel as well as hear. No one present but myself could have made these and I certainly did not make them.[94]

Once again we see that Wallace was not alone during the tests, and that there were other witnesses available to confirm his reports. By providing a step-by-step account of his experiments with table rapping, we see a further attempt by Wallace to demonstrate that he was a skilled spirit investigator, which reinforced his claim as being a credible witness.

Wallace's aim of developing a "new branch of anthropology" that was devoted to spirit investigations, fundamentally relied on his ability to establish the trustworthiness of his evidence. He followed a long tradition in ethnology and anthropology of relying on the accounts of first-hand observers to substantiate his suppositions. He took great care in showing his readers how the sources that he used in his book were highly credible. Most of the accounts that Wallace used were by prominent investigators who possessed both a strong knowledge of the literature on spiritualism, and extensive experience examining spirit phenomena at séances. He supported this information further with his own personal testimony from the séances that he had witnessed first-hand. With the so-called "facts" that he presented to his readers, Wallace hoped that he made a strong enough case for

recognizing investigations of spirit phenomena as a genuine scientific pursuit that showed the reality of spirits and psychical forces.

Conclusion

With the publication of Tylor's *Primitive Culture* in 1871, there was a growing anthropological interest in the study of religion. Spiritualists became the subject of anthropological research, and they were characterized as practicing a "primitive" form of belief that was indebted to an age when all humans saw the world as being inhabited by spirits – what Tylor called, "animism."[95] This was not what Wallace had hoped for when he tried to establish the research field in the middle of the nineteenth century as a "new branch of anthropology," and he subsequently became a vocal critic of Tylor's work.[96] He even published a scathing review of *Primitive Culture* in the popular review journal *The Academy*.[97] At the core of anthropology's criticism of spiritualism was a critique of the foundation of spirit investigations – a reliance on personal testimony.

By the turn of the twentieth century, Tylor's anthropological followers increasingly undermined the scientific practices of spirit investigators. In the "Preface" to the book, *Cock Lane and Common-Sense* (1894), the anthropologist and folklorist Andrew Lang (1844-1912) – who studied under Tylor at Oxford – remarked, "When Anthropology first challenged the interpretation of myths given by Philologists, we were told that Anthropology relied on mere travellers' tales. It was answered that the coincidence of report, in all ages and countries, and from all manner of independent observers, unaware of each other's existence, was a strong

proof of general accuracy, while the statements of learned and scholarly men…confirmed the strange stories of traveller… [T]he same test of evidence, universally coincident, applied to many of the alleged [spirit] phenomena in this book."[98] Yet as Lang contended, personal testimony was still a problematic source of evidence. The onus of proof would never be fully satisfied. People on both sides of the debate would be influenced by their inherent biases, and proponents of spiritualism would likely accept evidence purporting to have witnessed genuine spirit phenomena, and skeptics would reject it. For Lang the question should not be whether spirits and psychical forces existed, but why people have either believed or disbelieved in spiritualism. Wallace's whole approach to investigating spirit phenomena was completely undermined by Lang, and any further attempt to make spiritualism a bona fide branch of anthropology was effectively ended. The focus would not be on determining the existence of spirits and psychical forces, but understanding why different cultures believed or disbelieved in them.

This paper took seriously Wallace's claim that his investigations into spirit phenomena were a new kind of anthropological research. Taking Wallace's book *Miracles and Modern Spiritualism* as its starting point, it has shown how his theories and practices drew on larger disciplinary discussions about how to do ethnological and anthropological research during a period when the boundaries of the discipline were still being negotiated. Much emphasis was put on the observational practices that Wallace employed in his studies, examining in detail how he established the credibility of his sources. By taking seriously the practices and theories that he used to legitimize his spirit investigations as a genuine scientific pursuit, an important

story emerges on how nineteenth-century researchers constructed their truth-claims. This is particularly telling because spiritualism deals with non-traditional knowledge that runs counter to what has been deemed proper science.

