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Alfred Russel Wallace Notes 24.
Wallace at 200: Potential Subjects for Student Theses.

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Summary: The bicentennial of Alfred Russel Wallace's birth in 2023 will likely produce a wide array of reviews of his life and work; here, we pause for a short look at some Wallace-related questions that might be adapted for student theses and dissertations. Some of the subjects treated fall in with established lines of research, while others are suggested by other Wallace interests or activities that have not been much explored. *Key words:* Alfred Russel Wallace (1823-1913), research, theses and dissertations, graduate education, evolution, social criticism

Introduction

January 8th, 2023, marks the two hundredth anniversary of the birth of Alfred Russel Wallace, an important figure in intellectual history. While we can expect an avalanche of notices and reviews of Wallace's life and work during the year 2023, most of this attention will consist of "things accomplished" kinds of appreciation; here, we will approach things slightly differently, by suggesting what has not been done, and might be entertained within a specific context: graduate student thesis and dissertation projects.

There are at least two important preliminary considerations when it comes to organizing a thesis/dissertation effort. First, we need to be clear up front on the kind of study that suits the purpose of such a work. While there are no absolute rules for this, we need an outcome that both makes an actual contribution to knowledge, and demonstrates the individual's ability to perform as a professional in that field. Generally speaking, at the doctoral level the candidate is expected to demonstrate a capacity for thinking creatively within that field's domain; at the master's level original thinking plays second to proving the candidate understands the intent and relevance of published research in that subject. A senior thesis should at the least demonstrate a capacity for logical argument, and an ability to execute appropriate analytical methodologies.

Most theses and dissertations are not commercially published, at least as-is, as monographs. Few hold much interest for anyone beyond a rather small circle of readers, and this is not a defect. They usually involve rather specific, esoteric, or limited subjects, and it is normally not their function to offer results that will markedly change the field as a whole. Those that do look toward conclusions of greater general interest are often spun off as succinct research articles, or used to support book or grant proposals.

The second main consideration has to do with starting points. Even a competently trained student cannot be expected to enter into hi/r first serious professional research project without knowing that sources of intellectual support will be available. This not only

means oversight by faculty advisors, but an organized body of information pertaining to methodology, a known historical context for the work, and access to a mass of relevant literature. Wallace is well served in all these respects, and especially the last two. Victorian period science and society is one of the most studied scenes in the history of science and society, and in recent years Wallace himself has been well-covered by many dozens of full-scale critical analyses and biographies. [For a review of the books and periodicals literature, see the author's *Alfred Russel Wallace Page* website.]

It should also be noted that there is something of a trend away from person-specific analyses in academic circles, and toward appreciations of the way ideas are adopted by society. One should therefore expect that most person-specific investigations at the thesis or dissertation level either will involve analyses of the uniqueness of their contribution (as in music or mathematics), or how their contribution affected the course of work in their own field, or in society in general.

With these preliminaries in mind, we can turn to discussion of some topics I regard as possible candidates for such treatment.

Some Possible 'Wallace' Thesis or Dissertation Topics

1. Wallace as an inspirational influence on the late nineteenth century Women's Movement. It is clear from various writings that a good number of reform-oriented women in both Britain and the United States thought highly of Wallace, and *vice versa*. Some names in this context that might be mentioned include reformers Elizabeth Blackwell, Elizabeth Cady Stanton, Frances Willard, Helen Taylor, Isabella Beecher Hooker and Helen Keller, theosophists Annie Besant and Helene Blavatsky, and writers Beatrix Potter, Jane Barlow and Julia Dawson. It would be interesting to research in more detail how his various agendas contributed to their own. Level: Masters, or PhD.
2. Wallace as a conservationist, however one wishes to define that term. Wallace's place as a proto-conservationist has sometimes been debated (see, for example, Knapp 2009), but study of the emergence of conservation as a distinct discipline might be well served by taking a closer look at his role in the process: for example, how the mutual admiration displayed by Wallace and John Muir reflected period objectives. Level: PhD.
3. A systematic and biogeographic update (analogous to the one performed some years back on his Rio Negro fish sketches) of Wallace's collection of several hundred species of plants during his 1886-7 North American lecture tour. Wallace's diary of his travels (Smith & Derr, eds. 2013) includes field notes on the various plant forms he encountered along the way, and an informed systematic and biogeographic revision of this material would both contribute to the historical record, and provide an ideal research and education experience for the doctoral candidate. Level: PhD.
4. An exploration of the influence the plant specimens/seeds Wallace sent home from that 1886-7 adventure to famous horticulturists such as James Backhouse and Gertrude Jekyll had on the development of horticulture in Great Britain. This might be approached as a simple historical question, or as a sociological study detailing the connections and personalities involved. Level: Masters or PhD., depending on the depth and range of research committed.

