

Working Papers on The Nature of Evidence:
How Well Do 'Facts' Travel?
No. 33/08

**Travelling with the GDP
Through Early Development
Economics' History**

Daniel Speich

© Daniel Speich
Departement Geistes-, Sozial-, und Staatwissenschaften
ETH Zürich

September 2008



“The Nature of Evidence: How Well Do ‘Facts’ Travel?” is funded by The Leverhulme Trust and the ESRC at the Department of Economic History, London School of Economics.

For further details about this project and additional copies of this, and other papers in the series, go to:

<http://www.lse.ac.uk/collection/economichistory/>

Series Editor:

Dr. Jon Adams
Department of Economic History
London School of Economics
Houghton Street
London, WC2A 2AE

Tel: +44 (0) 20 7955 6727
Fax: +44 (0) 20 7955 7730

Travelling with the GDP through early development economics' history

Daniel Speich

Abstract

In the vast body of development theoretical knowledge one element has been of a considerable longevity: the abstraction of a Gross Domestic Product to represent a given economic entity. This paper suggests approaching the history of development thinking by travelling with the GDP through this discourse. The GDP has been contested as an indicator of economic development ever since it was first put to use in the 1940s. However, the specific mode of knowledge which is expressed in this abstraction has opened up a quite universally shared frame of reference in which a North-South-Divide became operational. The paper argues that GDP figures have become facts that travel easily across the globe because constant work is being undertaken to uphold the conditions for their mobility. Based on this observation the development endeavour can be located historically in a manifold constellation of the statistical acquisition of economic insight, political utopia, state intervention, the emerging prospect of economic planning in capitalist and non-capitalist systems and the quest for the international standardization of economic knowledge production.

Introduction

This paper takes up the idea of travelling facts in order to recast the history of the post-colonial development endeavour. The first part argues that the travelling metaphor is helpful as a methodical device when it comes to framing historical narratives. The second and third parts look at developmental facts and ask in what way they could be considered to have travelled.¹

¹ Research for this paper has been conducted during my stay at the Max-Planck-Institute for the History of Science, Berlin, in 2007. I am indebted to the Max-Planck-Society for generous funding and to Hans-Jörg Rheinberger and the participants of the colloquium of department III

A vast body of literature exists on how socio-economic change in weak economies can be accelerated. This is the central question in the development discipline around which intellectual activities have been revolving for over half a century. The research project of which this paper is a part aims at reconstructing a historical narrative concerning the role of science and technology in development. And because the field is so large, it seems helpful to start research by looking at formal aspects of knowledge production, rather than at the contents. Instead of aligning different leading dogmas of development, it is thus suggested to look at modes and techniques of knowledge production.

One element in the vast body of development theoretical knowledge has been of a considerable longevity. It is the abstraction of a Gross Domestic Product to represent the productivity of a given economic entity. My methodological argument states that the history of development thinking can be approached by travelling with the GDP through this discourse. To put the metaphor to its limits: one could imagine oneself riding on the back of this indicator through time and observing the different environments into which one is being brought. Part one of the paper aims at substantiating this approach.

Part two and three of the paper look at the GDP as a travelling fact. It is asked, how economists of development have gained more or less stable representations of single countries and how they then introduced these specific knowledge claims into a comparative framework. Something like a global epistemic space has been elaborated over the past six decades in which development discourse takes place. The practice of national accounting has been very important in this process. The accounting procedures have inherently and with necessity reduced local complexities and this reductionism

for invaluable comments on an earlier version of this paper. I particularly wish to also thank the members of the “facts”-group at LSE for the opportunity to discuss my work.

created the seamless space, in which GDP and other macroeconomic abstractions travel easily.