Supernaturalism as the word implies, goes against the accepted laws of nature, believers in spirit phenomena and psychical forces had to work extra hard to prove the reliability of their evidence.[99] Yet as Lang's remarks in 1894 remind us, the personal testimonies of observers who had witnessed spirit activities were an insufficient benchmark for laying the foundation of a new science. Although Wallace's efforts to make spirits and psychical forces a major topic in anthropological research ultimately failed, the methods and theories that he developed during this process took root elsewhere, and with the formation of the Society of Psychical Research in 1882, spirit investigations gained an organizational backing that helped to foster further studies into extraordinary phenomena.[100] Debates over the reality of the spirit hypothesis raged on. Examining Wallace's attempt to align his spirit investigations with anthropology sheds important light on the history of scientific observation, arguments over the evidentiary standards of scientific practice, and disciplinary formation in the nineteenth century.

Acknowledgement

I would like to thank Ian Hesketh, Nathan Uglow, Iwan Morus, Bernie Lightman, Andreas Sommer, Shane McCorristine, and Nanna Kaalund for their amazing support while researching and writing this paper. Their insightful commentary was

truly invaluable. My thanks also extends to the referees for their critical feedback, and Duncan Kelly for his guidance.

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[1] Alfred Russel Wallace, *Miracles and Modern Spiritualism: Three Essays* (London, 1875), vi-vii.

[2] Wallace defined modern spiritualism as the practice of the living communicating with the dead through psychic mediums. See: Wallace, *Miracles and Modern Spiritualism*, 80.

[3] Martin Fichman, "Science in Theistic Contexts: A Case Study of Alfred Russel Wallace on Human Evolution," *Osiris*, 16 (2001), 231-2.

[4] Alfred Russel Wallace to Thomas Henry Huxley, 22 November 1866, The British Library, London, BL Add. 46439 f. 5

[5] James Marchant, *Alfred Russel Wallace Letters and Reminiscences,* 2 vols. (London, 1916), vol. 2, 187-8.

[6] For more on the debates over reliable evidence in spirit investigations see: Peter Lamont, "Spiritualism and a Mid-Victorian Crisis of Evidence," *The Historical Journal*, 47 (2004), 897-920.

[7] Janet Oppenheim, *The Other World: Spiritualism and Psychical Research in England, 1850-1914*, (Cambridge, 1985), 297.

[8] For more on the establishment of credible witnesses in ethnology and anthropology see: Efram Sera-Shriar, "Arctic Observers: Richard King, Monogenism and the Historicization of Inuit through Travel Narratives," *Studies in History and Philosophy of Biological and Biomedical Sciences*, 51 (2015), 23-31; and Efram Sera-Shriar, "Tales from Patagonia: Phillip Parker King and Early Ethnographic Observation in British Ethnology, 1826-1830," *Studies in Travel Writing*, 19 (2015), 204-23.

[9] For more on observational practices within Victorian anthropology see: Efram Sera-Shriar, "What is Armchair Anthropology?: Observational Practices in Nineteenth-Century British Human Sciences," *History of the Human Sciences*, 27 (2014), 180-94.

[10] Daniela Bleichmar, *Visible Empire: Botanical Expeditions and Visual Culture in the Hispanic Enlightenment*, (Chicago, 2012), 6-10. For more secondary literature on the history of scientific observation within the natural and social sciences see: Anne Secord, "Artisan Naturalists: Science as

Popular Culture in Nineteenth-Century England," (unpublished Ph.D. thesis, University of London, London, 2002), 135-206; Cristina Grasseni ed., *Skilled Visions: Between Apprenticeship and Standards*, (Oxford, 2007); Anna Grimshaw, *The Ethnographer's Eye: Ways of Seeing in Modern Anthropology*, (Cambridge, 2001); and Lorraine Daston and Peter Galison *Objectivity*, (New York, 2007).

[11] As Wallace published his book after the amalgamation of the ESL and ASL, I use the term anthropology as an umbrella category to include ethnographic, ethnological and anthropological methods and theories.

