

Sciences Gay & Dismal:  
The MetaPolitics of Economics & Poetry

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Let us bear in mind the words of Galton written almost in the last years of his life, words not of despair, but of wise caution: 'When the desired fullness of information shall been acquired, then and not till then, will be the fit moment to proclaim a 'Jehad' or Holy War against customs and prejudices that impair the physical and moral qualities of our race.'

Pearson and Elderton 1925, p. 4.

A dinner conversation with Vern Smith is acknowledged with thanks.

## Stories and Models

The great debates over hierarchy in Victorian Britain occurred, just as Thomas Carlyle (1849, 1850) said, between supporters of the “dismal science” of economics – in conjunction with the Christian Evangelicals of Exeter Hall<sup>1</sup> – and the practitioners of the “gay science” of poetry. In particular, when the Eyre Controversy came out of Jamaica, the British intellectual community separated along disciplinary lines – economists, biologists, and Evangelicals sided with the Jamaicans; while poets and artists defended Governor Eyre (Semmel 1962, Holt 1995, Levy 2001, Levy-Peart 2001). In the judgment of many historians, the poets wrongly triumphed.

Why has art been so persuasive in competition with science?<sup>2</sup> The answer, we shall assume, is that ordinary people understand stories better than they do models. But if so, how was classical economics ever able to compete effectively. We shall claim that classical economics had story-like (inductive) properties. Two consequences follow from the inductive procedure which presupposed human homogeneity. First, it made classical

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<sup>1</sup>Carlyle’s identification of the anti-slavery coalition of the “dismal science” of political economy and “Exeter Hall” evangelical Christians is considered in Levy (2001), Levy-Peart (2001 & 2002). Carlyle’s second use of “dismal science” (Carlyle 1850) makes it clear that the “dismal science” includes both economists and evangelicals.

<sup>2</sup>We shall sometimes refer to visual caricatures and narratives together loosely as “art”. We do, however, recognize significant differences exist between literature and visual representations; Frye argues that literature which uses symbols that are completed by their context and relation to something outside the world of words, “can hardly become as abstract, as removed from all direct representation of what is external to itself, as painting or music can” (1963 p. 32).

economics the natural ally of Biblical story-tellers who also assumed human homogeneity. We have discussed this coalition elsewhere (Levy 2001, Levy-Pearl 2001 & 2002). Here we consider how classical economics became the natural target of later modelers who presupposed a racial hierarchy.

We distinguish in what follows between policy, questions such as “how the Jamaicans ought to be treated,” and metapolicy, questions such as “how we solve the problem of ‘how the Jamaicans ought to be treated.’” We provide a framework in which various sorts of metapolicies might be distinguished, and we propose a model which might predict which sort of metapolicies will be the rational choice of a policy advocate.

In the context of the nineteenth century debates, we identify two sorts of metapolicies: statistical models and narration of both a visual and an oral sort. We allow that both sorts of metapolicies can be caricatures<sup>3</sup> or approximations. The separation between poet/artists and economists/evangelicals over the Eyre controversy suggests that models might be substitutes for art; we ask whether this is always the case, or whether (and in which case when) models might serve as complements to stories or narratives (McCloskey 1990, Morgan 2001, Cowen 2002).

Recent discussions in economic methodology have drawn attention to the possibility that stories and models influence one another in complicated ways. The stories

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<sup>3</sup> See Gibbard -Varian 1978, for a rare discussion of economic models that are caricatures.

which economists use to explicate the models (McCloskey 1990) may be *required*, to make the models operational (Morgan 2001). If Morgan is correct the theorists who build models need to give instructions on how the model is to be used in the same way that experimentalists who test theories must give very detailed instructions to the subjects of the experiments.<sup>4</sup>

Economists outside the experimental tradition have tended not to take stories seriously – “anecdotal evidence” is as close to a slur as polite conversation allows – because we often assert, without proof, that stories cannot be statistical models, or that they are (unrealistic) caricatures. Attitudes toward stories inside the experimental tradition are different, perhaps because experimentalists need to take people as they are and not as they should be for of the convenience of our theories.

The instructions which experimental economists give the subjects of the experiments are of systematic concern for replication (Plott 1982, p. 149). When the instructions are varied, an experimental outcome becomes hard to replicate. The instructions are words – neither payments, nor hard constraint; they are, as Vern Smith told us, stories. Experimentalists have varied the stories in order to examine their impact on the experimental outcome. If we play a game in which there are real costs to deviation

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<sup>4</sup> The parallel between stories required for models in Morgan’s account and those used by experimentalists is not be complete. The experimentalists routinely vary the stories and observe how the outcome changes. This variation remains conjectural in the case of the ‘use-to-which-the-model-is-put’ experiment.

from a model of optimal behavior often enough, the subject will learn the true model. From Vern Smith we learn, however, that in “trust” games it matters for the trajectory of the experiment whether the other player is called “participant,” “opponent” or “partner.”

Thus, we know that stories leave their mark in the experimental record of human action. This is a reason to believe that ordinary people find stories attractive; in the experiments the subjects begin with a story and learn the model more slowly. An additional problem which concerns us below is the longevity of the story of human heterogeneity, in particular, its impact on the models of Jews published by the two premier statisticians in the eugenics tradition, Francis Galton and Karl Pearson.

To provide a larger context for the issues, we consider why it was that stories of human heterogeneity told by Thomas Carlyle, as well as the first essays in eugenics by Galton and W. R. Greg, also attacked classical political economy and offered a transformative alternative view of human nature. We emphasize the possibility of complementarity between narration and model because the opposition of art and model is a story told at least since Socrates, in Plato’s telling, proposed to expel the poets from the Republic.

#### From Art versus Science to Stories and Models

The recognition of opposition between “art” and “science” or model has a long history. Perhaps the most elegant expression of this view was provided forty years ago by

Northrop Frye.<sup>5</sup> The key difference between art and science, Frye argued in his 1963 Massey Lectures, is whether the world (and man) are to be taken as they are, or whether they are to be transformed. In its essence, art has to do with transformation.

Frye explains the difference between science and narration, emphasizing that science takes the world as it is, and then constructs abstract models. So the scientist begins with the observed world, and then imagines or abstracts:

Science begins with the world we have to live in, accepting its data and trying to explain its laws. From there, it moves towards the imagination: it becomes a mental construct, a model of a possible way of interpreting experience. The further it goes in this direction, the more it tends to speak the language of mathematics, which is really one of the languages of the imagination, along with literature and music. (1963, p. 6)

By contrast, the artist begins by imagining, and then recording in a story or painting how

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<sup>5</sup> Like C. P. Snow, Frye had the political views of his writers much in mind. Snow (1959, p. 7): "I remember being cross-examined by a scientist of distinction. "Why do most writers take on social opinions which would have been distinctly uncivilised and démodé at the time of Plantagenets? Wasn't that true of most of the famous twentieth-century writers? Yeats, Pound, Wyndhman Lewis, nine of out of ten of those who have dominated literary sensibility in our time—weren't they not only politically silly, but politically wicked? Didn't the influence of all they represent bring Auschwitz that much nearer?"

Frye (1963, p. 7): "Writers don't seem to benefit much by the advances of science, although they thrive on superstitions of all kinds. And you certainly wouldn't turn to contemporary poets for guidance or leadership in the twentieth-century world. You'd hardly go to Ezra Pound, with his fascism and social credit and Confucianism and anti-semitism. Or to Yeats, with his spiritualism and fairies and astrology. Or to D. H. Lawrence, who'd tell you that it's a good thing for servants to be flogged because that restores the precious current of blood-reciprocity between servant and master. Or to T. S. Eliot, who'll tell you that to have a flourishing culture we should educate an élite, keep most people living in the same spot, and never disestablish the Church of England. The novelists seem to be a little closer to the world they're living in, but not much. When Communists talk about the decadence of bourgeois culture, this is the kind of thing they always bring up. Their own writers don't seem to be any better, though; just duller."

the world should be

Art, on the other hand, begins with the world we construct, not with the world we see. It starts with the imagination, and then words toward ordinary experience: that is, it tries to make itself as convincing and recognizable as it can. (1963, p. 6)

And the difference comes down to this:

You can see why we tend to think of the sciences as intellectual and the arts as emotional: one starts with the world as it is, the other with the world we want to have. (1963, p. 6)

Modern polemics also hold that models serve to explain while narratives are designed as rhetorical devices, to transform. Bjørn Lomborg, for instance, discusses the method by which debates occur about the state of the environment, and complains about the persuasiveness of stories:

On a higher level this book [*The State of the World*] plays to our general understanding of the environment: the Litany of our ever deteriorating environment. This is the view of the environment that is shaped by the images and messages that confront us each day on television, in the newspapers, in political statements ... Even children are told the Litany ... (2001, p. 3)

A potential problem arises in the selection of stories:

... because in today's global environment, with massive amounts of information at our fingertips, an infinite number of stories can be told, good ones and bad.

Should you be so inclined, you could easily write a book full of awful examples and conclude that the world is in a terrible state. Or you could write a book full of sunshine stories of how the environment is doing ever so well. Both approaches could be using examples that are absolutely true, and yet both approaches would be expressions of equally useless forms of argumentation. (7)

The solution to this problem, not surprisingly, is to find central tendencies among the

stories: “we can only elucidate global problems with global figures. ...” because “global figures summarize all the good stories as well as all the ugly stories.” (7) Flee particulars for averages.

But the attraction of the central tendency is not universal, either within economics, where opposition to the method of abstraction followed from resistance to the centralizing tendency inherent in the method or among artists, who often favour transformation. Frye reminds us that artists who begin with the process of imagining the world as it might be, focus on the extremes: “Imagination gives us both a better and a worse world than the one we usually live in, and demands that we keep looking steadily at them both.” (1963, p. 40).<sup>6</sup> In a recent conversation with Pierre Bourdieu about the seeming triumph of neo-liberalism and the revival of the Manchester school, Günther Grass describes his “understanding that narrative fiction should ... tell a story from the point of view of people who do not make history, but to whom history happens” (2002, p.

