An alternative explanation for the success of Western Civilization.

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The location of Western Civilization defined nations in Europe and the United States within the largest global pollen environments on the planet is proposed as a key factor leading to their success. Environments with changes in pollen cause large up and down changes in serum histamine directly causing reductions and increases in brain serotonin i.e., a larger "serotonin slope," linked to higher levels of creativity. The pollen ecosystem is thus considered the hidden driver of the success of these populations.

> *"Other, less abstract approaches to improving creativity center around the importance of serotonin. According to research... serotonin levels are tied to creativity... a gene pertaining to serotonin, known as TPH1, is associated with "figural" creativity — or creativity regarding shapes, diagrams, and drawings."*
> *-- Jandy Le and Michael Xiong – The Scientific Origin of Creativity (2019)*

Historians have attempted to identify the causes for the success of "Western" nations over other regions of the world especially as it relates to the accumulation of technology and knowledge and their eventual power in the modern world. False factors like race or religion and physical factors like geography, weather, and even luck (which do have their place) have all been part of the analysis. But, perhaps, there is another factor that observational data appears to support. Taken as a given that increased changes in brain serotonin correlate with increased creativity, then regions of the globe with increased pollen density will lead to increased up and down changes in serum histamine that will thus also lead to increased changes in brain serotonin (a larger "serotonin slope") and thus, possibly, create an unseen, if not unrealized, benefit of an environment situated for improved creativity. We thus have perhaps an additional driver behind the success of specific nations of the world and even aggregate modern human history.

One could even speculate that the very act of domestication into living areas e.g., caves, dwellings, etc. began the initial serotonin slope leading to the origination of human intelligence. The increased evidence for intelligence in domesticated dogs would further reinforce this proposal.

An argument can be made that any correlation between pollen level and societies is a result of coincidence as societies could, over time, tend to settle in areas where agriculture would flourish e.g., warm temperate forests or temperate forests (**Fig. 1**), however human beings did not originate from these areas, and we evolved and migrated from the Africa tropics.

Recent research including maps of present day and historical pollen density match the proposed theory.

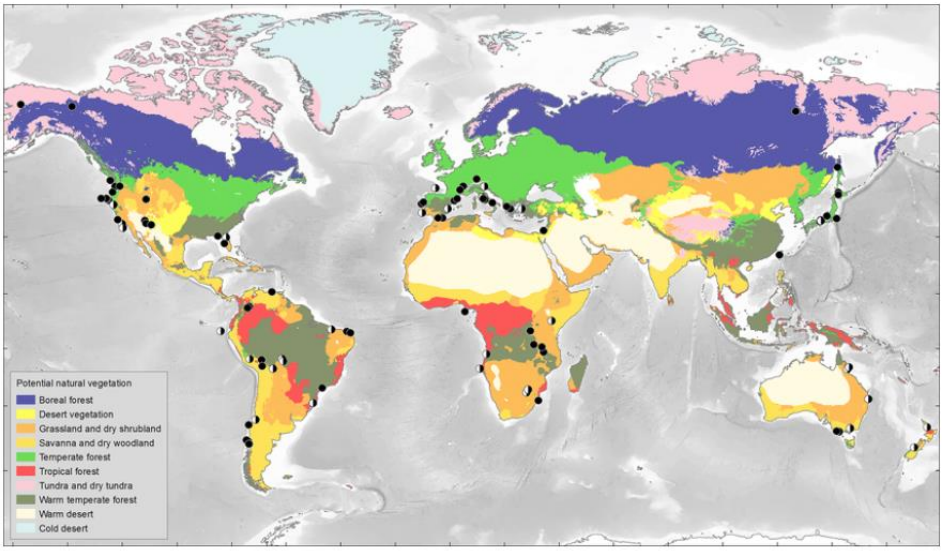
Manuel Chevalier et al. in their 2020 paper Pollen-based climate reconstruction techniques for late Quaternary studies from Earth-Science Reviews includes a map of different pollen samples (**Fig. 2**) that shows a frequency distribution whose density is nearly identical to that of the map of successful nations including the United States, Canada, Europe, China, and Japan. Their work also includes as map of and historic pollen records again with densities or locations correlating to the proposed model (**Fig. 3**). Note the mapped correlation to modern nation-states with the greatest technology, industry, and success.

