

# New Advances in Biohistory

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The publication under review is a research report based on two studies (Nexus 200 and Nexus 400) with some accompanying historical background and commentary. The Nexus 200 study

aimed to explain a principal paradox of late modernity. A coherent web of indicators suggests that the West's achievement of seemingly peerless prosperity, peace, and well-being may have occurred in tandem with the decay of its genetic capital: rising aggregate IQ scores alongside [a decline in hereditary general intelligence] and rates of intellectual eminence and macro-innovation; diminishing interpersonal violence despite waning altruistic dispositions; expanding wealth and power of Western democracies but shrinking Western populations.

The Nexus 400 study tested the hypothesis that the relaxation of environmental/ecological harshness and climatic variability through the warming of global temperatures in the late Modern Era [after *c.* 1750] shifted the balance of selection among populations of Western European descent from the group to the individual level.

This latter study is notable for being “the *first* published empirical demonstration of the relative strengths of individual-level and group-level selection in humans.”

According to the Berkeley Earth estimates of global temperatures, the Medieval Warm Period ended by about AD 1250. After some two centuries of relatively stable temperatures, the Little Ice Age of 1450-1750 witnessed low sunspot activity, colder and more unpredictable weather, widespread crop failures and famines. The colder winters created ecological conditions favorable to the spread of epidemic diseases such as bubonic plague. These hardships are reflected in the demographic statistics for Western Europe during this era:

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In the UK, Sweden, and France between AD 1300 and 1700, infant and child mortality were between 26.9 percent and 46.2 percent. Additionally, reproductive participation rates were very low—only around 40 percent of individuals in the sixteenth and seventeenth centuries fully participated in the production of their succeeding generation.

But hard times foster tough men, and a colder and more unpredictable climate favors slower life history traits, also known as K-strategizing. This shift leads to “higher levels of social equality, within-group peace,

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**THE RHYTHM OF THE WEST:  
A Biohistory of the Modern Era,  
AD 1600 to the Present**

By Michael A. Woodley of Menie, Aurelio José Figueredo, and four others

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between-group peace, sexual equality, strategic differentiation, macroeconomic diversification, human capital and aggregate IQ.”

During this period, intelligent persons with forward-looking and prudent dispositions were more likely to survive and pass on their genes:

Bourgeois traits increased fitness, with the result that those carrying bourgeois traits replaced the old peasantry via downward social mobility, whereby the surplus elite population had to move down the social ladder to find employment. More industrious and enterprising individuals inherited those economic niches formerly held by the peasantry.

According to Gregory Clarke in *A Farewell To Alms*, this shift provided the basis for the industrial revolution which followed. Clarke rejects the hypothesis that

this process was accompanied by a rise in inheritable general intelligence, but the present study's authors state that "there is every indication that [hereditary general intelligence] was increasing during this period along with the behavioral dispositions Clarke discusses."

Just as the conditions of the Little Ice Age favored high intelligence and bourgeois virtues, primary authors Woodley and Figueredo have proposed that they favored group selection over individual selection. Under adverse conditions, traits that benefit the group at the expense of the individual may spread within a population. Such traits include courage, self-sacrifice and altruistic behavior in general. Even exceptionally high intelligence may be a group-selected trait: it has been observed that eminent men who have made important contributions to science and society have often not been reproductively successful; the brilliant "science nerd" who cannot attract a girlfriend has even become a popular figure of fun. The authors point out that these pro-social traits closely match those which early twentieth century eugenicists sought to promote, listed by the authors as: "altruism, heroism, and cognitive and conative aspects of eminence."

After about 1750, and continuing to this day, the trend has been toward warmer and more predictable global temperatures. The authors hypothesize that "the relaxation of environmental harshness and climatic variability through the warming of global temperatures in the Late Modern Era shifted selection among populations of Western European descent from the group level to the individual level." Such a shift would lead us to predict declines in the more pro-social virtues, as well as in hereditary general intelligence.

A partial confirmation may be found in what the authors describe as a "precipitous fall of per capita rates of eminent intellectual figures and rates of macro-innovation around the end of the British industrial revolution." Both altruism and high hereditary general intelligence contribute to intellectual eminence, and eminent individuals are chiefly responsible for the provision of macro-innovations. The authors comment: "Though some may find reassurance in the fact that these trends have not arrested economic growth...it must be noted that they have probably slowed it substantially and threaten its long-run future."

The authors also assemble several lines of evidence for sinking levels of hereditary general intelligence, culminating in an estimated "decadal decrement of .44, which accords almost perfectly with the loss in hereditary  $g$  predicted on the basis of selection against genetic variants associated with hereditary  $g$  in the U.S. (specifically, a generational loss of attained education of 1.5 months, yielding an estimation of .42). If nonhereditary general intelligence is factored in, the total rate of decline increases to around 1.21 points per decade for Western populations." Factors responsible for this

include not merely warmer temperatures, but disproportionately frequent use of birth control by the most intelligent and forward-looking persons in Western nations, as well as lower mortality from improved hygiene and medicine. Deferral of marriage and reproduction in favor of higher education may also constrain the fertility of women of high inheritable general intelligence.

Declines in hereditary general intelligence have been masked in recent decades by the so-called Flynn effect, but this is caused by increases in specialized abilities largely, if not entirely, independent of general intelligence. The Flynn effect may not offset declines in general intelligence for much longer.

The gradual displacement of religion from the lives of West Europeans may be either cause or effect of the decline of the pro-social virtues among them. Studies indicate that many persons in some of the most developed Western nations suffer from a sense of purposelessness: 18 percent of Britons, 20 percent of French, and 27 percent of Dutch report having no sense of purpose in life. Other studies have found increased levels of personality disorders and pathological forms of interpersonal relations, a loss of empathetic feelings, and increased narcissism. Historically high rates of depression in Western countries have been characterized by some medical observers as a mental health crisis.

The authors' disturbing conclusion is that the West's "putative thriving in the late twentieth and early twenty-first centuries, often considered the zenith of human development, may in fact be coasting on the waning inertia of pre-industrial eugenic selective pressures." They offer the following predictions regarding the long-term effects of these changes:

As population levels of hereditary general intelligence decrease, the proportion of those with the general intelligence needed to sustain the highly sophisticated forms of social organization typical of group selected Western peoples shrinks; correspondingly an extension of the means of social control of the remaining cognitive elite is needed to maintain societal complexity. Top-down systems of education, for instance, must become increasingly pervasive in the lives of ordinary persons so as to inculcate specialized skills that compensate for deficient general intelligence and thereby afford the great mass of people the capacity for productive economic participation through narrow niches appropriate for these limited skills.

But the authors abstain from all policy recommendations, cautioning that eugenic interventions may have effects quite different from those their advocates anticipate. ■