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<sup>6</sup> Frye goes so far as to argue that stories which show the world as it is, tend not to be successful. Frye (1963, pp. 36-37): “In fact, whenever literature gets too probably, too much like life, some self-defeating process, some mysterious law of diminishing returns, seems to set it. There’s a vivid and expertly written novel by H. G. Wells called *Kipps*, about a lower-middle-class inarticulate, very likeable Cockney, the kind of character we often find in Dickens. Kipps is carefully studied: he never says anything that a man like Kipps wouldn’t say; ...It’s an admirable novel, well worth reading, and yet I have a nagging feeling that there’s some inner secret to bringing him to life that Dickens would have and that Wells doesn’t have. Well, one of the things that Dickens often does is to write *badly*. He might have given Kipps sentimental speeches and false heroics and all sorts of inappropriate verbiage to say; and some readers would have clucked and tutted over these passages and explained to each other how bad Dickens’s taste was and how uncertain his hold on character could be ... To bring anything really to life in literature we can’t be lifelike: we have to be literature-like.”



69). The storyteller, aware that his story is but one of many, should embrace particulars, focusing on the unfortunate part of the distribution to offset the stories already told about the fortunate history makers.

We consider below in some detail the possibility that a modeler could be influenced by a story and so selectively present evidence as to advocate a transformation. The modelers in question are Francis Galton and Karl Pearson, two of the three founding editors of *Biometrika*. Of the advocacy there should be little question. Here is what Pearson wrote about transformation in the “Forward” of the first issue of his *Annals of Eugenics*:

It is the aim of our journal to aid, as far as lies in its power, the oncomings of the day, when we can claim that the groundwork of our science has been securely laid, and both the student’s text-book and practical eugenics–eugenics applied to national problems–will then be feasible. Let us bear in mind the words of Galton written almost in the last years of his life, words not of despair, but of wise caution: ‘When the desired fullness of information shall been acquired, then and not till then, will be the fit moment to proclaim a ‘Jehad’ or Holy War against customs and prejudices that impair the physical and moral qualities of our race.’” (Pearson and Elderton 1925, p. 4).

#### An Empirical MetaPolicy

We propose to make one mathematical concept the foundation of our metapolicy account, the device which is central to much recent nonparametric thinking in statistics:

an empirical probability distribution  $\hat{F}$  which puts mass  $1/n$  at each point  $x_1, x_2 \dots x_n$ .

(Efron 1979 & 1981). Each point in the distribution may then be considered either as an observation or as an anecdote in a story.<sup>7</sup> A model of these observations, by contrast, is an estimate of location applied to all N (Andrews, *et al.* 1972).

A model might or might not be an anecdote. The mean of the empirical distribution is generally not an observation. The most obvious example where a model is an anecdote is a median of the empirical distribution when N is odd. (When N is even, selecting one of Steve Stigler’s “co-medians” at random would allow the median of the empirical distribution to satisfy the anecdotal property.)

There is of course more to models than estimates of location. In Figure 1 below we present the economists’ usual and customary art object – the relationship between Y and X. Now, the observations of the model comprise points  $[x_a, y_a], [x_b, y_b], [x_c, y_c]$  which we call **a**, **b**, **c**. The modern economists’ model relating X to Y is a regression which is marked as **OLS**. This is an abstracting device, passing amongst the data and encountering none.

For narration or for a story, we consider [**a**], [**b**], and [**c**]. We define [**ab**], [**bc**] and [**ac**] as “anecdotal evidence.” Lomborg’s point is that compared to the estimated model, **OLS**, which gives a unique description of the relationship between X and Y, one can pick

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<sup>7</sup> “The narrative of a detached incident, or of a single event, told as being in itself interesting or striking.” OED (1992) entry “anecdote.”

any of the combinations of anecdotes to obtain a wide range of relationships.

Although OLS is in general not consistent with anecdotal evidence, “elementary set methods” are (Farebrother 1997). Elsewhere we have considered the properties of centered anecdotal evidence – here **[ac]** – which we have defined as the median of anecdotal evidence (Levy-Peart 2002a). Such estimators as what we are calling the MAE have i) desirable properties when the estimating model is mis-specified ii) and serve as a dependable starting point for an iterative procedure. We shall argue that the *Wealth of Nations* served this purpose for some of the greatest work of the Chicago-NBER school.

We suppose that everyone early in life picks a favorite from the set of anecdotal evidence (**[ab]**, **[bc]**, **[ac]**). A few people go on to develop models. The question we propose to address below is whether this favorite story will have an impact on the type of models constructed. Previous work on preferences over model estimation (Feigenbaum-Levy 1996) have followed convention and taken preferences as given. What we suggest is that a theorist who prefers the **[ab]** anecdote to **[ac]** will produce a model which resembles **[ab]** more closely than it does **[ac]**.

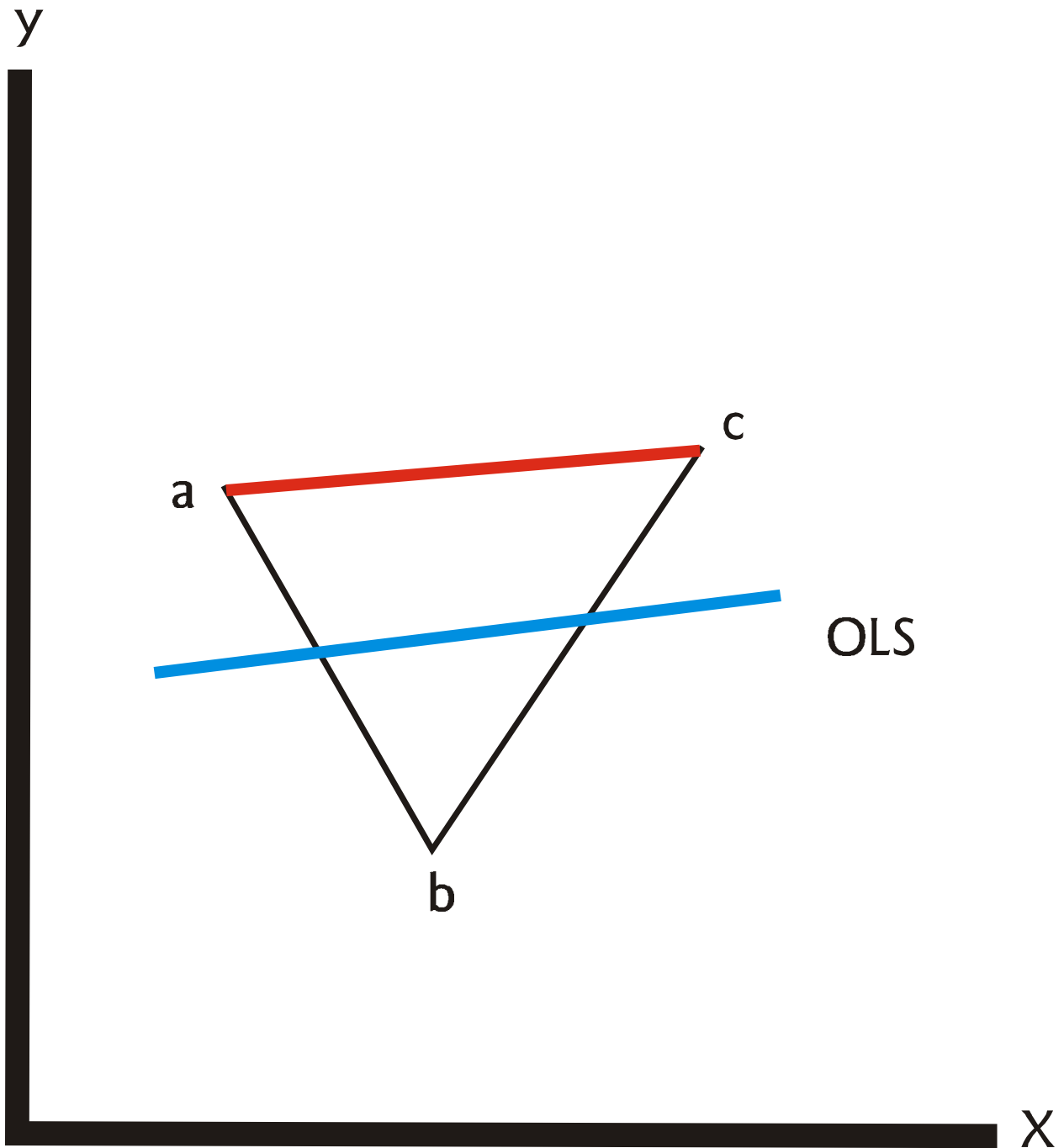


Figure 1. Models and Anecdotes

The picture we draw in Figure 2 encapsulates the arguments we advance elsewhere (Levy-Pearl 2002a). When the maintained model is correctly specified with probability 1 status – the right hand part of Figure 1 – the MAE is unbiased but less inefficient than conventional techniques such as OLS or LAD. (There is a subtle interrelationship between error distributions, and thus the efficiency of different standard regression techniques, and the ability to update the specification with new observations, Levy 1999/2000). When however the maintained model is incorrectly specified, we fall into the left-hand side of Figure 2. “Gross errors,” violations of the probability 1 claim and influential observations, change the relative efficiency properties drastically.