[12] See for example the following works on Wallace's spirit investigations: William Keezer "Alfred Russel Wallace: Naturalist, Zoogeographer, Spiritualist, and Evolutionist," *Bios*, 36 (1965), 66-70; Malcolm Jay Kottler, "Alfred Russel Wallace, the Origin of Man, and Spiritualism," *Isis,* 65 (1974), 144-92; John Durant, "Scientific Naturalism and Social Reform in the Thought of Alfred Russel Wallace," *British Journal for the History of Science*, 12 (1979), 31-58; Peter Peels, "Spiritual Facts and Super-Visions: The Conversion of Alfred Russel Wallace," *Religion and Modernity* 8 (1995), 69-91; Fichman, "Science in Theistic Contexts," 227-50; and Benjamin David Mitchell, "Capturing the Will: Imposture, Delusion, and Exposure in Alfred Russel Wallace's Defence of Spirit Photography," *Studies in History and Philosophy of Biological and Biomedical Sciences*, 46 (2014), 15-24. Wallace's spiritualism has also been discussed in the following biographies: Michael Shermer, *In Darwin's Shadow: The Life and Science of Alfred Russel Wallace* (Oxford, 2002); Ross Slotten, *The Heretic in Darwin's Court: The Life of Alfred Russel Wallace*, (New York, 2004), 326-51; and Martin Fichman, *An Elusive Victorian: The Evolution of Alfred Russel Wallace* (Chicago, 2004), 139-208.

[13] The best example of a study that investigates Wallace's interest in extra-European forms of spiritualism is: Christine Ferguson, "Other Worlds: Alfred Russel Wallace and Cross-Cultural Spiritualism," *Victorian Review*, 41 (2015), 177-91. For more on the intersection of Wallace, anthropology, travel, and spiritualism see: Kathleen Bolling Lowrey, "Alfred Russel Wallace as Ancestor Figure: Reflections on Anthropological Lineage after the Darwin Bicentennial," *Anthropology Today*, 26 (2010), 18-21.

[14] Hunt discussed the importance of Baconianism in his article: James Hunt, "On Physio-Anthropology, Its Aim and Method," *Journal of the Anthropological Society of London*, 5 (1867), ccix-cclxxi. For more on Hunt's use of Baconianism in anthropology see: Efram Sera-Shriar, "Observing Human Difference: James Hunt, Thomas Huxley, and Competing Disciplinary Strategies in the 1860s," *Annals of Science*, 70 (2013), 480-5.

[15] For more on Wallace's activities at the ASL see: Jeremy Vetter, "The Unmaking of an Anthropologist: Wallace Returns from the Field, 1862-1870," *Notes and Records of the Royal Society of London*, 64 (2010), 25-42.

[16] Evelleen Richards was the first scholar to frame Hunt and Huxley's anthropological feud as a competition between two forms of scientific naturalism in her article: Evelleen Richards, "The 'Moral Anatomy' of Robert Knox: The Interplay Between Biological and Social Thought in Victorian Scientific Naturalism," *Journal of the History of Biology*, 22 (1989), 373-436. For more on the contest for cultural authority in the nineteenth century see: Frank Turner, "The Victorian Conflict between Science and Religion: A Professional Dimension," *Isis*, 69 (1978), 356-76; and Frank Turner, *Contesting Cultural Authority: Essays in Victorian Intellectual Life* (Cambridge, 1993).

[17] For more on the disciplinary debates between British anthropology and ethnology during the 1860s see: George Stocking, "What's in a Name? The Origins of the Royal Anthropological Institute (1837-71)," *Man*, 6, (1971), 369-90; George Stocking, *Victorian Anthropology* (New York, 1987), 238-45. Robert Kenny, "From the Curse of Ham to the Curse of Nature: The Influence of Natural Selection on the Debate on Human Unity before the Publication of the *Descent of Man*," *British Journal for the History of Science*, 40 (2007), 367-88; Henrika Kuklick, "The British Tradition," in Henrika Kuklick ed., *A New History of Anthropology* (Oxford, 2008), 52-78 at 52-6; Efram Sera-Shriar, *The Making of British Anthropology, 1813-1871* (London, 2013), 109-46; and Efram Sera-Shriar, "Human History and Deep Time in Nineteenth-Century British Sciences: An Introduction," *Studies in History and Philosophy of Biological and Biomedical Sciences*, 51 (2015), 19-22.

