Book Review

The Journey of Man: A Genetic Odyssey

Wells, Spencer. *The Journey of Man*. Penguin Books Ltd., 2003.

Reviewed by Dr. Marco Kletting

HO Advanced Seminar in Human Origins (Spring 2022 - Biola)

Dr. Joseph R. Miller

April 16, 2022

1. Author Information

Spencer Wells is an American geneticist, anthropologist, author, and entrepreneur. He received a Bachelor of Science degree in biology from the University of Texas at Austin and a PhD in biology from Harvard University. He did postdoctoral work at the Stanford University and was a research fellow at the University of Oxford. He has published in journals such as Science, American Journal of Human Genetics, and the Proceedings of the National Academy of Sciences.[1]

2. Summary

The Journey of Man is about the journey of humanity from its origin in Africa to the far corners of the Earth. The author demonstrates that comparing DNA sequences from various people groups all over the world reveals a map of our humanity's wanderings and gives us approximate dates related to these wanderings. This data must be reconciled with the archaeological and climatological record.

The book begins with a discussion on the conflict of Christianity and Darwin's theories and the abuses like eugenics which arose from Darwinism. The book then turns to population genetics and molecular anthropology. The analysis of mitochondrial DNA (mtDNA), which is only inherited through the female lineage, revealed that all humans living today descend from a single woman – commonly called mtDNA Eve - living ca. 150,000 ya in Africa. [2] This could be achieved by comparing the mtDNA sequences of women living today from all around the world by creating a phylogenetic tree of the specific genetic markers within the mtDNA.[3] Then Wells turns to the Y-chromosome, which is only passed through the male lineage. The analysis of the Y-chromosome of various men from different people groups around the world, revealed that all men living today can trace back their Y-chromosome to a single man – commonly called Y-chromosomal Adam - living 59,000 ya. [4] All people living today descend from this man.

[1] https://en.wikipedia.org/wiki/Spencer_Wells; https://de.wikibrief.org/wiki/Spencer_Wells.
[2] Spencer Wells, *The Journey of Man: A Genetic Odyssey.* (Penguin Books Ltd.: 2003), 33.
[3] Ibid., 30-33.
[4] Ibid., 53-56

Next, Spencer writes how humans spread from Africa to the other parts of the world. Again, this can be investigated by looking at specific genetic markers which one finds in specific people groups living today and following the order the mutation occurs and estimating the dates and demographic details.[5] His focus is on the Y chromosome, but he supplements the data with results from the mtDNA. Surprisingly, genetic research revealed that the first humans who left Africa landed up in Australia at ca. 50000 ago via a Coastal Highway. [6] Next humanity spread in the Middle East.[7] After that, humans spread over Eurasia[8] before they arrived in Europe[9] and finally in America.[10]

Wells also writes about the impact of culture on genetics. He shows what insights genetic research can give into the origin and development of languages, the spread of agriculture and sexual politics.[11] Sampling various peoples all over the world made it possible to trace the journey of humanity. However, Wells argues that the mobile revolution leads to a more and more of intermingling of different people groups all over the world and there will come a time when this kind of research will not be possible anymore. [12]

3. Evaluation

3.1. Strengths

The book makes the basics of human population genetics clear to any scientifically inclined lay reader. Wells employs a useful analogy of the transmission of a soup recipe over many generations to help the reader to understand how one can make a human family tree from the genetic data.[13]

A strength of the approach using genetic data to map the spread of humanity over time is that it can demonstrate that the multi-regional hypothesis cannot be correct and something like the Out of Africa model fits the data much better. [14] The books main arguments are substantiated by several studies

[5] Ibid., 70-71.
[6] Ibid.*61-99, 182.*
[7] Ibid. 81-99, 182.
[8] Ibid. 100-121, 182.
[9] Ibid. 122-134,182.
[10] Ibid. 134-145,182-183.
[11] Ibid. 146-183.
[12] Ibid. 184-198.
[13] Ibid. 32, 100-104.
[14] Ibid., 54.

referenced in the section on further reading. Wells is even an author of one of them himself.[15] While some of this content might have to be updated due to more recent findings (see Section 3.3) this not a weakness of the book since it had to deal with the data available at that time.

The arguments for the various steps of the spread of humanity are especially strong when genetic analysis can be bolstered by archaeological findings. One example are stone tools found in Australia dated ca. 50,000-60,000 ya,[16] which confirm the dates from the genetic data for humanity arrival in Australia.

A further strength of the book is that Wells distinguished what can be really known from the scientific data and what is only speculation.