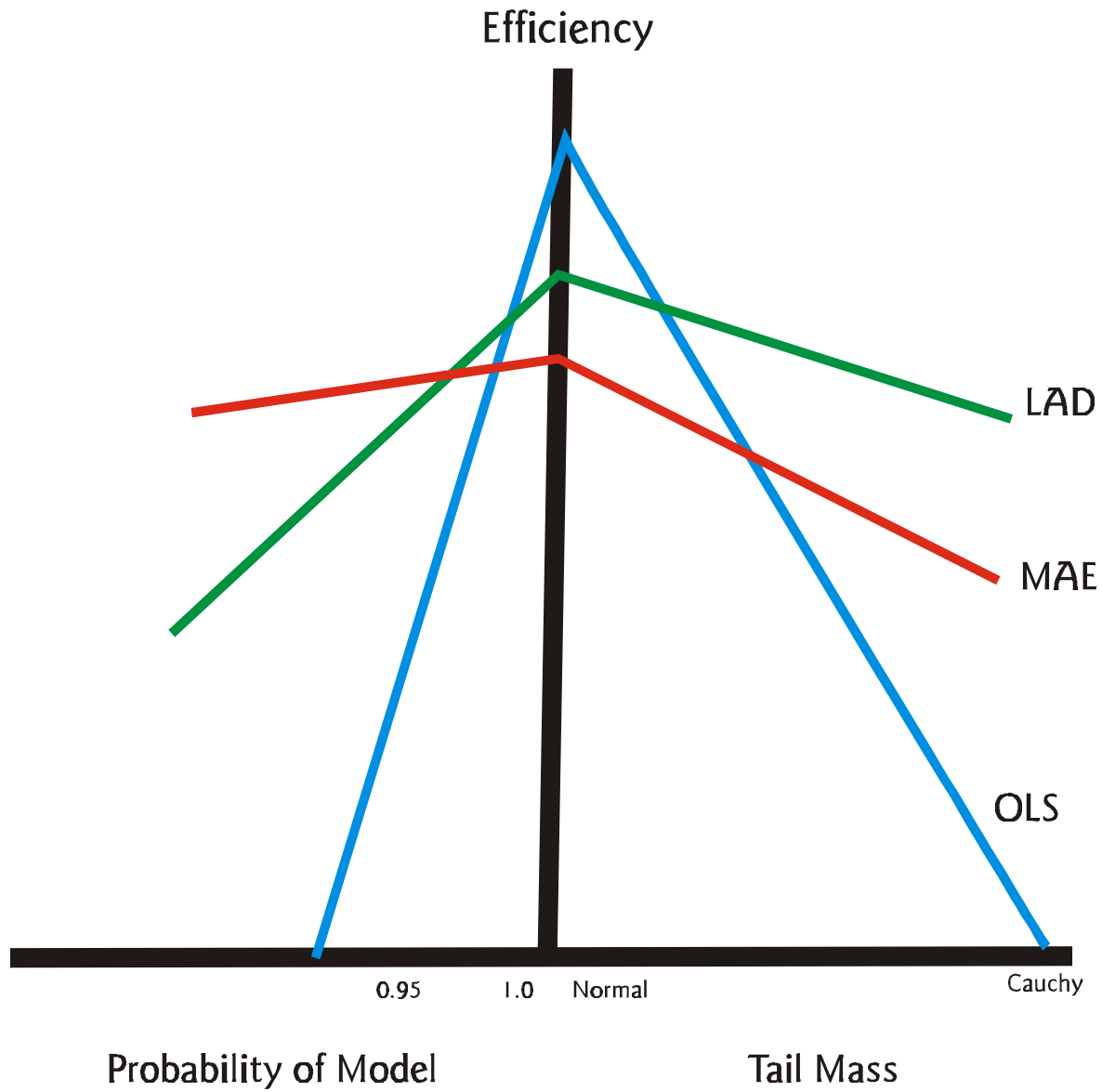


Figure 2. Admissibility of Median Anecdotal Evidence

Let us think seriously about the probability 1 claim. It says that the modeler's specification is akin to a mathematical theorem. Probability 1 constraints can be added to numerical optimization problems and increase the computed likelihood (Levy 1988a). Under one interpretation the theorist never makes a mistake so he is different from everyone else. Such a claim is not made by appeal to MAE. Indeed, the theorist and his theorizing could well be one of the anecdotes! Thus, the theorist's choice of **OLS** or [**ac**] could depend upon whether the theorist presumes himself to be the same as or different than other people.

We pause to note a related problem. Recent alternatives to rational choice modeling have proposed that individuals live their lives according to stories (Velleman 2000). Velleman does not tell us which stories they prefer nor ask whether there are incentives which lead people to bend their story to become more like a model. Caplan (2001) finds that as education increases people come to believe more like economists believe.<sup>8</sup>

"So Much Illustrated by Curious Facts"

Modern statisticians often propose the use a sample median (Andrews, *et al.* 1972) and elementary set methods of regression such as MAE (Rousseeuw and Leroy 1987) on

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<sup>8</sup> Is this related to Galton's result (1907, pp. 58-59) that the majority of scientists have no idea of what "mental imagery" means even though it is commonplace in ordinary people?

the grounds that as globally robust techniques (maximally resistant to breakdown) they are suitable candidates for efficiency-seeking iteration. While there are many proposals for the iteration steps, there is less contention about where to begin the search. We propose to think of Adam Smith's *Wealth of Nations* as something akin, a robust beginning for economists to follow. The "Curious facts" of which David Hume (Smith 1977, p. 186) wrote are, we believe, the heart of the matter.

We have explained at length (Levy 2001, Peart-Levy 2000, Levy-Peart 2001) that the Smith's account explicitly assumes the homogenous human. There is no difference at foundation between the philosopher and the porter; to assert otherwise as the philosopher is prone to do, is simple vanity. There is no difference among national characters which can explain trustworthiness in contracts; to assert otherwise as even Hume was prone to do, is to give up explanations in terms of incentives for pretense.

We propose that the homogeneity postulate is central to an "inductive" amount of behavior where we start with the data and build the model. Looking out over human experience, Smith takes his facts from all over. He considers that French opera-dancers need pecuniary compensation for being thought public prostitutes; he proposes that moralists who collected the books of classical antiquity and the Bible, told stories of human behavior perhaps because they would be thought wise. The homogeneity assumption is the induction step. If a French opera-dancer whom Smith has seen on his



trip to Paris is motivated by desire for material income and approbation then so too is the philosopher of whom Smith has only read.

Modern readers first encountering the *Wealth of Nations* sometimes seem surprised. Economists find that Smith does not start with axioms of desires and constraints; philosophers find that Smith has neither an epistemology nor a metaphysics (Harman 1986). Instead, he begins the work with the division of labor in which he is at pains to point out that the pretensions of the philosopher to be a species apart from those he models is simple vanity.

The nature of economic models is sketched by Adam Smith when he explains just what the claim of self-interested behavior entails:

though the principles of common prudence do not always govern the conduct of every individual, they always influence that of the majority of every class or order. (1976, p. 295)

The exercise is to find out what is true for the choice of the majority. We shall encounter the principle of majoritarian explanations again in J. S. Mill.

Smith's doctrine of human homogeneity attains his sharpest form when he explains in chapter 10 of book 1 that with workers of a equal competence and competition in the labor market, the net advantages of employment would be equalized. But of course observed pecuniary wages differed greatly. This is how he begins his explanation:

The five following are the principal circumstances which, *so far as I have*

*been able to observe*, make up for a small pecuniary gain in some employments, and counter-balance a great one in others: first, the agreeableness or disagreeableness of the employments themselves; secondly, the easiness and cheapness, or the difficulty and expence of learning them; thirdly, the constancy or inconstancy of employment in them; fourthly, the small or great trust which must be reposed in those who exercise them; and fifthly, the probability or improbability of success in them. (1976, p. 116-17)

Smith offers these as explanations as facts, the “principal circumstances” or centralized anecdotes, which he then attempts to explain.<sup>9</sup>

Developing and extending the explanations for such central tendencies of behavior became a principal objective of the economists who followed Smith. Consider his list.<sup>10</sup> The modern version of the second element has been developed into “human capital theory.” The third element on his list is seasonality. The fourth is now efficiency wages. The fifth element is occupational choice under conditions of risk. The bulk of the findings reported by Goldfarb and Leonard (2002) in a survey of post World War II work

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<sup>9</sup> As the debate over the relative roles of induction and deduction occurred late in the century, the principal spokesperson of the Historicists, T.E.C. Leslie, alluded to Chapter 10 in his defense of Smith’s method: “With all these conceptions the theory of a complete equality of the advantages and disadvantages of wages and profits, had obviously a powerful attraction for Smith. It affords surprising evidence of his true philosophical spirit of inquiry into facts that he should nevertheless have denied the actual equality of wages and profits, traced the great actual inequalities to their causes, and defined the conditions of equality and inequality, and the actual effect of industrial progress on these movements, in such a manner as to indicate the very progressive divergence which can be shown to have since taken place, and which a school of modern economists not only ignores, but sometimes angrily denies as inconsistent with its a priori deductions.” (1879, p. 163) “So far from building a science of the production and distribution of wealth on Mr. Lowe’s two abstractions, the famous tenth chapter of his first book involves a complete refutation of such a system; as it does also of the assertion that its leading principles were not obtained by induction.” (1879, p. 387)

<sup>10</sup> The first explanation speaks to matters of fame and honor (Levy 1988b, 1992; Cowen 2000).

on the size distribution of income falls into these categories. It is important to emphasize that 19<sup>th</sup> century writers had no substantive quarrel with Smith's list as long as competition was insured.<sup>11</sup>

*Attacking Abstraction from Within Economics.* It is well known that John Stuart Mill called in his 1836 Essay *On the Definition of Political Economy; and on the Method of Investigation Proper to It* and again in his 1843 *Logic* for a separate and specialized science of political economy, and that the famous “hypothetical” abstract economic man, entered into economics in this context. Political economy, Mill argued, treats “man's nature as modified by the social state”, but it abstracts from all motivations for action save for “the desire of wealth” as modified by the aversion to labour and the “desire of the present enjoyment of costly indulgences” (p. 321). The problem of multiple cause implied that the science should be substantially deductive in nature. Yet Mill accorded a key role to induction in the establishment of the basic causal framework (Hollander-Peart 1999).