[18] Hunt and Huxley outlined the parameters of anthropology and ethnology respectively in the following essays: James Hunt, "Introductory Address on the Study of Anthropology," *Anthropological*

Review, 1 (1863), 1-20; Thomas Henry Huxley, "On the Methods and Results of Ethnology," *Fortnightly Review*, 1 (1865), 257-77.

[19] For more see: Stocking, "What's in a Name?," 369-90; and Efram Sera-Shriar, "Race," in Mark Bevir ed., *Historicism and the Human Sciences in Victorian Britain*, (Cambridge, 2017), 48-76, at 48-9.

[20] Hunt, "Introductory Address," 2.

[21] Alfred Russel Wallace to Thomas Henry Huxley, 22 November 1866, The British Library, London, BL Add. 46439 f. 5

[22] For more on the disciplinary practices of British anthropology in the middle of the nineteenth century see: Sera-Shriar, "Observing Human Difference," 461-91.

[23] Wallace, *Miracles and Modern Spiritualism*, 125-6.

[24] For more on Spencer Timothy Hall and mesmerism see: Alison Winter, *Mesmerized: Powers of Mind in Victorian Britain*, (Chicago, 2000), 130-6.

[25] Wallace, *Miracles and Modern Spiritualism*, 119.

[26] Fichman, "Science in Theistic Contexts," 231.

[27] Wallace, *Miracles and Modern Spiritualism*, 125.

[28] For Wallace's theory of spiritualism see: Wallace, *Miracles and Modern Spiritualism*, 100-4. In addition to mesmerism, there were other ideas shaping Wallace's views on spiritualism. For example, although he does not engage with the writings of the Swedish theologian, philosopher and mystic, Emanuel Swedenborg (1688-1772) in *Miracles and Modern Spiritualism*, Swedenborgian ideas came to be important for Wallace's later writings on spirits and psychical forces. For more on this connection see: Fichman, *An Elusive Victorian*, 112-7.

[29] Barbara Weisberg, *Talking to the Dead: Kate and Maggie Fox and the Rise of Spiritualism*, (San Francisco, 2004), 12–13.

[30] For more on the rise of spiritualism in the nineteenth century see: Judith Walkowitz, "Science and the Séance: Transgressions of Gender and Genre in Late Victorian London," *Representations*, 22 (1988), 3-29; Julian Holloway, "Enchanted Spaces: The Séance, Affect, and Geographies of Religion," *Annals of the Association of American Geographies,* 96 (2006), 182-7; Owen Davies, *The Haunted: A*

Social History of Ghosts, (Basingstoke, 2007); Jennifer Bann, "Ghostly Hands and Ghostly Agency: The Changing Figure of the Nineteenth-Century Spectre," *Victorian Studies,* 51 (2009), 663-85; Shane McCorristine, *Spectre of the Self: Thinking about Ghosts and Ghost-Seeing in England, 1750-1920,* (Cambridge, 2010), 12-13; David Nartonis, "The Rise of Nineteenth-Century American Spiritualism, 1854-1873," *Journal for the Scientific Study of Religion*, 49 (2010), 361-73; and Andreas Sommer, "Psychical Research in the History and Philosophy of Science: An Introduction and Review," *Studies in History and Philosophy of Biological and Biomedical Sciences* 48 (2014), 38–45.

[31] Fichman, "Science in Theistic Contexts," 231. For more on the link between Wallace's travels, ethnography and spiritualism see: Fichman, *An Elusive Victorian*, 170-1; Sherrie Lynne Lyons, *Species, Serpents, Spirits and Skulls: Science at the Margins in the Victorian Age*, (Albany, 2009), 120; Ferguson, "Other Worlds," 177-91.