I. Methodical travelling: finding a narration

The material, or the case, on which to focus, is the genesis of a global “Development Machine”² since World War II. The productivity of the “travelling”-approach for narrating the past of the post-colonial development endeavour may become visible, if it is contrasted to some existing, older accounts of the field. The apparatus of development was initially conceptualized as a strategic element in the Cold War and it transported key elements of the Western model of a Keynesian welfare state. Necessary conditions for the emergence of the postcolonial practice of development were an unrestricted trust in science and technology, a strong state, a stable and clearly regulated international economic order and the assumption, that socio-economic change can be planned, induced and controlled.

By the 1970s, most of these conditions were seriously called into question. But, quite surprisingly, the business of development gained further momentum and is still with us today in the 21st Century. Net aid flows still rose in the 1980s, even though it became more and more evident that the whole endeavour did not meet its objective satisfactorily, and continued to rise towards the turn of the millennium after a short pause in the early 1990s.³ Meanwhile, development theory evolved into a lively field of highly differentiated analysis and debate, including questions concerning low aid efficiency, the problems of structural adjustment, a new interest in non-governmental organizations, intermediate and appropriate technologies, rural development, local participation and gender issues. The complex

² James Ferguson, *The Anti-Politics Machine. Development, Depoliticization, and Bureaucratic Power in Lesotho* (Cambridge [etc.], 1990).

³ Figures from <http://stats.oecd.org> (download January 2006).

system of international technical cooperation and foreign aid has become a powerful element within the socio-economic reality of almost all recipient countries. At the same time its fundraising activities have strongly influenced the public image of the Third World within donor societies. The aid industry can be understood as a new global culture, within which forms of economic knowledge play a key role.

What are the reasons for the persistence of the development endeavour? What explanations can be found in the existing narrations of the field's history?

Development has been the subject matter of vast historical literature. Textbooks of development economics often include an overview of the historical succession of doctrines. These accounts reconsider the previously predominant doctrines in close relation to the development schemes that were installed. Thus, they have a tendency to qualify earlier thinking in terms of its practical success. The dominant mode of historical reasoning seems to be the quest for "lessons" to be learned from the past in order to gain new directions for the future.⁴ However, after five decades of development theory and practice, there are many contradictory lessons available and it is not easy to see a cumulative progress in knowledge concerning the problems at hand. In fact, since around 1980 a body of literature has evolved around the alleged "death of development".⁵ It was assumed that the initial objective of scientifically understanding the process of modernization in order to induce an improvement of the overall conditions had somehow lost its legitimacy in view of the poor record of the venture. One recent

⁴ See for example Erik Thorbecke, "The Evolution of the Development Doctrine and the Role of Foreign Aid, 1950-2000," in *Foreign Aid and Development. Lessons Learnt and Directions for the Future*, ed. Finn Tarp (London, 2000).

⁵ Dudley Seers, "The Birth, Life and Death of Development Economics," *Development and Change* 10 (1979); Colin Leys, *The Rise and Fall of Development Theory* (Nairobi, 1996); Jeanette C. Mitchell, "Development: An Obituary," *History of Economics Review* 39 (2004).

publication by an insider went as far as qualifying the whole history of the endeavour as an “elusive quest for growth”.⁶

Some accounts attribute the very stability of the development endeavour to the fact that poverty and inequality still prevail on a global scale. This would mean assuming that the main driving forces behind development thinking and action were humanitarian ethics or (Christian) compassion of the rich with the poor.⁷ But such an account seems incomplete. Surely, a moral sense of obligation has been decisive in motivating aid flows, but so have political considerations and the prospects of financial profit.

Other accounts top the economists’ self-criticism by means of a critique of ideology. Since the 1980s a number of mainly neo-Marxist authors have recast the history of the development idea as an ideological cornerstone of the postcolonial exploitation of the Third World.⁸ It has been argued that the word “development” was designed to hide the agenda of pushing the frontier of capitalism more and more into non-Western spheres. A central point in this argument was the obvious political entanglement of the discipline in the context of the Cold War. The Truman policy of levelling the boundaries of the colonial system appears to have been paralleled by the fixing of new borders between capitalist compliance and a received socialist threat. However, it is argued that the ultimate aim was to establish a seamless planetary

⁶ William Russell Easterly, *The Elusive Quest for Growth. Economists' Adventures and Misadventures in the Tropics* (Cambridge, Mass., 2002).