In Mill's conception, the behavioural framework of political economy consists of an “approximate generalization”, one subject to constant verification. Once we know what is true for the “vast majority” of people we can proceed by universalizing:

wherever it is sufficient to know how the great majority of the human race, or of some nation or class of persons, will think, feel, and act, these propositions

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<sup>11</sup>Mill's objection – the theory of non-competing groups – depends upon imperfections in the capital market which makes financing education more difficult for one person than another.

are equivalent to universal ones. For the purposes of political and social science this *is* sufficient. As we formerly remarked [p. 603], an approximate generalization is, in social inquiries, for most practical purposes equivalent to an exact one: that which is only probable when asserted of individual human beings indiscriminately selected, being certain when affirmed of the character and collective conduct of masses' (1843/1973-74, p. 847).

Mill also refers to "the empirical laws of human nature" in describing the appropriateness of the wealth-maximization axiom (and competition) for the analysis of Britain and the United States but its inappropriateness in the analysis of Continental Europe.

In the latter half of the century, and especially during the 1870s, attacks on the nature and scope of Economics took issue with the abstract character of political economy.

These proved so successful that in 1876 Sir Francis Galton attempted to have Economics removed from Section F of the British Association for the Advancement of Science, and discussion at the Political Economy Club's Adam Smith Centennial Dinner degenerated into acrimonious discussion of the continuing usefulness of economics. Following the dinner, the *Pall Mall Gazette* reported that "the natural philosophers have been frightened out of their wits by the ladies who flock to the Section of 'Economic Science and Statistics' and who insist on reading papers and starting discussions which are not only not scientific but which savour of the singular antipathy to science for its own sake common to all the feminine movements of the day" (Jevons 1972-81, iv, pp. 272-3).

Today, we may fail to appreciate this comment for what it is: an attempt to preserve

the deductive method of the natural philosophers in the face of challenges by those (women, Mill) who favoured story-telling and centralized anecdotes, or induction.

In large measure, the debate was over the role of deduction and induction, and it featured a caricature of the method of Smith and Mill, preached by such practitioners as Robert Lowe. Contemporary critics of economic method such as Bonamy Price<sup>12</sup> urged a return to the “common sense” of political economy, while leading figures among the Historicists, John Kells Ingram and T.E.C. Leslie<sup>13</sup> called for an end to “vicious abstraction” and a broadening of the conception “economic man”, based on the “facts”: “By merely keeping close to facts and not hiding realities under lax generalizations, we shall be led to more humane, as well as truer, conceptions of the proper conditions of industrial life” (Ingram 1878, p. 617). The debate was also about transformation – whether the nature of economic man was adequately described by Mill’s axioms in successive stages of society.<sup>14</sup> (Leslie 1879: 227). For Leslie, economic analysis overly

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<sup>12</sup> Bonamy Price [1807-88] succeeded Thorold Rogers as Drummond Professor of Political Economy at Oxford in 1868, a position he held until his death. Price acknowledged but downplayed the significance of achievements by J. E. Cairnes as well as Jevons: “they have remoulded, rather than added to, our economical knowledge, and remoulded it in a way rather tentative than final or satisfactory” (1879, p. 183).

<sup>13</sup> A leading proponent of the Historical School, the Irish political economist, Thomas Edward Cliffe Leslie [1825-82], was Professor of Political Economy and Jurisprudence in Queen’s College, Belfast, from 1853 until his death. A second major proponent whose work proved to be of significant popular appeal, was John Kells Ingram. Ingram’s (1888) *History of Political Economy* went through numerous printings and was translated into nine languages.

<sup>14</sup> “... what is the desire of wealth? ... it is a general name for a great variety of want, desires, and sentiments, widely differing in their economic character and effect, and undergoing fundamental changes in some respects in the successive periods of society. ... the phrase *desire of wealth* represents a coarse and

simplified the causal structure in question: “Had the actual operation of the motives in question been investigated, it would have been seen to vary widely in different states of society, and under different conditions” (1876: 226).

An edifying criticism of economic accounts in this context was put forward by William Dillon in his 1882 *The Dismal Science: A Criticism*. Dillon’s account reiterates how Classical methods were caricatured at the time, and it illustrates how the Classical attempt to find central tendencies were countered with stories.

Dillon finds the most interesting statement put forward by J. S. Mill:

The Economist is first to abstract from the intricate net-work of passions and motives which determine the actions as they are, one or two fundamental principles which, it is said, are paramount in matters connected with wealth. He is then to reason deductively from these fundamental principles, and build up a science of human conduct upon the assumption that the principles or motives so abstracted are the only factors which are effective in determining the result. Having in this way elaborated his deductive science, he is then to introduce the “disturbing influences.” All the passions and motives, other than the desire or wealth and aversion to labour, which form an essential part of human nature, and all the social affections which influence man viewed as a member of society, are to be classed together as “disturbing influences.” After these have been duly allowed for, the result may be taken as indicating the with approximate accuracy the line of action which human beings may be relied upon to pursue. (1882, pp. 212-13)

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crude generalization in the natural history of man; but that the several impulses comprised under the name assume altered forms and vary in their relative strength, and so produce different economic consequences, in different states of society: and therefore that the abstraction embodied in the phrase is too vague and unreal for use in economic investigations of a really scientific character.” (Ingram 1878, p. 615). “Every department of social life, and amongst the rest [of] the industrial system, undergoes transformation – not arbitrarily indeed, but in accordance with law” (1878, 619).

Dillon considers Lowe's more crude form of abstraction:

In an article in the *Nineteenth Century* of November, 1878, Mr. Lowe, replying to "some recent attacks on Political Economy," writes as follows:—"In love, or war, or politics, or religion, it is impossible to foretell how mankind will act; and, therefore, on these subjects it is impossible to reason deductively. But once place a man's ear within the ring of pounds, shillings and pence, and his conduct can be counted onto the greatest nicety. I do not, of course, mean, that everybody really acts alike where money or money's worth are concerned; but that the deviations from a line of conduct which can be foreseen and predicted are so slight that they may practically be considered as non-existent." (1882, p. 215)

After pointing out that Lowe gets stronger results by restricting the scope of economics to monetary matters, Dillon worries about how one can test such assertions:

Assertions of this kind have certain advantages. They are easily made, and are striking when made in incisive language; and, even when they are wholly untrue, they are often hard to disprove. (1882, p. 217)

Finally, he uses stories to suggest why one should not believe economic accounts:

At different ages of the world, and in far-distant countries, there have appeared upon their earth two supreme poets. In the faculty of seeing into and portraying the passions and motives which really do sway and determine the course of action in this human nature of ours, Homer and Shakespeare "stand along together far away above mankind." (1882, p. 217)

So we test economic accounts by appeal to *characters* (as opposed to models) in Homer and Shakespeare. These characters are real in a way which abstract economic man is not. Consider Achilles:

The Achilles of the *Iliad* is not by any means a model of Christian perfection, free from or superior to the lower passions of human nature. ... Every lover of Homer is familiar with the last great scene in the ninth book of the *Iliad*. A last [sic] effort is

made to propitiate Achilles. Agamemnon determines to offer gifts of enormous value—a “priceless compensation.” ... If the ear of Achilles is not in the literal sense placed “within the ring of pounds, shillings, and pence,” it is certain that the appeal made to his “desire of wealth” is about as powerful and as artful an appeal as could well be imagined. Here is certainly a fair case to test Mr. Lowe’s theory of human nature. If that theory were true, we should expect to find that the priceless gifts would be accepted, and that the great drama of the Wrath would then and there come to an abrupt termination. But this does not seem to have been Homer’s view. (1882, p. 218)

Achilles’ reward – if things work out right – is immortality. And as we are writing about him some three millennia after the event, things evidently did work out well. The majority cannot be famous unless (following Andy Warhol) we change the meaning of “fame.” If economic models abstract from extremes to focus on the center of the distribution then a class of activities will indeed be abstracted out. But this raises the obvious question, why would we wish to focus on the extremes of a distribution?

It is important to emphasize that the question here is *not* whether or not we should include the motivation of desire for approbation when we wish to explain wage income; Smith’s affirmative answer in the *Wealth of Nations* has stood the test of time. The question is whether we wish focus on outliers or on the center of a distribution.

The Persistence of a Story in the Model; or Eugenics & the Jews

A story, even one which is not a model, can direct the modeler to look for explanatory variables or to maintain that things which look the same are really different or vice versa. And a desire for the story to hold can lead the modeler to select among



possible models which best fits his desires. To see how the eugenics modelers let the stories drive their results, we need to find a group which was selected in the stories as being importantly different and which was then modeled as different by statistical methods. The stories are about transformation (Peart-Levy 2002). And of course eugenics is nothing but transformation.

In the stories told by the chemical political economists – as John Ruskin referred to his approach – we know of three groups that were targeted as denying the possibility of transformation. Economists of the Smith-Mill stripe who held with abstract economic man as a modeling device. Christian evangelicals were a particular interesting target because although they accepted the possibility of transformation, that possibility comes only from God who is outside the world (Levy-Peart 2002b). But neither British economists nor British evangelicals were subjects of eugenics modeling.

