

A Response to Recent Critics of Dickens and Flynn (2001)

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Rushton and Jensen (2006) "Thirty Years of Research on Race Differences in Cognitive Ability," *Psychology, Public Policy and Law* 11 (2) pp235-294

Criticism	Response
D&F model implies increasing B-W gap with age but review of evidence finds about 1 SD at all ages	<ol style="list-style-type: none"> 1. The model does predict that an initial negative shock should cause declines over time, but the amount of time it would take could be very short with most of the change happening in the first three years in a disadvantaged environment. 2. Standardization samples of Black-White differences show the gap between them growing with age.
The fact that heritability increases from .4 to .8 contradicts the Dickens-Flynn theory	No, the Dickens Flynn theory was in part developed to explain this increase in heritability. See p362 in the 2001 article.
Mean black IQ in different cultures is constant.	No it is not. It varies depending on their social status and the GDP of the country. See for example Wicherts, Dolan and Van der Maas "A Systematic Literature Review of the Average IQ of Sub-Saharan Africans," forthcoming in <i>Intelligence</i> and Chapter 5 of Wichert's dissertation available at http://www.repository.naturalis.nl/document/44999
D&F provide no evidence that GxE correlation is large or increases with age	Growing heritability is evidence of that, and Jensen himself has argued for this explanation for the growth of heritability (<i>The g Factor</i> , 1998 p179 "The diminishing ... effect of home environment... can best be understood in terms of the changing aspects of the genotype-environment (GE) covariance from predominantly passive, to reactive to active."
Mingroni (2007) "Resolving the IQ Paradox: Heterosis as a Cause of the Flynn Effect and Other Trends" <i>Psychological Review</i> 114 (3) pp 806-829	
It is questionable to label environmental factors that are caused by genes as environmental and the high correlation with genes makes it impossible to separate out there effects.	This misses the point. The same processes that produce big effects for genes will also produce big effects for exogenous environmental variation. That is testable in standard ways.
D&F triggers can't be "shared environment" since there is no effect of shared environment in adults and effects are small in	Environmental effects don't come with tags on them "shared" and "non-shared." The same physical problem could cause both share and non-shared variance (for example if lead paint in a

children.	home is consumed to different degrees by different children). The same environmental effect that is shared for children in a household will appear as non-shared for their adult parents (for example the SES of the parents' adult household). So the same factors could be affecting both adults and children but be reflected in different variance components to the extent that they create differences between individuals. However, the point of the D&F model is that environmental differences between households at the same point in time tend to be transient so they do not receive the benefit of the multiplier and therefore appear weak. However, differences in the means of these transient environmental influences across generations or social groups do get the benefit of multiplier effects and as such can produce large differences in averages.
Social multiplier is too vague to quantify.	No, it is a network effect. There is already a substantial literature on estimating network effects, much of which suggests their importance for individual achievement.
Mean IQ causes individual IQ which causes mean IQ. This is circular reasoning.	No, its simultaneous equations. All types of natural and social scientists regularly work with systems where there is reciprocal causation. There is well accepted technique for doing this. Exactly the technique employed in this paper.
Social multiplier doesn't tell us whether IQ will rise or fall.	Of course not. That's not the point. It is a multiplier. The direction of the triggering affect tells which way the system will go. The point is that small differences between generations or social groups can get blown-up to large differences in ability.
Social multiplier must be non-shared environment and so runs into the problem that birth order studies show later born equally able or less able.	<ol style="list-style-type: none"> 1. Effects do not have to be non-shared as explained above 2. There could be birth order effects and they would likely swamp secular gains which are only .3 IQ points per year
Social multiplier is an X factor	P in the model stands in for the average IQ in a person's environment. This does vary from person to person. Typescript mentioned in original manuscript shows how functional form used in 2001 paper can be derived from model where individual social effects differ.

<p>Social multiplier means that children being raised in low IQ countries should be dumb</p>	<ol style="list-style-type: none"> 1. Not just children, everybody. 2. But that depends on who they associate with. If only the country's elite and members of their own western culture then no effect. 3. Whole point of social multiplier is that P is the average for the social group one is part of – that is how it contributes to explaining black-white differences.
<p>Multiple simultaneous trends including increases in height, head size, autism, myopia, etc. suggest common cause (heterosis) and D&F model is implausible for them.</p>	<ol style="list-style-type: none"> 1. Best argument that critics have made but... 2. Trends are no longer simultaneous (in the US, growth in height stopped about 1952 while IQ gains have persisted, Flynn 1984, "IQ gains and the Binet Decrements" <i>Journal of Educational Measurement</i> 21 Table 2) 3. In Norway growth in height took place in the upper end of the distribution while IQ gain was greatest in lower end of the distribution (Flynn <i>What is Intelligence</i> 2007 p105) 4. Need to consider each "trend" individually. Autism could be increased use of diagnosis, height could be due to non-linear environmental effects or epigenetic phenomena.
<p>Heterosis better explanation for secular gains than environmental change</p>	<p>Heterosis effects are implausibly small. This is clear from Mingroni's own article but in addition see Flynn <i>What is Intelligence</i> pp101-102 and 182-183.</p>