[32] For example, the geologist and zoologist Robert Jameson's natural history classes at the University of Edinburgh were designed to prepare young medics and naturalists for careers as scientific travellers, and included in his readings lists, among other things, were important travel narratives. See: Adrian Desmond and James Moore, *Darwin's Sacred Cause: Race, Slavery and the Quest for Human Origins*, (London, 2009), 28-9.

[33] For more on ethnography and observational practices see: Sera-Shriar, "Tales from Patagonia," 206-9.

[34] Lyons, *Species, Serpents, Spirits and Skulls*, 120.

[35] Michael Bravo, "Ethnological Encounters," in Nicholas Jardine, James Secord and Emma Spary eds., *Cultures of Natural History*, (Cambridge, 1996), 338-57 at 344; and Sera-Shriar, "Arctic Observers," 23-31. For more generally on the importance of travel literature in the making of natural sciences see: Peter Hulme and Tim Youngs, "Introduction," in Peter Hulme and Tim Youngs eds., *The Cambridge Companion to Travel Writing*, (Cambridge, 2002), 1-16; Janet Browne, "A Science of Empire: British Biogeography before Darwin," *Revue d'Histoire des Sciences*, 45 (1992), 453-75; Lisbet Koerner, "Purposes of Linnaean Travel: A Preliminary Research Report," in David Phillip Miller and Peter Hanns Reill eds., *Visions of Empire: Voyages, Botany, and Representation in Nature*,

(Cambridge, 1996), 117-52; Daniel Carey, "Compiling Nature's History: Travellers and Travel Narratives in the Early Royal Society," *Annals of Science*, 54 (1997), 269-92; and Nanna Kaalund, "From Science in the Arctic to Arctic Science: A Transnational Study of Arctic Travel Narratives, 1818-1883" (Unpublished Ph.D thesis, York University, Toronto, 2017).

[36] For more on truth-to-nature objectivity see: Daston and Galison, *Objectivity*, 55-113.

[37] For more on Humboldtian science see: Susan Faye Cannon, *Science in Culture: The Early Victorian Period*, (New York, 1978); Mary Louise Pratt, *Imperial Eyes: Travel Writing and* Transculturation, (London, 1992), 111-44; Carey, "Compiling Nature's History," 269-92; Michael Dettelbach, "The Face of Nature: Precise Measurement, Mapping, and Sensibility in the Work of Alexander von Humboldt," *Studies in History and Philosophy of Biological and Biomedical Sciences* 30, (1999), 473-504; Andrea Wulf, *The Invention of Nature: Alexander von Humboldt's New World*, (New York, 2015).

[38] John Durant, "Scientific Naturalism and Social Reform in the Thought of Alfred Russel Wallace," *British Journal for the History of Science*, 12 (1979), 39. For more on Prichard and Lawrence as seminal figures of British ethnology see: Sera-Shriar, *The Making of British Anthropology*, 21-52. Prichard and Lawrence's seminal works in ethnology were: James Cowles Prichard, *Researches into the Physical History of Man,* (London, 1813); and William Lawrence, *Lectures on Physiology, Zoology, and the Natural History of Man, Delivered at the Royal College of Surgeons,* (Salem, 1828).

[39] Durant, "Scientific Naturalism and Social Reform," 40; Vetter, "The Unmaking of an Anthropologist," 25-42; and Stocking, *Victorian Anthropology*, 148-9.

[40] Wallace's original three essays appeared as follows: Alfred Russel Wallace, *The Scientific Aspect of the Supernatural: Indicating the Desirableness of an Experimental Enquiry by Men of Science into the Alleged Powers of Clairvoyants and Mediums*, (London, 1866); Alfred Russel Wallace, "An Answer to the Arguments of Hume, Lecky, and Others, Against Miracles," *The Spiritualist: A Record of the Progress of the Science and Ethics of Spiritualism*, 1 (1870), 113-6; and Alfred Russel Wallace, "A Defence of Modern Spiritualism," *Fortnightly Review*, 15 (1874), 630-57; Alfred Russel Wallace, "A Defence of Modern Spiritualism. Part II," *Fortnightly Review*, 15 (1874), 785-807.