There is a name, however, which is applied to the evangelicals – and by extension to the economists – throughout the 19<sup>th</sup> century: “Pharisee.” As the ancient Pharisees were those with whom Jesus most disagreed, and accused of being hypocrites, early century use of the term is a synonym for “cant.” (Levy-Peart 2002b). Here, the difference between the *OED* and *Webster’s Third International* is worthy of note. The *OED* defines “pharisee” as hypocritical: “One of an ancient Jewish sect distinguished by their strict observance of the traditional and written law, and by their pretensions to superior

sanctity.”<sup>15</sup>

The word turns into more than an accusation of a personal disconnect between professions of belief and behavior, in the poem which opens Charles Kingsley’s *Water-Babies*. *Water-Babies*, we have argued elsewhere, is perhaps the most successful of all the transformational stories (Peart-Levy 2002). Suppressed after the first 200 copies of the *Water-Babies* were printed, the poem is the marker of the two “states” of the first edition of *Water-Babies* (Macleod 1986, p. 40):

#### L’ENVOI

Hence, unbelieving Sadduces,  
And less believing Pharisees,  
With dull conventionalities;  
And leave a country muse at ease  
To play at leap-frog, if she please,  
With children and realities. (August 1862, p. 273)

Kingsley explains the point of this jib when in his “Limits of Exact Science as Applied to History” which prefaces his *Romans and Teutons* Cambridge lectures

I know no modern nation, moreover, which illustrates so forcibly as China the great historic law which the Hebrew Prophets proclaim; and that is this:—That as the prosperity of a national is the correlative of their morals, so are their morals the correlative of their theology. As a people behaves, so it thrives; as it believes, so it

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<sup>15</sup> Compare the *OED* on “sadducee”: “A member of one of the three ‘sects’ (the others being the Pharisees and Essenes) into which the Jews were divided in the time of Christ. According to the New Testament and Josephus, they denied the resurrection of the dead, the existence of angels and spirits, and the obligation of the unwritten law alleged by the Pharisees to have been handed down by tradition from Moses.” Only *Webster’s* tells one what the Pharisees actually professed, i.e., “immortality of the soul, the resurrection of the body, future retribution, and a coming Messiah.”

behaves. Such as his Gods are, such will man be; down to that lowest point which too many of the Chinese seem to have reached, where, having no Gods, he himself becomes no man; but (as I hear you see him at the Australian diggings) abhorred for his foul crimes even by the scum of Europe. (1864, p. xlvii)

If Jews do not believe in transformation in this world, then they are untransformable. This was not a new thought for Kingsley. In *Alton Locke*, the widely studied “novel” attacking the materialism of industrial capitalism, the exemplars of heartless economic materialism have the names “Levi and Aaron.” (Levy 2001).

A decade before the *Wealth of Nations* saw print, Adam Smith renounced the doctrine of “national characters” in service to what we have described as an attempt to find the center of anecdotal evidence. It is therefore unsurprising that at the beginning of their careers as eugenicists, co-founders of that “science” W.R. Greg and Galton, each attacked the population theory put forward by Smith’s disciple T. R. Malthus for ignoring the racial element. The point at issue is Malthus’s controversial recommendation that instead of urging people to early marriage, as a remedy for fornication, people be urged to delay marriage until they might reasonably be expected to support their family.<sup>16</sup> The prudential restraint to marriage which Malthus supported would have a dis-eugenic effect upon the race. The prudent, by delaying marriage, would be out-bred by the imprudent.<sup>17</sup>

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<sup>16</sup>There are two controversial interpretative issues in the text. First, there is the homogeneity of Malthusian-Smithian population theory and second there is an implication that Malthus’s doctrine has a moral radicalism about it. Both readings are urged in Levy (1978 & 1999) and Hollander (1997).

<sup>17</sup>“The check to over-population mainly advocated by Malthus is a prudential delay in the time of marriage; but the practice of such a doctrine would assuredly be limited, and if limited it would be most

Galton's 1865 "Hereditary Talent and Character" announces his adherence to the doctrine of national characters:

Still more strongly marked than these are the typical features and characters of different races of men. The Mongolians, Jews, Negroes, Gypsies, and American Indians; severally propagate their kinds; and each differs in character and intellect, as well as in colour and shape, from the races form a class of instances worthy of close investigation, in which peculiarities of character are invariably transmitted from the parents to the offspring. (1865, p. 320).

The generating mechanism Galton posits for racial hierarchy is a conjunction of the argument which Thomas Carlyle advanced in his quarrel with the economists (Levy 2001; Levy-Pearl 2001) – labor makes us fully human – with the principle of natural selection:

The most notable quality that the requirements of civilization have hitherto bred in us. Living as we do in a rigorous climate and on a naturally barren soil, is the instinct of continuous steady labour. This is alone possessed by civilized races, and it is possessed in a far greater degree by the feeblest individuals among them than by the most able-bodied savages. ... men who are born with wild and irregular dispositions, even though they contain much that is truly noble, are alien to the spirit of a civilized country, and they and their breed are eliminated from it by the

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prejudicial to the race, as I have pointed out in *Hereditary Genius*, but may be permitted to do so again. The doctrine would only be followed by the prudent and self-denying. Those whose race we especially want to have, would leave few descendants, while those whose race we especially want to be quit of, would crowd the vacant space with their progeny ... The practical application of the doctrine of deferred marriage would therefore lead indirectly to most mischievous results, that were overlooked owing to the neglect considerations bearing on race." Galton (1907, p. 207)

"Malthus's 'prudential check' rarely operates upon the lowest classes; the poorer they are, usually, the faster do they multiply ; certainly the more reckless they are in reference to multiplication. It is the middle classes, those who form the energetic, reliable, improving element of the population, those who wish to rise and do not choose to risk, those in a word who constitute the true strength and dignity of nations, – it is those who abstain from marriage or postpone it. [Footnote omitted quoting Galton's *Hereditary Genius*] Thus the imprudent, the desperate, – those whose standard is low, those who have no hope, no ambition, no self-denial ... to the disadvantage or the exclusion of the prudent, the resolute, the striving and the self-restrained." Greg (1875, p. 129).

law of selection. (1865, p. 325)

Wallace's 1864 demonstration that the principle of natural selection is arrested in humans due to sympathy, called into question Galton's merging of Carlyle and Darwin.<sup>18</sup>

Undaunted, beginning in 1869, Galton took up the task of showing how human policy might replace natural selection. This is how he introduces his *Inquiries into Human*

*Faculties*:

Since the publication of my work on *Hereditary Genius* in 1869, I have written numerous memoirs ... They may have appeared desultory when read in the order in which they appeared, but as they had an underlying connection it seems worth while to bring their substance together in logical sequence ... My general object has been to take note of the varied hereditary faculties of different men, and of the great differences in different families and races, to learn how far history may have shown the practicability of supplanting inefficient human stock by better strains, and to consider whether it might not be our duty to do so by such efforts as may be reasonable, thus exerting ourselves to further the ends of evolution more rapidly and less distress than if events were left to their own course. (1907, p. 3)

*Galton and the Jews*. The first exercise in Galton's agenda is composite

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<sup>18</sup>This might explain why Peart-Levy 2000 find an affinity of the 1865 Galton position with James Hunt's racial doctrine that Negroes are a less-developed race with zero variance. This is something it seems in which Galton wanted to believe. One of the uses of his finger print data was to test for the uniformity doctrine. He finds reason to believe in the uniformity of Negroes even though his statistical results says otherwise: "The impressions from Negroes betray the general clumsiness of their fingers, but their patterns are not, so far as I can find, different from those of others, they are not simpler as judged either by their contours or by the number of origins, embranchments, islands, and enclosures contained in them. Still, whether it be from pure fancy on my part, or from the way in which they were printed, or from some real peculiarity, the general aspect of the Negro print strikes me as characteristic. The width of the ridges seems more uniform, their intervals more regular, and their courses more parallel than with us. In short, they give an idea of great simplicity, due to causes that I have not yet succeeded in submitting to the test of measurement." Galton (1892, pp. 195-96).

photography.<sup>19</sup> Here is how this is to be employed for the principle of human selection:

This face and the qualities it connotes probably gives a clue to the direction in which the stock of the English race might most easily be improved. It is the essential notion of a race that there should be most ideal typical form from which the individuals may deviate in all directions, but about which they chiefly cluster. The easiest direction in which a race can be improved is towards that central type, because nothing new has to be sought out. It is only necessary to encourage as far as practicable the breed of those who conform most nearly to the central type, and to restrain as far as may be the breed of those who deviate widely from it. Now there can hardly be a more appropriate method of discovering the central physiognomical type of any race or group than that of composite portraiture. (1907, p. 10)

The reader is struck by the fact that Galton talks only about conformity and deviation without regard to sign. One expects that he will attempt to locate “degenerate families” of criminals for genetic segregation (Carlson 2001). Perhaps this is a verbal slip because Galton goes on to explain his failure to recognize the race of criminals by the composite:

I have made numerous composites of various groups of convicts, which are interesting negatively rather than positively. They produce faces of a mean description, with no villainy written on them. The individual faces are villainous enough, but they are villainous in different ways, and when they are combined together, the individual peculiarities disappear, and the common humanity of a low type is all that is left. (1907, p. 11)

But Galton’s composite photography had one great success. Here is Karl Pearson retrospective judgment on the composite of Jewish boys, in which a model has become “a great work of art”:

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<sup>19</sup>Composite photography is featured in the exhibition “Perfecting Mankind,” Squiers (2001).

There is little doubt that Galton's Jewish types formed a landmark in composite photography, and its success was, I think, almost entirely due to (a) increased facility in the process, and (b) to the fact that his composites were based of physiognomically like constituents. In the case of criminality and phthisis he has based his composites on mentally and pathologically differentiated components, and had expected to find mental and pathological characters highly correlated with the facial. His negative results were undoubtedly of value, but they cannot appeal to the man in the street like his positive success with the Jewish type. We all know the Jewish boy and Galton's portraiture brings him before us in a way that only a great work of art could equal—scarce excel, for the artist would only idealise from one model. (1924, p. 293).