⁷ See for the West German case Kurt Zaugg-Ott, *Entwicklung oder Befreiung? Die Entwicklungsdiskussion im Ökumenischen Rat der Kirchen von 1968 bis 1991* (Frankfurt a. M. 2004); Peter Langhorst, *Kirche und Entwicklungsproblematik. Von der Hilfe zur Zusammenarbeit* (Paderborn 1996).

⁸ Serge Latouche, ed., *Le Développement En Question*, vol. 100, Tiers-Monde. Croissance, Développement, Progrès (Paris, 1984); Samir Amin, *Eurocentrism* (London, 1988); Gilbert Rist, *Le Développement. Histoire D'une Croyance Occidentale* (Paris, 2001 (1996)); Gustavo Esteva, "Development," in *The Development Dictionary. A Guide to Knowledge as Power*, ed. Wolfgang Sachs (London, New York, 1992). See also Arturo Escobar, *Encountering Development. The Making and Unmaking of the Third World* (Princeton, New Jersey, 1995), chapters 2 and 3 for a more balanced neo-Marxist view.

space for the capitalist logic of the market. Lessons from these historical accounts amount to a call for abandoning the endeavour completely.⁹

While this rich historiography has doubtlessly produced many important insights, the situation still remains unsatisfying. The relative impact of moral, financial and political factors in aid giving is difficult to weigh and at the same time highly contested. It seems important to ask for the conditions of the possibility of such debates. I would thus suggest shifting the analytical perspective away from the donors' and recipients' motives towards a more formal account. The mode of existence of the postcolonial "Development Machine" is defined by the production, diffusion and reformulation of scientific and technical expertise.¹⁰ A shared set of analytical tools, concepts and categories has emerged, which worked as a common language for antagonistic players to express their different views on the aims and ways of aid. And in this, I assume that the discipline of economics has played a crucial role. The perception and analysis of global inequality have given rise to a world-wide communicative community of actors engaged in development economic issues.

⁹ Scott, *Domination and the Arts of Resistance: Hidden Transcripts*; Wolfgang Sachs, "Introduction," in *The Development Dictionary. A Guide to Knowledge as Power*, ed. Wolfgang Sachs (London, New York, 1992); Arturo Escobar, "Imagining a Post-Development Era," in *Power of Development*, ed. Jonathan Crush (London, New York, 1995).

¹⁰ A rich literature describes the cultural cohesion of the development industry. See for example Richard Harper, *Inside the IMF. An Ethnography of Documents, Technology and Organisational Action* (San Diego (etc.), 1998); Colette Chabbott, "Development Ingos," in *Constructing World Culture. International Nongovernmental Organizations since 1875*, ed. John Boli and George M. Thomas (Stanford, 1999); Emma Crewe and Elizabeth Harrison, *Whose Development? An Ethnography of Aid* (London [etc.], 1998); David Mosse, *Cultivating Development. An Ethnography of Aid Policy and Practice* (London, 2005); Alan Rew, "The Donors' Discourse. Official Social Development Knowledge in the 1980s," in *Discourses of Development*, ed. Ralph David Grillo and R. L. Stirrat (Oxford [etc.], 1997); James Ferguson, "Anthropology and Its Evil Twin: 'Development' in the Constitution of a Discipline," in *International Development and the Social Sciences. Essays on the History and Politics of Knowledge*, ed. Frederick Cooper and Randall Packard (Berkeley, Los Angeles, London, 1997); Timothy Mitchell, *Rule of Experts. Egypt, Techno-Politics, Modernity* (Berkeley, 2002); Richard Rottenburg, "Accountability for Development Aid," in *Facts and Figures. Economic Representations and Practices*, ed. Herbert Kalthoff, Richard Rottenburg, and Hans-Jürgen Wagener (Marburg, 2000); Richard Rottenburg, *Weit hergeholte Fakten. Eine Parabel der Entwicklungshilfe* (Stuttgart, 2002).