Kuan-Wei Chen et al in the 2018 edition of the International Archives of Allergy and Immunology included a global map of ragweed in their paper Ragweed Pollen Allergy: Burden, Characteristics, and Management of an Imported Allergen Source in Europe. Again, we see the location and density of an example pollen, in this case fall ragweed, correlating to nations that are major modern and technological world powers (**Fig. 4**).

Jonathan Storkey et al in the 2014 edition of PLoS ONE paper called A Process-Based Approach to Predicting the Effect of Climate Change on the Distribution of an Invasive Allergenic Plant in Europe, show a map of even greater detail in central Europe noting density of ragweed (**Fig. 5**).

Figures

Fig. 1.



Map with location of the 93 marine and terrestrial pollen sites covering part of or all the last glacial period (MISs 4, 3 and 2). Sites have better resolution than 1 sample per 1000 years. Present-day potential natural vegetation after Levavasseur et al. (2012).

Source: https://www.researchgate.net/figure/Map-with-location-of-the-93-marine-and-terrestrial-pollen-sites-covering-part-of-or-all_fig2_319631062 retrieved October 24, 2021.

Fig. 2.

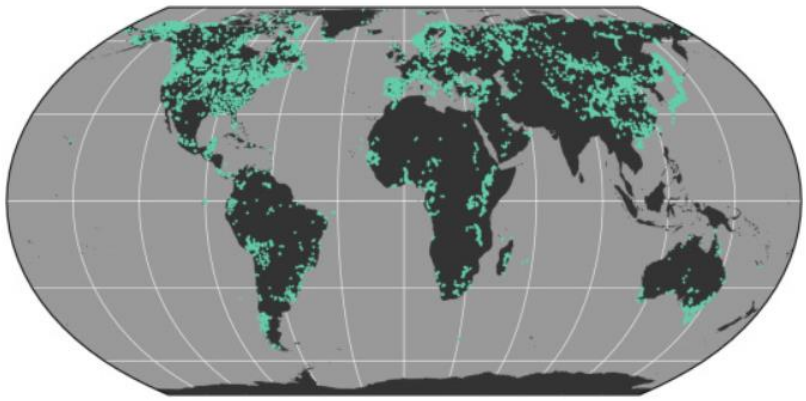


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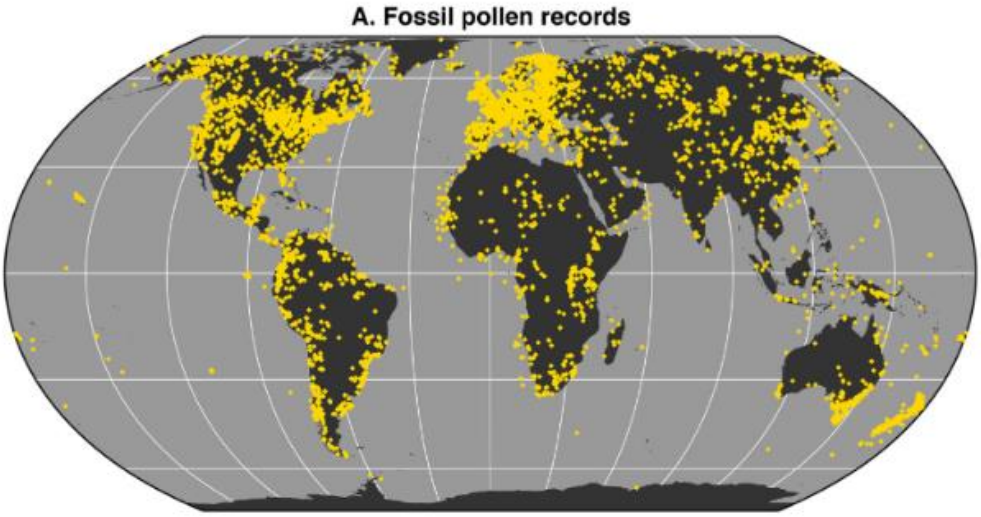
Fig. 10. Map of modern pollen samples available from numerous public databases and studies (Cao et al., 2014; Davis et al., 2020; Flantua et al., 2015; Fletcher and Thomas, 2007; Gajewski et al., 2002; Herbert and Harrison, 2016; Montade et al., 2019b; Montade et al., 2019b; Whitmore et al., 2005; Williams et al., 2018a). The map is based on the 'Equal Earth' map projection to better represent the relative sizes of the different continents (Šavrič et al., 2019).