The Jewish composite photographs are discussed in two articles, Galton 1885 and Jacobs 1885. Galton is convinced that he has captured the Jewish acquisitive soul:

They were children of poor parents, dirty little fellows individually, but wonderfully beautiful, as I think, in these composites. The features that struck me the most, as I drove through the adjacent Jewish quarter, was the cold scanning gaze of man, woman, and child, and this was no less conspicuous among the schoolboys. There was no sign of diffidence in any of their looks, nor of surprise at the unwonted intrusion. I felt, rightly or wrongly, that every one of them was coolly appraising me at market value, without the slightest interest of any other kind. (1885, p. 243)

The subjectivity of this procedure is revealed by Galton's co-experimentalist Jacobs:

I fail to see any of the cold calculation which Mr. Galton seems to have noticed in the boys at any of composites A, B, and C. There is something more like the dreamer and thinker than the merchant in A. In fact, on my showing this to an eminent painter of my acquaintance, he exclaimed, "I imagine that is how Spinoza looked when a lad," a piece of artistic insight which is remarkably confirmed by the portraits of the philosopher, though the artist had never seen me. The cold and somewhat hard look in composite D, however, is more confirmatory of Mr. Galton's impression. It is note-worthy that this is seen in a composite of young fellows between 17 and 20, who have had to fight a hard battle of life even by that early age. (1885, p. 268).

What Jacobs says is actually dangerous for eugenicists. If Jacobs were right that the Jewish boys have had a harder life than their Christian countrymen, the Carlylean commonplace suggests that Christians are in trouble. The Jewish soil is less fertile and the climate more hostile. Is why Pearson dissents? We are warned by Pearson – “ ... many will criticise, and I think rightly criticise the analysis Mr. Jacobs gives of the ‘Jewishness’ in this portraits ...” (1924, p. 293). This is, we suspect, *not* how natural selection is supposed to work.

*Pearson and the Jews.* The first article in the first issue of *Annals of Eugenics* is part one of “The Problem of Alien Immigration into Great Britain Illustrated by an Examination of Russian and Polish Jewish Children.” As the authors are Karl Pearson and Margaret Moul we have the ability to see how their modeling of Jewish immigrants compares with Pearson’s well-known methods of moments.<sup>20</sup> If – to pick the most obvious hypothetical – we were to observe Pearson-Moul employing maximum likelihood methods or t-tests<sup>21</sup> we would suspect that Pearson was buying a conclusion at the price of

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<sup>20</sup>“Before Student’s time [and the t-test], every analysis of data that considered ‘what might have been’ resembled a long staircase from the near foreground to the misty heights. One began by calculating a primary statistic, a number that indicated quite directly what the data seemed to say about the point at issue. The primary statistic might, for instance, have been a sample mean. Then one faced the question of ‘How different might its value have been?’ and calculated a secondary statistic, a number that indicated quite directly how variable (or perhaps how stable and invariable) the primary statistic seemed to be. The secondary statistic might have been an estimate of the standard deviation of such a sample mean. After this step, one again needed to face the question of ‘How much different?’ ... In principle, one should have gone on to a tertiary statistic ... then to a quaternary statistic.” Mosteller & Tukey (1977, p 2).

<sup>21</sup>“Student calculated some numerical aspects of the distribution of *t*. ... R. A. Fisher (1925) verified Student’s guess 17 years later. This approach cut off the misty staircase after the third step–indeed



statistical principles.

Here is the motivation which Pearson-Moul provide for the extraordinarily laborious exercise: the eugenic-economics of densely-settled countries. Pearson-Moul begin by retelling the story of climate and race suitability. The inherent inferiority of the Negro – unsuitable even for Africa! – is too obvious to need evidence.

It is perfectly idle to talk in these matters either of pride of race or of the common humanity of all mankind. The reasons that can be given for admitting orientals as permanent immigrants into a densely populated occidental country apply equally to the admission of occidentals into oriental countries. When it comes to settling or resettling a sparsely peopled country, then it is possible to find out whether the individual is a real humanitarian or not, according as he thinks only of his own race, or of the actual suitability of other races, as judged by their culture and their adaption for the proposed environment. From this standpoint it is probable that the Japanese would be far more valuable than men of Nordic race in many of the Pacific islands, and that the Hindoo and still more the Chinaman might, to the great advantage of the general world progress, replace the negro in many districts of Africa. (1925, pp. 6-7)

Now Pearson-Moul turn to the matter at hand, reviewing most helpfully the contending stories which would justify alternative policies. There is the human homogeneity story and the story of alien beliefs of a hyper-competitive sort:

In the years preceding the Great War, the question of indiscriminate immigration – especially that of the Polish and Russian Jews into the East End of London, and the poorer quarters other large towns in Great Britain – had become a very vital one. It was asserted on the one hand that the immigrants were a useful class of hard workers fully up to the level of the English workman in physique and intelligence, and on the other hand these immigrants were painted in lurid colours

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almost after the second step.” Mosteller & Tukey (1977, p. 3). Pearson (1936) will be quoted below.

as weaklings, persons with a low standard of life and of cleanliness, *under-bidding native workers in sweated trades and spreading anarchic doctrines*, so that the continued inflow of this population was leading not only to economic distress, but to a spread of doctrines incompatible with the stability of our social and political systems. (1925, p. 7) [emphasis added]

Into the fray of competitive stories, told by those with personal interests, comes a need for disinterested modelers:

It was very obvious to the onlooker that whatever might be the real facts of the situation, those facts were not available for the calm discussion of the case. The partizans of cheap labour and the partizans of monopolistic trade-unionism were both undoubtedly acting from personal and party inspirations, and there was no one whose business it was really to find the true answer to the question of whether Great Britain could assimilate to its national profit this mass of new and untested material. (1925, p. 7)

Pearson-Moul will then explain in detail why immigration is the central matter in eugenics policy and remind the reader that stories are not models:

The whole problem of immigration is fundamental for the rational teaching of national eugenics. What purpose would there be in endeavouring to legislate for a superior breed of men, if at any moment it could be swamped by the influx of immigrants of an inferior race, hastening to profit by the higher civilisation of an improved humanity? To the eugenicist permission for indiscriminate immigration is and must be destructive of all true progress. ... No sane man, however, doubts that at various periods of English history our nation has been markedly strengthened by foreign immigration. The Huguenots ... the Dutch ... that of the Germans of 1848 – many of whom were indeed of Jewish extraction. But these special cases do not prove the general desirability of free immigration ... (1925, p. 7)

Now to work. The first issue is testing whether Jewish children were as clean or as well dressed as Gentile children. Their results on cleanliness were challenged in the

*Journal of the Royal Statistical Society* on the basis of centralized anecdotes – “does not accord with the common view held by social workers and school teachers who labour among Jewish children.” (F.S. 1926, pp. 148-49). Consider the clothing conclusion:

It is clear that the alien Jewish children are far below the average of the Gentile children’s being indeed below the Gentiles of the poorer districts. They are only in excess of the “Ragged School,” although well in excess of this. There seems some ground for the statement frequently made that they undersell natives in the labour market because they have a lower standard of life. (1925, p. 49).

The sequence of the testing will be of important. They examine personal hygiene and clothing before intelligence. Let us think about Pearson-Moul found. Assuming that they held income constant across groups – which they attempted to the best of their very considerable ability, although this was questioned (F.S. 1926, p. 149) – then presumably they have detected a difference in cultural expenditure patterns. So Jewish parents are spending less than non-Jewish parents on their children’s clothing. Their silence on where the income is going is suggestive.<sup>22</sup>

From expenditure on clothing, Pearson-Moul impute a racial failing for which intelligence might compensate. Jews have to prove they are *superior* to gain admission:

The Americans have learnt from experience how unwise it is to admit an untested and motley stream of immigrants even into a land of vacant spaces; it is far more urgent to restrict immigration in the case of a crowded country. There

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<sup>22</sup> If the answer is additional “savings” or “education” then we see how Pearson-Moul could get the same policy, the desirability of exclusion, out of the opposite statistical finding. If counter-factually Jewish families spent more on their children’s clothing and thereby saved less than their Christian neighbors then the inference of “imprudence” would also justify their exclusion.

should always be room in a country for the highest type of immigrants, for men who, with superior intelligence or with superior physique, will readily mingle with its stock and strengthen the vitality. But for men with no special ability—above all for such men as religion, social habits, or language keep as a caste apart, there should be no place. They will not be absorbed by, and at the same time strengthen the existing population, they will develop into a parasitic race\*, [\*A striking instance of such a race is that of the gypsies, who without any thought were allowed to enter the country, and who being there serve no useful and profitable national purpose.] a position neither tending to the welfare of their host, nor wholesome for themselves.

We hold therefore that the problem of admission of an alien Jewish population into Great Britain turns essentially on the answer that may be given to the question: Is their average intelligence so markedly superior to the native Gentile, that it compensates for their physique and habits certainly not being above (probably a good deal below) the average of the characters here? (1925, pp. 124-25)

Pearson-Moul find little difference between intelligence of Jewish boys and their Christian peers but significant difference between Jewish boys and girls. Their concluding remarks are

An examination of this table shows us once that the Jewish girls have less intelligence than the Gentile girls in any type of Council school. The comparison of the Gentile and the Jewish boys is less clear cut ... What is definitely clear, however, is that our own Jewish boys do not form from the standpoint of intelligence a group markedly superior to our natives. But that is the sole condition under which we are prepared to admit that immigration. ... Taken on the average, and regarding both sexes, this alien Jewish population is somewhat inferior physically and mentally to the native population. (1925, p. 126)

So, we find no difference between Jewish and Christian boys but a difference between the girls. We then pool by gender and impute a racial difference! From expenditures patterns, we have imputed a barrier which only racial superiority could

overcome.

