His own brand of development economics was based on years of experience as a policy consultant in South America in the 1950s and 1960s. After writing his most famous book *Exit, Voice and Loyalty* (1970) and finding a scholarly home at Princeton's Institute for Advanced Study, Hirschman shifted the emphasis in his work from investigating projects of economic development toward studying the history of economic and political thought. His goal was to identify conceptual gaps and to find neglected overarching frameworks in the discourse of the past. He tried to grasp the complexity and pursued the question of how political and economic actors drawing on their ambitions, memories, motives, passions and interests made sense and understood the world around them. Adelman provides a detailed map of the wide variety of the contemporary and historical scholars affecting Hirschman's intellectual development. To my surprise, Friedrich von Hayek's method of experimental individualism (p. 123, 237 & 323) was amongst those influences, though Hirschman criticises Hayek's politics in The Rhetoric of Reaction (1991: 110-121).

Hirschman's methods of participant observation, pattern building and scrutiny of the history of economic and political discourse to derive new or refresh overlooked theories could be the inspiration for those young aspiring economists who are disappointed by the limitations of the standard methods of linear mathematical modelling and econometrics and are looking for an alternative or share Hirschman's greater 'fondness for understanding complexity in the social sciences than searching for strong predictions' (Adelman, p.13). He is probably less well known than other maverick dissident economists like Kenneth Boulding, influential in founding ecological, evolutionary or conflict economics or the best-selling John Kenneth Galbraith. Therefore, Adelman's meticulously researched biography (he must have sacrificed years of his life reading archive material and interviewing family, friends and colleagues) is an invaluable source to make Hirschman's thinking more popular and assessable. A second very useful tool to (re-)acquaint oneself with Hirschman's ground breaking work is the anthology The Essential Hirschman (Princeton and Oxford: Princeton University Press, 2013) edited by Adelman in collaboration with Emma Rothschild and Hirschman's nephew Amartya Sen which assembles his most important contributions to development economics and his theory of markets and democracy.

Thomas Picketty
Capital in the Twenty-First Century
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Capital in the Twenty-First Century is one of the most successful works of economics in recent memory, and has inspired numerous reviews. This review, in an attempt to avoid repetition, will provide a condensed overview of the main argument followed by a short critique. Despite this critique, the basic conclusion is positive. Reading *Capital in the Twenty-First Century* is thoroughly recommended.

The theoretical issue tackled by Piketty is the relation between the capital-income ratio, the share of capital in income, and the distributions of income and wealth. The central observation is the apparent U-shaped evolution of the share of capital in income alongside the capital-income ratio from 1914 to 2010. Denoting the capital-income ratio as β, and the capital share as $\alpha=r\beta$, where r is the rate of return to capital, it follows that $d\alpha/d\beta>0$ over the twentieth century as a whole. The condition that must hold for this to be the case is that the elasticity of the rate of return to capital with respect to the capital-income ratio is less than one in absolute value. Whilst it is plausible for this to have been an historical accident, Piketty contends that it is a fact of contemporary capitalism by employing an aggregate production function argument. Given a CES production function, an elasticity of substitution between labour and capital greater than 1 will yield this condition. Although he notes the importance of parameter instability, Piketty argues that, 'on the basis of historical experience, the most likely outcome is that the volume effect will outweigh the price effect, which means that the accumulation effect will outweigh the decrease in the return on capital'. Meanwhile, as the steady state value of the aggregate capital-income ratio is given by $\beta=s/g$, where s is the saving rate out of total income and g the rate of growth of income, in a low growth environment β might rise to a very high level, implying a rather large share of capital in national output.

Given the above, the explanation for rising income inequality over the second half of the twentieth century, and the basis for the prediction that this trend will continue, is simply that capital income is much more concentrated than labour income. (After this, and in relation to the capital tax policy proposal, the relation between the rate of profit and the growth rate of national income is analysed and linked to the foregoing). Piketty's approach, however, suffers from an immediate conceptual difficulty. Denoting the elasticity of substitution as σ, the standard CES production function is as follows:

$$Y=[\gamma K^{(\sigma-1)/\sigma}+(1-\gamma)L^{(\sigma-1)/\sigma}]^{\sigma/(\sigma-1)}$$

The capital share is easily derived, from which it is obvious that $d\alpha/d\beta>0$ requires $\sigma>1$:

$$\alpha=\gamma\left(\frac{K}{Y}\right)^{\frac{\sigma-1}{\sigma}}$$

However, with $\sigma>1$, and therefore gross substitutability, neither labour nor capital is essential to the production process. This is conceptually problematic; *a priori* one would like to restrict $\sigma \leq 1$ to ensure essentiality, whilst the majority of empirical estimates of σ find that the latter condition holds. A possible alternative is to relax the perfect competition assumption. Consider, for instance, a monopolistically competitive firm sector with σ=1. Under plausible assumptions, the representative firm will price according to a mark-up m over marginal cost, yielding the following labour share of income:

$$mw = (1-\gamma)\frac{Y}{L} \rightarrow \frac{wL}{Y} = \frac{1-\gamma}{m}$$

Similarly, the capital share will equal γ/m, and the share of monopoly profit will equal $(m\text{-}1)/m$. Assuming, for the sake of argument, that this rent will be distributed between capital income and labour income according to a parameter ψ measuring the relative bargaining position of capital, the observed capital share of income will be as follows:

$$\alpha = \psi + \frac{\gamma - \psi}{m}$$

One can then interpret changes in the capital share as changes in the power of capital relative to labour. Aside from solving the essentiality problem, this approach draws attention to something Piketty largely ignores: the decline in the power of organised labour in the UK and USA compared to continental Europe, and the associated (and rather different) policy conclusions. Whilst its theoretical framework precludes a formal treatment of these issues, certain passages in *Capital in the Twenty-First Century* point towards their conclusion:

> More generally, it is important, I think, to insist that one of the most important issues in coming years will be the development of new forms of property and democratic control of capital. The dividing line between public capital and private capital is by no means as clear as some have believed since the fall of the Berlin Wall . . . When it comes to organizing collective decisions, the market and the ballot box are merely two polar extremes. New forms of participation and governance remain to be invented.

Unfortunately, however, this passage does not appear until the last section of the last chapter, and the reader is left wondering what the author's exact thoughts on the subject are.