[41] For more on reliable evidence in spiritualism see: Richard Noakes, "Haunted Thoughts of the Careful Experimentalist: Psychical Research and the Troubles of Experimental Physics," *Studies in History and Philosophy of Biological and Biomedical Sciences*, 48 (2014), 46-56; Lamont, "Spiritualism," 897-920.

[42] Wallace, *Miracles and Modern Spiritualism*, 100.

[43] Ibid, 100.

[44] Oppenheim, *The Other World*, 307; and Fichman, *An Elusive Victorian*, 141.

[45] For more on scientific naturalism see: Roy Macleod, "The X Club a Social Network of Science in Late-Victorian England," *Notes and Records of the Royal Society of London*, 24 (1970), 305-22; Turner, "The Victorian Conflict," 356-76; Ruth Barton, "Huxley, Lubbock, and Half a Dozen Others," *Isis*, 89 (1998), 410-44; Adrian Desmond, "Redefining the X Axis: 'Professionals',' 'Amateurs' and the Making of Mid-Victorian Biology – A Progress Report," *Journal of the History of Biology*, 34 (2001), 3-50; and Gowan Dawson and Bernard Lightman, eds., *Victorian Scientific Naturalism: Community, Identity and Continuity* (Chicago, 2014).

[46] Wallace, *Miracles and Modern Spiritualism*, 100.

[47] Ibid, 109.

[48] For more on evolutionism in Victorian ethnology and anthropology see: George Stocking, *Race, Culture and Evolution: Essays in the History of Anthropology,* (Chicago, 1968); George Stocking, "'Cultural Darwinism' and 'Philosophical Idealism' in E.B. Tylor," in George Stocking, ed., *Race, Culture, and Evolution: Essays in the History of Anthropology*, (Chicago, 1968), 91-109; Joan Leopold, *Culture in Comparative and Evolutionary Perspective: E.B. Tylor and the Making of Primitive Culture,* (Berlin, 1980); Sera-Shriar, "Observing Human Difference," 468-9; Henrika Kuklick, "The Theory of Evolution and Cultural Anthropology," in Aldo Fasolo, ed., *The Theory of Evolution and its Impact*, (Berlin, 2012), 83-102; Sera-Shriar, "Race," 48-76.

[49] Alfred Russel Wallace, "On the Origin of Human Races and the Antiquity Man Deduced from the Theory of Natural Selection," *Journal of the Anthropological Society of London*, 2 (1864), clviii-clxxxvii.

[50] Although Wallace frames his evolutionary paradigm as Darwinian, his theistic tendencies were incommensurable with Darwin's inherent positivism, and Humean predilection. For more on Wallace's evolutionism see: Michael Flannery, "Alfred Russel Wallace, Nature's Prophet: From Natural Selection to Natural Theology," in Indraneil Das and Andrew Alex Tuen, eds., *Naturalists, Explorers and Field Scientists in South Asia and Australia*, (Dordrecht, 2016), 51-70; and Fichman, *An Elusive Victorian.* For more on Darwin, positivism and Humean philosophy see: Neal C. Gillespie, *Charles Darwin and the Problem of Creation*, (Chicago, 1979); and Frank Burch Brown, "The Evolution of Darwin's Theism," *Journal of the History of Biology*, 19 (1986), 1-45.

[51] Wallace, *Miracles and Modern Spiritualism*, 109.

[52] Ibid, 101.

[53] Fichman, "Science in Theistic Contexts," 228. See also: Wallace, *Miracles and Modern Spiritualism*, 116.

[54] Wallace, *Miracles and Modern Spiritualism*, 115-16.

[55] For more on Hunt and the Anthropological Society of London see: J.W. Burrow, "Evolution and Anthropology in the 1860's: The Anthropological Society of London, 1863-71," *Victorian Studies*, 7 (1963), 137-49; Stocking, "What's in a Name?," 369-90; Stocking, *Victorian Anthropology*, 247-55; Frank Spencer, "Hunt, James (1833-1869)", in Frank Spencer, ed., *History of Physical Anthropology*, 2 vols. (London, 1997), vol. 1, 506-8; Kenny, "From the Curse of Ham to the Curse of Nature," 367-88; Kuklick, "The British Tradition," 52-5; and Sera-Shriar, "Observing Human Difference," 461-91.