This is a fairly mundane instance of the expert witness in action. There is a however a rather dramatic example of the length to which Pearson is willing to go to buy his conclusion. The Pearson-Moul analysis, not surprisingly, has been in terms of the average. What about the occasional extremely capable Jew, a Spinoza or an Einstein, which Pearson and Moul explicitly consider (Holmes 1926, p. 233)

we know and admit that some of the children of these alien Jews from the academic standpoint have done brilliantly, whether they have the staying powers of the native race is another question.\* [\*A member of an eastern race said to the senior author of this paper recently: 'It puzzles me when I see how late in life you English can work; all I have to do, must be done before I am fifty.'] No breeder of cattle, however, would purchase an entire herd because he anticipated finding one or two fine specimens included in it; still less would he do it, if his byres and pastures were already full. (Pearson and Moul, 1925, p. 127)

What's wrong with discarding outliers, perhaps to make one's decision on the basis of the sample median? Don't outliers complicate maximum likelihood estimation and t-tests?

What's wrong with this is easy to see if we take Pearson's method of moments seriously as Pearson tended to do.<sup>23</sup> To ask about the reliability of the estimate of the first

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<sup>23</sup> Here is how Pearson begins his blistering attack on maximum likelihood estimation in principle, and Fisher in particular. Pearson quotes Fisher (first) giving a personal insult and (second) explicating the methods of moments in opposition to maximum likelihood estimation: "*Wasting your time fitting curves by moments, eh?*"

"Perhaps the most extended use of the criterion of consistency has been developed by Pearson in the 'Method of Moments.' In this method which is without question of great practical utility, different forms of frequency curves are fitted by calculating as many moments of the sample as there are parameters to be evaluated. The parameters chosen are those of an infinite population of the specified type having the same moments as those calculated from the sample ... Moreover for that class of distribution to which the method can be applied, it has not been shown except in the case of the normal curve, that the best [sic!

moment (the sample mean) one estimated the second moment (the sample variance). To ask about the reliability of the estimate of the second moment one looks at estimates of the higher moments. Pearson and Moul have told us that the information which is critical to the estimation of the third and fourth moment of the distribution of Jewish characteristics is not important when they, as a matter of principle, disregard the exceptional Jew. When Karl Pearson throws away outliers asymmetrically, we know something is bending his statistical decisions and turning a model into a story.<sup>24</sup>

#### Conclusion: The return to Abstract Economic Man

We have argued above that a story, a work of art, is a world rather than a representation, and not necessarily a world as it is, but as it ought to be. Artists who favoured transformation objected to the centralizing tendency of the economists' method of abstraction on the grounds that abstraction from randomness removed the theorist from the essence or "substance" of economic man.<sup>25</sup> Once we allow that the bulk of mankind might be transformed, then that "substance" need not be a central tendency.

By contrast, modelers *require* abstraction to obtain a central tendency (or a

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KP] values will be obtained by the methods of moments ...” (Pearson 1937, p. 34)

<sup>24</sup> We focus on testing. The lack of curiosity about the distribution is perhaps even more odd. A Pearson family of distributions is defined by the first four moments.

<sup>25</sup> That visual characterizations were perceived as such, is evident in this description from the 1860s of the images we study elsewhere, as representations of "substance": "In the very nature of caricature there is a substance which cannot be extinguished apart from the realities of which it is the mockery and the burlesque. ...Caricatures help to make history – and they are history also ..." *Southern literary messenger*, 1863, pp. 711-12).

caricature) and are comfortable with it. In economics, all characteristics of human beings, save those required for trade (in the classical period) or constrained optimization (in the neoclassical period), are abstracted to build economic man. Classical economists put forward a doctrine of abstract economic man, an analytical egalitarianism that explains behavior in terms of incentives, luck, and history, and Mill's famous *Essay* provides a defense of the method of abstraction along these very lines (Hollander-Peart 1999, Hausman 1981). The wealth-maximization axiom is selected, not because it is the only motive at work that matters in economic affairs, but instead because it is "the main and acknowledged end" in "certain departments of human affairs" (Mill p. 323).<sup>26</sup>

In his 1848 *Principles*, Mill outlined the implication of such a method: it implies a rejection of racial "explanations" of outcomes, which he condemned:

Is it not, then, a bitter satire on the mode in which opinions are formed on the most important problems of human nature and life, to find public instructors of the greatest pretensions, imputing the backwardness of Irish industry, and the want of energy of the Irish people in improving their condition, to a peculiar indolence and *insouciance* in the Celtic race? Of all vulgar modes of escaping from the consideration of the effect of social and moral influences on the human mind, the most vulgar is that of attributing the diversities of conduct and character to inherent natural differences. (1965, p. 319)

The doctrine of abstract economic man has always been contested, and has often been

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<sup>26</sup>In 1871, J. E. Cairnes would put the case for abstraction, as opposed to anecdote, most clearly: "What is a law of nature but a relation between phenomena considered apart from all particular exemplifications of the relation – that is to say, an abstract doctrine." (1871, pp. 81-82).

caricatured. In the Victorian period the contested ground was abstraction from the “fact” of racial difference. As an important instance of this contestation we quote an 1869 issue of the *Quarterly Review*:

‘Make them peasant-proprietors,’ says Mr. Mill. But Mr. Mill forgets that, till you change the character of the Irish cottier, peasant-proprietorship would work no miracles. He would fall behind the instalments of his purchase-money, and would be called upon to surrender his farm. He would often neglect it in idleness, ignorance, jollity and drink, get into debt, and have to sell his property to the newest owner of a great estate. ... In two generations Ireland would again be England’s difficulty, come back upon her in an aggravated form. Mr. Mill never deigns to consider that an Irishman is an Irishman, and not an average human being—an idiomatic and idiosyncractic, not an abstract, man. Greg (1868, p. 78)

We have seen how the story tellers triumphed well into the twentieth century, as the Jew became an object of models that self-consciously attempted to impute racial inferiority and eugenic restrictions on immigration. But the modern revival of the classical economists’ doctrine of fixed human nature by the Chicago School constituted an attempt to restore race-neutrality to economics.

Stories about the Jew – and their accuracy – were once again at the center of the debate. When Frank Knight reviewed Fisher’s theory of interest, he asserted the primacy of culture against the doctrine of racial imputation of imprudence, as measured by time preference, which served to justify immigration policies (Peart-Levy 2001). Whereas there may be no difference between the Teuton and Jew, these cultures differ radically from the Greek:



As previously stated, we do not know whether people generally, or the class from which savings come, would “discount” the future or the present or neither, “other things being equal.” In general, there is perhaps more ground for the inverse allegation as against the modern European people and especially the Teutonic stock (and the West European Jew?), namely, that they “look before and after, and sigh for what is not” and neglect the present moment. Compare Faust and Rabbi ben Ezra with Marius the Epicurean, or the Puritan with the Greek view of life. (Knight 1931, p. 203)

Perhaps more dramatically Knight saw no difference in the motivation of different sorts of people. He explains the demand for wealth:

It seems to me indisputable in fact that people desire wealth for many reasons, of which the guaranty of the future delivery of groceries or other consumable services is sometimes the main and sometimes a quite minor consideration. If is desired for the same reasons a head-hunting hero desires a goodly collection of skulls; it is power, a source of prestige, a counter in the game, an article of fashion, and perhaps a mere something to be “collected.” It is wanted to use, but also just to have, to get more, in order to get still more. (Knight 1931, p. 177).

There is nothing here about the Galton’s material acquisitiveness of the Jew, but instead an illustration of economic problems across time, culture and race. The Stigler-Becker attack on the postulate of positive time preference (Stigler-Becker 1977) continued the argument which Stigler made in his dissertation: positive time preference has no role in the making of abstract economic man.<sup>27</sup> In this stigmatization of positive time preference, Stigler remained Knight’s faithful student.

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<sup>27</sup>Stigler (1941, p 213): “The second ground for valuing present goods more highly is that ‘... to goods which are destined to meet the wants of the future, we ascribe a value which is really less than the true intensity of their future marginal utility.’ This is a failure of perspective, an irrationality in human behavior—the only irrationality, it may be noted, that Böhm-Bawerk introduces into his ‘economic man.’”



## Bibliography

- Andrews, D.F, P. J. Bickel, F. R. Hampel, P. J. Huber, W. H. Rogers and J. W. Tukey. 1972. *Robust Estimates of Location*. Princeton: Princeton University Press.
- Blaug, M. 1980. *The Methodology of Economics, or How Economists Explain*. Cambridge: Cambridge University Press.
- Cairnes, J. E. 1874. *Some Leading Principles of Political Economy Newly Expounded*. London.
- Caplan, Bryan. 2001. "What Makes People Think Like Economists? Evidence on Economic Cognition from the 'Survey of Americans and Economists on the Economy.'" *Journal of Law & Economics* 44: 395-426.
- Carlson, Elof Axel. 2001. *The Unfit: A History of a Bad Idea*. Cold Springs Harbor, NY: Cold Springs Harbor Laboratory Press.
- [Carlyle, Thomas.] 1849. "Occasional Discourse on the Negro Question." *Fraser's Magazine for Town and Country* 40: 670-679.
- Carlyle, Thomas. 1850. *Latter-Day Pamphlets*. London: Chapman and Hall.
- Cowen, Tyler. 2000. *What Price Fame?* Cambridge: Harvard University Press.
- Cowen, Tyler. 2002. "Is a Novel a Model?" George Mason University Buchanan Center Working Paper.
- Curtis, L. P., Jr. 1968. *Anglo-Saxons and Celts*. Bridgeport: Conference on British Studies at the University of Bridgeport.