3.2. Weaknesses/Critique

Wells writes that M130 is found in 5% or less in the population on the Indian subcontinent, 10% of Malaysian, 15% of New Guinean and in 60% of Australian aboriginal men.[17] He also writes that ", around 50 per cent of the men in southern India have M20."[18] However, he does not explain on what statistical basis he does arrive at that numbers. Moreover, he should have also added error bars to the numbers. Error bars should also have been provided for the dates of mtDNA Eve and Y-chromosomal Adam.

One issue with using molecular anthropology to map the historical spread of humanity is, that it assumes geographical location historically constant. However, it might also be the case that the people living now in Africa and identified as the oldest people groups might have lived somewhere else.[19]

The Journey of Man assumes naturalism, which is evident from a paragraph at the beginning where Wells speculates about the origin of life via "the first self-replicating molecules "and claims that "we are the result of over a billion years of evolutionary tinkering"[20] However, the assumption that life on

[15] Wells et al. (Proceedings of the National Academy of Sciences USA 98: 1044–9, 2001).
[16] Wells, *The Journey of Man*, 76.
[17] Ibid. 73-74.
[18] Ibid. 113,.
[19] Fazale Rana, "Lecture 14: Evolutionary Scenarios for Humanity's Origin," HO Advanced Seminar in Human Origins (Spring 2022 - Biola), 2017, vimeo video, 35:12, https://vimeo.com/198093867?embedded=true&source=video_title&owner=3355087
[20] Wells, *The Journey of Man*, xiii.

Earth arose only by natural mechanisms can be seriously challenged.[21] Likewise, the claim that natural evolutionary processes can lead to all the diversity of life can be contested[22], also regarding the evolution of humanity from a common ancestor with chimpanzees.[23] Furthermore, naturalism has implications on his discussion about the evils of eugenics, racism, and his attempt to exonerate Darwin from racism. But on naturalism ethics becomes completely subjective and the concept of human rights and dignity would just be a made-up concept, but nothing which humans inherently have. Why on naturalism is belonging to the same species "human" make any difference? Why on naturalism could we not invent to give rights depending on specific properties a person has? Why would this be wrong in an objective sense? The book would lose nothing of its strength if it would be more neutral regarding worldview issues, because the construction of phylogenetic trees limited to modern humans does not have to rely the on the assumption that modern humans evolved from a common ancestor with chimps.

3.3. Suggestions for a new Edition

At the time when *The Journey of Man* was written the genetic data suggested that Y-chromosomal Adam lived ca. 90,000 years after Eve. Eve was dated 150,000 ya[24] and Adam ca. 59,000 ya.[25] However, the currently available genetic data puts Y-chromosomal Adam in the same period as mtDNA Eve.[26] In a second edition this would have to be considered.

Moreover, the re-assessment of findings in Australia showed that no radiocarbon tested sites are older than 40,000 ya.[27] This does not mean that Australia was not settled as the Y-chromosomal data suggests but it cannot be confirmed by the archaeological record. Moreover, the dates from genetic data depend on the accuracy of the molecular clock and recent research showed that the mutation rate

21 James M. Tour. *Origin of Life, Intelligent Design, Evolution, Creation and Faith*. https://www.jmtour.com/personal-topics/evolution-creation/ (accessed April 15, 2022); Stephen C., Meyer, Return of the God Hypothesis, Kindle-Version, (HarperOne, 2021), 256 -291.
22 Meyer, *Return of the God Hypothesis*, 292-330.
23 Fazale Rana and Hugh Ross, *Who Was Adam?: A Creation Model Approach to the Origin of Humanity*. (RTB Press:2015), 143-158.
24 Wells. *The Journey of Man*, 40.
25 Ibid., 53-56.
26 Rana, "Lecture 14: Evolutionary Scenarios for Humanity's Origin."
27 Rana, *Who Was Adam?*, 134.

in the Y-chromosome depends on the Haplotype.[28] This might affect the dating of divergence times of people groups.[29]

4. Recommendation

This book can be recommended to anyone who has interests in human origins. A basic understanding of genetics would be beneficial. From a Christian perspective it is important to be conversant with this kind of research because it is relevant for the first eleven chapters of Genesis.

[28] Qiliang Ding, Ya Hu, Amnon Koren, Andrew G Clark, Mutation Rate Variability across Human Y-Chromosome Haplogroups. Molecular Biology and Evolution, Volume 38, Issue 3, March 2021, Pages 1000–1005, https://doi.org/10.1093/molbev/msaa268
[29] Ibid.