[56] For more on Baconianism and disciplinary formation in nineteenth-century Britain see: Martin Rudwick, *The Great Devonian Controversy: The Shaping of Scientific Knowledge Among Gentlemanly Specialists*, (Chicago, 1985), 24-5; Roy Porter, *The Making of Geology: Earth Science in Britain 1660-1815*, (Cambridge, 1977), 66-70; and Richard Yeo, "Scientific Method and the Rhetoric of Science in Britain 1830-1917," in John Schuster and Richard Yeo, eds., *The Politics and Rhetoric of Scientific Method*, (Dordrecht, 1986), 259-97.

[57] Howard Gruber, *Darwin on Man: A Psychological Study of Scientific Creativity*, (Chicago, 1974), 122.

[58] James Hunt, "On Physio-Anthropology," ccxii.

[59] For more on the race taxonomies of Prichard and Lawrence see: Prichard, *Researches*, 7, 21-25; Lawrence, *Natural History of Man*, 107, 242-52. See also: Sera-Shriar, *The Making of British Anthropology*, 27-42.

[60] Edward Burnett Tylor, *Primitive Culture: Researches into the Development of Mythology, Philosophy, Religion, Art and Custom*, 2 vols. (London, 1871), vol. 1, vi. See also: Sera-Shriar, *The Making of British Anthropology*, 163-4.

[61] Wallace, *Miracles and Modern Spiritualism*, 47.

[62] Bleichmar, *Visible Empire*, 6-10.

[63] Wallace, *Miracles and Modern Spiritualism*, 32.

[64] Ibid, 32.

[65] See Noakes, "Haunted Thoughts," 46-56. For more generally on measurement, standardization and science see: Graeme Gooday, *The Morals of Measurement: Accuracy, Irony and Trust in Late Victorian Electrical Practice*, (Cambridge, 2004), 1-39.

[66] Wallace, *Miracles and Modern Spiritualism*, 199-200.

[67] Ibid, 200-2.

[68] Ibid, 202.

[69] Ibid, 104.

[70] The use of travel narratives to substantiate ethnological and anthropological research was widespread within the two disciplines and is sprinkled throughout the works of nineteenth-century researchers. For example see: Prichard, *Researches*; Lawrence, *Natural History of Man*; Robert Gordon Latham, *The Natural History of the Varieties of Man*, (London, 1850); James Hunt, *On the Negro's Place in Nature*, (London, 1863); Tylor, *Primitive Culture*.

[71] Vetter, "The Unmaking of an Anthropologist," 25-42; Durant, "Scientific Naturalism and Social Reform," 31-58.

[72] Daston and Galison, *Objectivity*, 19-27. See also Bleichmar's discussion on long-distance observation in: Blechmar, *Visible Empire*, 66-72.

[73] For more on observation and ethnography see: Janet Browne, "Biogeography and Empire," in Nicholas Jardine, James Secord and Emma Spary, eds., *Cultures of Natural History*, (Cambridge, 1996), 305- 21 at 306-8; Bravo, "Ethnological Encounters," 338-357; Sera-Shriar, "Tales from Patagonia," 206-9; Sera-Shriar, "Arctic Observers," 23-31.

[74] Wallace, *Miracles and Modern Spiritualism*, 145.

[75] For more on how armchair ethnologists made sense of others' first-hand observations see: Sera-Shriar, *The Making of British Anthropology*, 75.

[76] Wallace, *Miracles and Modern Spiritualism*, 47-8.

[77] Ibid, 51.