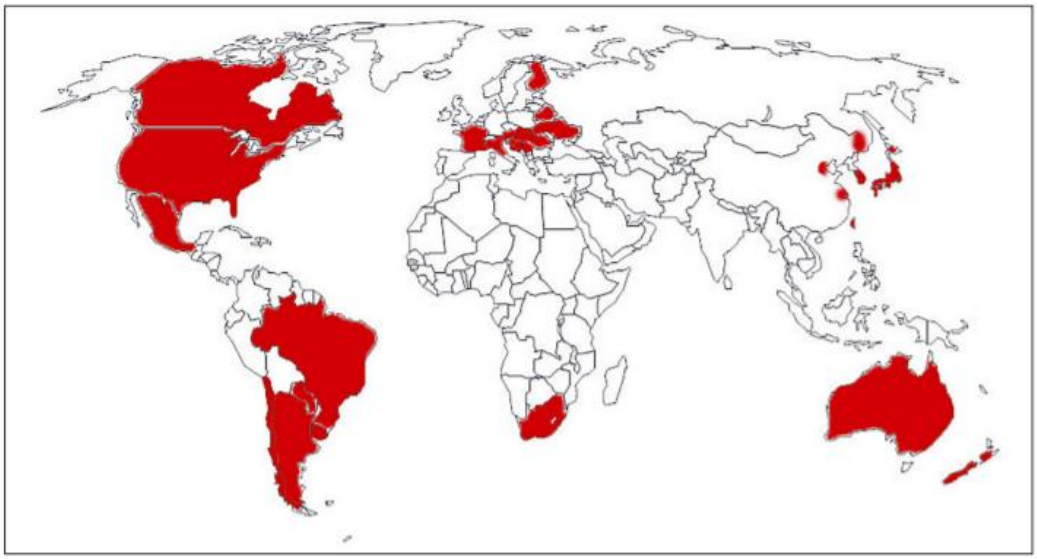
Source: https://www.sciencedirect.com/science/article/pii/S001282522030430X retrieved October 24, 2021.

Fig. 3.



Source: https://www.sciencedirect.com/science/article/pii/S001282522030430X retrieved October 24, 2021.

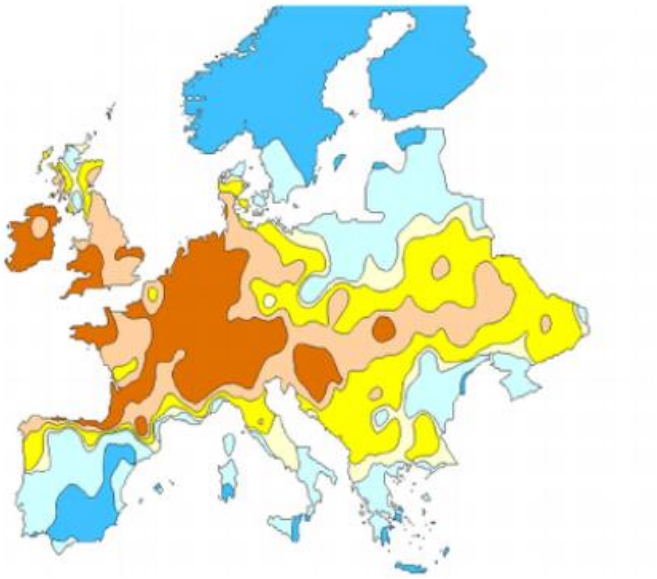
Fig. 4.



Worldwide distribution of ragweed. Ragweed occurrence has been reported in different countries (red) in North America (Canada, the USA, Mexico), South America (Brazil, Uruguay, Paraguay, Argentina, Chile), Europe (Hungary and neighboring countries, Italy, France, Finland), Africa (South Africa), Asia (Japan, South Korea, China), Australia and New Zealand.

Source: https://www.karger.com/Article/Pdf/487997 retrieved October 24, 2021.

Fig. 5.



Distribution of Ambrosia artemisiifolia (common ragweed) in Europe

Source: https://www.researchgate.net/figure/Distribution-of-Ambrosia-artemisiifolia-common-ragweed-in-Europe-under-climate-change_fig3_260214135 retrieved October 24, 2021.