5. Wallace's model of Glacial Epochs causation. Wallace was the first to propose a combined climatological/astronomical model of the Ice Ages. No one has ever examined this model in detail; it remains the least noticed of his important contributions to knowledge. Level: Masters or PhD.
6. Wallace's role in the emergence of the so-called Liberal Agenda/Progressive Movement of the early twentieth century. A good number of important figures took notice of his innovative critical evaluations of society, and tracing this out would make an interesting contribution to the history of sociology. Level: Masters or PhD.
7. Wallace's writings on colonialism, and how those observations related to perceptions of other travelers and officials of the period. Did his point of view eventually win out? Level: Masters or PhD.
8. Wallace as a proto-anthropocentric principle advocate. A few related elements of his books *Man's Place in the Universe* and *Is Mars Habitable?* have been looked at (see, for example, Dick 2008, Gould 1983, Tipler 1981, R. Smith 2019), but the full range of reasons why he adopted the positions he did has not been suitably worked out. Some have 'blamed' his spiritualism as a contributing factor, for example, but the connections posed there arguably do not add up (including the fact that many spiritualists believed some of the other planets hosted advanced living beings, something Wallace never accepted). Level: Masters or PhD.
9. Wallace the superstar. At the time of his death Wallace was a major intellectual celebrity. But then his star quickly faded, and only recently has he enjoyed a considerable renaissance in reputation. What were the reasons for these ups and downs – for these shifts in awareness/appreciation – and what do such changes tell us about the shifting dynamics of how science (and the role of the renaissance man) is valued and reported? Level: PhD.
10. Wallace as a force opposing the then-emerging neoclassical economics model, and the political economy approach in general. How has his posed social economics model fared, especially its core concept of 'well-being'? Level: PhD.
11. Clarification of the reinforcement/Wallace effect process. Wikipedia defines 'reinforcement' as "a process of speciation where natural selection increases the reproductive isolation (further divided to pre-zygotic isolation and post-zygotic isolation) between two populations of species. This occurs as a result of selection acting against the production of hybrid individuals of low fitness. The idea was originally developed by Alfred Russel Wallace and is sometimes referred to as the 'Wallace effect.'" As the notion of reinforcement remains problematic, a full historical review would be helpful; alternately, some specific model of isolation might be studied, either mathematically or in a laboratory/field setting, and interpreted in view of Wallace's positions. Level: PhD.
12. Specific studies suggested by Wallace's ideas on protective coloration. A 2017 review by Tim Caro well summarizes the subject, and also points toward some particular investigations that are suggested by Wallace's original position: "Despite skyrocketing advances in the field of coloration, Wallace's specific examples and generalizations about coloration patterns are still sufficiently provocative to demand continued investigation more than a century later" (Caro 2017, p. 29). Level: PhD.
13. Wallace let evolution by natural selection be called 'Darwinism' without demur; was he merely being polite, or was he anticipating that the vision of evolution entertained by

Darwin would turn out to be too crude, and deliberately tried to distance himself from it? How has this split influenced the development of the philosophy of this subject? Level: Masters or PhD.

14. Is Wallace's own title 'On the Tendency of Varieties to Depart Indefinitely from the Original Type' (1858) a less pithy but ultimately more correct conceptualization of 'natural selection', especially given his interpretation of it as the 'elimination of the unfit'? (Smith 2012). How does this bear on research questions depending on a clear definition of the concept? Level: Masters or PhD.
15. How do Wallace's personal experiences illuminate the role of empiricism in first-hand descriptions of séances? What errors did he make, both in his actual participations, and in his assumptions about what was most relevant? Level: Masters.
16. What are the origins and boundaries of Wallace's utopianism, culminating in, among other things (e.g., his setting of 'well-being' as a general societal goal), the brand of socialism he harnessed to sexual selection (involving women's free choice in marriage)? Further, how did this 'social experiment' side of his thinking contribute to his scientific studies? His attention was first drawn to this matter early on, through his teen years Owenist experiences; later connections are, for example, with the utopian settlements at New Harmony and Freeland (in Africa), and his possible influence on Ebenezer Howard (developer of the 'garden city'/new town concept), William Morris (the Arts and Crafts movement), and the Swadeshi movement (Smith *et al.* 2019). Level: Masters or PhD.
17. What was Wallace's species concept? How was it related to that of others in the Darwinian circle, and to the later, twentieth century, codification by Ernst Mayr? Level: Masters or PhD.
18. How does the history of Wallace's argument with George Romanes over the latter's 'physiological selection' concept jibe with recent revivals of the idea (e.g., Forsdyke 1999)? Level: Masters or PhD.
19. What is the full picture of Wallace's views on domestication, and how did the erroneous claims that he somehow missed the lessons domestic breeds held for Wallacean/Darwinian selection come about? Level: Masters or PhD.
20. Wallace and educational reform; especially, to what extent did the co-educational practices Wallace observed on his North American tour inform his later thoughts on women's rights, educational reform, and societal evolution? Level: Masters or PhD.

Conclusion

Wallace's involvement in so many scientific and social issues makes him an ideal starting point for: (1) comparative studies, and (2) historical/philosophical investigations. Beyond this, his fertile brain produced so many scientific theories that it will be a long time before we run out of testable hypotheses based on them (in this context one might consider the long list of studies found at: <http://people.wku.edu/charles.smith/wallace/threads.htm>) In either instance one often has the option of contrasting Wallace's approach with the more usual ones, either by teasing out the influences on his thought process, or shifting the emphasis toward his manner of argument. No less a figure than Charles Peirce once remarked of Wallace: "He believes in all that he believes down to the very soles of his boots; and his arguments are mostly so surprisingly strong that some one of his works, say his 'Studies, Scientific and Social,' ought to be made the basis of a course of lectures

on logic. Happy would be the university which should find itself equipped with a professor of logic really capable of dealing with his text.” (Peirce 1906, p. 160).

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