- Dillion, William. 1882. *The Dismal Science: A Criticism on Modern English Political Economy*. Dublin: M. H. Gill & Son.
- Efron, B. 1979. "Bootstrap Methods: Another Look at the Jackknife." *Annals of Statistics* 7: 1-26.
- Efron, Bradley. 1981. "Nonparametric Estimates of Standard Error: The Jackknife, the Bootstrap and Other Methods." *Biometrika* 68: 589-599.
- Farebrother, R. W. 1997. "Notes on the History of Elementary Set Methods." *L<sub>1</sub> - Statistical Procedures and Related Topics*. Edited by Yadolah Dodge. Institute of Mathematical Statistics Lecture Notes–Monograph Series. Volume 31.
- Feigenbaum, Susan and David M. Levy. 1996. "The Technological Obsolescence of Scientific Fraud." *Rationality and Society* 8: 261-276.
- Frye, Northrop. (1963) *The Educated Imagination*. Toronto: Canadian Broadcasting Corporation.
- Galton, Francis. 1865. "Hereditary Talent and Character." *Macmillan's Magazine* 12:318-27.
- Galton, Francis. 1907. *Inquiries into Human Faculty and Its Development*. London: J. M. Dent.
- Galton, Francis. 1885. "Photographic Composites." *The Photographic News* 29: 243-45.
- Galton, Francis. 1892. *Finger Prints*. London: Macmillan and Co.

- Galton, Francis. 1907. *Inquiries into Human Faculty and Its Development*. Second edition. London: J. M. Dent.
- Gibbard, Alan and Hal R. Varian. 1978. "Economic Models." *Journal of Philosophy* 75: 664-677.
- Goldfarb, Robert S. and Thomas C. Leonard. 2002. "Inequality of What among Whom?: Rival Concepts of Distribution in the 20<sup>th</sup> Century." Eastern Economic Association: Boston
- Grass, Günther and Pierre Bourdieu 2002. "The 'Progressive' Restoration – A Franco-German Dialogue." *New Left Review* 14: 63-77.
- [Greg, W. R.] 1869. "The Realities of Irish Life." *Quarterly Review* **126**: 61-80.
- Greg, W. R. 1875. *Enigmas of Life*. Boston: James R. Osgood and Company.
- Harman, Gilbert. 1986. *Moral Agent and Impartial Spectator*. Lawrence: University of Kansas.
- Hausman, D. M. 1981. "J. S. Mill's Philosophy of Economics." *Philosophy of Science* 48 (3): 363-85.
- Hollander, Samuel. 1997. *The Economics of Thomas Robert Malthus*. Toronto: University of Toronto Press.
- Hollander, S., and Peart, S. J. 1999. "John Stuart Mill's Method in Principle and in Practice." *Journal of the History of Economic Thought*. 21 (4): 369-97.

- Holmes, S. J. 1926. "Annals of Eugenics: A Journal for the Scientific Study of Racial Problems." *Science* N. S. 63: 232-233.
- Holt, Thomas C. 1992. *The Problem of Freedom: Race, Labor, and Politics in Jamaica and Britain, 1832-1932*. Baltimore: Johns Hopkins University Press.
- Jacobs, Joseph. 1885. "The Jewish Type, and Galton's Composite Photographs." *The Photographic News* 29: 268-69.
- Jevons, W. S. 1972-81. *Papers and Correspondence of William Stanley Jevons*. Edited by R. D. Collison Black. London: Macmillan.
- Kingsley, Charles August 1862- January 1863. "The Water-Babies: A Fairy Tale for a Land-Baby." *Macmillan's Magazine* 6&7.
- Kingsley, Charles 1863. *The Water-Babies: A Fairy Tale for a Land-Baby*. London & Cambridge: Macmillan and Co.
- Kingsley, Charles. 1864. *The Roman and the Teuton*. Cambridge and London.
- Knight, Frank H. 1931. "Professor Fisher's Interest Theory: A Case in Point." *Journal of Political Economy* 39: 176-212.
- Leslie, T.E.C. 1879. *Essays in Moral & Political Philosophy* London.
- Levy, David M. 1978. "Some Normative Aspects of the Malthusian Controversy." *History of Political Economy* 10: 271-85.
- Levy, David M. 1988a. "Increasing the Likelihood Value by Adding Constraints."

- Economics Letters* 28: 57-61.
- Levy, David M. 1988b. "The Market for Fame and Fortune." *History of Political Economy* 20: 615-625.
- Levy, David M. 1992. *Economic Ideas of Ordinary People: From Preferences to Trade*. London: Routledge.
- Levy, David M. 1999. "Christianity or Malthusianism: The Invisibility of a Successful Radicalism." *Historical Reflections/Réflexions Historiques* 25: 61-93.
- Levy, David M. 1999/2000. "Non-normality and Exploratory Data Analysis: Problem and solution." *Econometric Theory* 15: 99.3.3. [Problem]; 16 99.3.3 [Solution].
- Levy, David M. 2001. *How the Dismal Science Got Its Name: Classical Economics and the Ur-Text of Racial Politics*. Ann Arbor: Michigan.
- Levy, David M. and Sandra J. Peart. 2001/2002. "Secret History of the Dismal Science." [www.econlib.org](http://www.econlib.org).
- Levy, David M. and Sandra J. Peart. 2002a. "Analytical Egalitarianism, Anecdotal Evidence and Information Aggregation." History of Economics Society/ American Economic Association, Atlanta.
- Levy, David M. and Sandra J. Peart. 2002b. "Who are the Canters: Economists, Evangelicals and Other 'Parasites.'" Eastern Economic Association. Boston.
- Lomborg, Bjørn. 2001. *The Skeptical Environmentalist: Measuring the Real State of the World*.

- Cambridge: Cambridge University Press.
- McCloskey, Donald. 1990. "Storytelling in Economics." *Economics and Hermeneutics*.  
Edited by Don Lavoie. London: Routledge.
- Macleod, Helen. 1986. "Charles Kingsley & 'The Water Babies'." *Book and Magazine Collector* 23: 36-43.
- Mill, John Stuart (1962-). *Collected Works of John Stuart Mill*. Edited by J. M. Robson.  
Toronto: University of Toronto Press. vols. ii-iii: *Principles of Political Economy* [1965]; vol. iv: *Essays on Economics and Society* [1967]; vols. vii-viii: *A System of Logic: Ratiocinative and Inductive* [1973].
- Morgan, Mary. 2001. "Models, Stories and the Economic World." *Journal of Economic Methodology*
- Mosteller, Frederick and J. W. Tukey. 1977. *Data Analysis and Regression*. Reading, Mass.: Addison-Welsey.
- The Oxford English Dictionary on Compact Disc*. 1992. Second edition. Oxford: Oxford University Press.
- Pearson, Karl. 1936. "Method of Moments and Method of Maximum Likelihood."  
*Biometrika* 28: 34-59
- Pearson, Karl and Ethel M. Elderton. 1925 "Forward." *The Annals of Eugenics* 1: 1-4.
- Pearson, Karl and Margaret Moul. 1925. "The Problem of Alien Immigration into Great



- Britain, Illustrated by an Examination of Russian and Polish Jewish Children.”  
*Annals of Eugenics* 1: 5-55, 56-127.
- Peart, Sandra J. and David M. Levy. 2002. “Transformation and Hierarchy: Punch’s Irish Caricatures as Illustrations of ‘Chemical Political Economy.’” European Conference on the History of Economics. Montreal.
- Peart, Sandra J. and David M. Levy. “‘Not an Average Human Being’: How Economics Succumbed to Racial Accounts of Economic Man.” *Race, Liberalism and Economics*. Edited by David Colander. University of Michigan Press, 2003.
- Plott, Charles. 1982. “Industrial Organization Theory and Experimental Economics.”  
*Journal of Economic Literature* 20: 1485-1527.
- Rousseeuw, Peter J. and Annick M. Leroy. 1987 *Robust Regression and Outlier Detection*.  
New York: John Wiley & Sons.
- Ruskin, John. “Unto this Last.” 1905. *The Works of John Ruskin*. Edited by E. T. Cook and Alexander Wedderburn. Volume 17, pp. 1-114. London.
- [F. S.] 1926. “Annals of Eugenics.” *Journal of the Royal Statistical Society* 89: 147-51.
- Semmel, Bernard. 1962. *The Governor Eyre Controversy*. London: Macgibbon & Kee.
- Smith, Adam. 1976. *An Inquiry into the Nature and Causes of the Wealth of Nations*. Edited W. B. Todd. Oxford: Clarendon Press.
- Smith, Adam. 1977. *The Correspondence of Adam Smith*. Edited Ernest Campbell Mossner

- and Ian Simpson Ross. Oxford: Clarendon Press.
- Snow, C. P. 1959. *The Two Cultures and the Scientific Revolution*. Cambridge: Cambridge University Press.
- Squiers, Carol. 2001. *Perfecting Mankind: Eugenics and Photography*. New York: International Center of Photography.
- Stigler, George J. 1941. *Production and Distribution Theories*. New York: Macmillan.
- Stigler, George J. and Gary S. Becker. 1977. "De Gustibus Non Est Disputandum." *American Economic Review* 67: 76-90.
- Wallace, A. R. 1864. "The Origin of Human Races and the Antiquity of Man Deduced from the Theory of 'Natural Selection.'" *Journal of the Anthropology Society* 2: clviii-cixx.
- Webster's Third New International Dictionary of the English Language Unabridged*. 1993. Philip Babcock Gove, Editor. Springfield, Mass.: Merriam-Webster.
- Whately, Richard. 1831. *Introductory Lectures on Political Economy*. London.
- Velleman, J. David. 2000. *The Possibility of Practical Reason*. Oxford: Clarendon Press.