[78] Much has been written on Kate Fox and her sisters. For example see: Reuben Briggs Davenport, *The Death-Blow to Spiritualism: Being the True Story of the Fox Sisters, as Revealed by Authority of Margaret Fox Kane and Catherine Fox Jencken*, (New York, 1888); Oppenheim, *The Other World*, 11, 32, 35, 126, 297, 331, 344; Weisberg, *Talking to the Dead*; David Chaplin, *Exploring Other Worlds: Margaret Fox, Elisha Kent Kane, and the Antebellum Culture of Curiosity*, (Amherst, 2004); McCorristine, *Spectre of the Self*, 12, 60.

[79] Wallace, *Miracles and Modern Spiritualism*, 156. It is worth noting, however, that in 1888 Margaret Fox publicly admitted to committing fraud with her sisters during performances.

[80] For more on Owen and spiritualism see: Amy Lehman, *Victorian Women and the Theatre of Trance: Mediums, Spiritualists and Mesmerists in Performance*, (London, 2002), 160-8.

[81] Robert Chambers, *The Vestiges of the Natural History of Creation*, (London, 1844).

[82] For more on Chambers and spiritualism see: Oppenheim, *The Other World*, 272-8.

[83] Wallace, *Miracles and Modern Spiritualism*, 156.

[84] For more on Faraday's experiments see: Michael Faraday, "Experimental Investigation of Table-Turning," *Journal of the Franklin Institute*, 56 (1853), 328-33; Anonymous, "Michael Faraday's Researches in Spiritualism," *The Scientific* Monthly, 83 (1956), 145-50; and Oppenheim, *The Other World*, 327-328, 336-337.

[85] The most comprehensive study of Home's career is: Peter Lamont, *The First Psychic: The Extraordinary Mystery of a Notorious Victorian Wizard,* (Preston, 2005).

[86] Wallace, *Miracles and Modern Spiritualism*, 158-9. The original source of these observations come from Brewster's daughter's biography of her father: Margaret Maria Gordon, *The Home Life of Sir David Brewster*, (Edinburgh, 1869), 257-8.

[87] Wallace, *Miracles and Modern Spiritualism*, pp. 158-9.

[88] Ibid, 161.

[89] Ibid, 161. For the original source see: Edward William Cox, *What Am I? A Popular Introduction to the Study of Psychology*, 2 vols. (London, 1873), vol. 2, 388.

[90] For more on Guppy see: Richard Noakes, "Guppy, (Agnes) Elisabeth (1838-1917)," *Oxford Dictionary of National Biography,* (Oxford, 2004) [http://www.oxforddnb.com/view/article/54083, accessed on 7 June 2017].

[91] Wallace, *Miracles and Modern Spiritualism*, 163.

[92] Steven Shapin and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life,* (Princeton, 1985), 60-5.

[93] Wallace, *Miracles and Modern Spiritualism*, 126.

[94] Ibid, 126.

[95] Tylor, *Primitive Culture,* vol. 1, 384-5.

[96] Alfred Russel Wallace to Thomas Henry Huxley, 22 November 1866, The British Library, London, BL Add. 46439 f. 5

[97] Alfred Russel Wallace, "Primitive Culture: Researches into the Development of Mythology, Philosophy, Religion, Art, and Custom," *The Academy,* 3 (1872), 69-71.

[98] Andrew Lang, *Cock Lane and Common-Sense,* (London, 1894), x.

[99] It is worth noting that by 1892, Wallace no longer viewed spiritualism as supernatural, and regretted having formed this link in his 1866 essay. See Alfred Russel Wallace, "Spiritualism" in David Patrick ed., *Chamber's Encyclopedia*, 10 vols. (Edinburgh, 1892) vol. 9, 645-9.

[100] For more on the formation of the Society for Psychical Research see: Edward Bennett, *The Society for Psychical Research: Its Rise & Progress & A Sketch of its* Work, (London, 1903); William Henry Salter, *The Society for Psychical Research: An Outline of its History*, (London, 1948); Alan Gauld, *The Founders of Psychical Research*, (London, 1968); Renee Haynes, *The Society for Psychical Research 1882*-1982, (London, 1982); Oppenheim, *The Other World,* 142-58, 253-62, 361-5; and Roger Luckhurst, *The Invention of Telepathy*, (Oxford, 2002), 51-9, 148-50.