The beginnings of development economics can be located in the 1940s. In the context of a new post-war world order, economic change in poor countries quickly gained political importance and thus attracted scientific attention. The new focus was most influentially expressed in the inaugural address of Harry Truman in January 1949, in which the US president stated as a fourth point of his foreign policy “a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas.”¹¹ The scientific response was considerable. And the economics profession was especially challenged by the topic. What had been at the core of economic thought in the times of Adam Smith, namely the advancement of material progress, had somehow disappeared from the modern economists’ sight because of their preoccupation with equilibrium properties.¹² With the Truman statement, increasing wealth in terms of economic growth quite suddenly re-entered the scene under the label of development. Within the framework of an economic theory of growth, the new discipline of development economics emerged and quickly rose to prominence. Scholars in the field promised no less than to formalize the secret of Western economic success in such a way that it would become applicable across international borders and could help to level the inequalities that had been built up by colonial rule.

Anthropologists of development have repeatedly highlighted the significance of written reports and the importance for all agents to keep up with the pace of changing key concepts.¹³ Thus, the aid business

¹¹ Dennis Merrill, ed., *The Point Four Program: Reaching out to Help the Less Developed Countries*, vol. 27, Documentary History of the Truman Presidency (Bethesda, Md., 1999), p. 4f.

¹² Heinz W. Arndt, *The Rise and Fall of Economic Growth. A Study in Contemporary Thought* (Melbourne, 1978). See also Peter J. Boettke and Steven Horwitz, "The Limits of Economic Expertise. Prophets, Engineers, and the State in the History of Development Economics," *History of Political Economy* 37 (2005), p. 26; Bruna Ingraio and Giorgio Israel, *The Invisible Hand. Economic Equilibrium in the History of Science* (Cambridge MA, 1990).

¹³ Philip Quarles van Ufford, "Knowledge and Ignorance in the Practices of Development Policy," in *An Anthropological Critique of Development: The Growth of Ignorance*, ed. Mark

has constituted itself as a knowledge industry which reached a critical level of internal cohesion towards the end of the 1960s. From that moment onward the discipline was quite stable and grew steadily despite rather unfavourable changes in its politico-economic environment. While aid flows were characteristically directed from donors to recipients, the flows of knowledge followed more chaotic lines, as they included field research as well as productive reinterpretations of norms and prescriptions in local recipient contexts.

Over the last five decades, the international development discourse has become an important source of cultural identity in metropolitan headquarters as well as in urban and rural areas of poor countries. One is confronted with a global phenomenon, which most probably cannot be reduced to a “hidden transcript” of neo-colonial domination.¹⁴ Rather, I would argue, the “Development Machine” has become part and parcel of the actually existing condition of globality as described by Michael Geyer and Charles Bright.¹⁵ Like other agents of global convergence, it bears witness to the high degree of global cultural and economic integration that has been achieved in the last decades. At the same time it is one prominent arena for asserting difference and rejecting sameness around the planet.

The international development endeavour has a history that does not match past future prospects of westernising the world. The failures of implementing core elements of Modernization Theory abound. And neither can its past be reconstructed as a tragic story of negating otherness, because development has been an important factor in the evolution of multiple modernities. Development has a double face of

Hobart (London, New York, 1993); Terje Tvedt, *Angels of Mercy or Development Diplomats? Ngos & Foreign Aid* (Trenton, N.J., 1998).

¹⁴ See James C. Scott, *Domination and the Arts of Resistance: Hidden Transcripts* (New Haven [etc.], 1990).

¹⁵ Michael Geyer and Charles Bright, "World History in a Global Age," *American Historical Review* 100 (1995).

unity and diversity. Neither the telos of enlightened universalism nor the particularism of *tiers-mondistes*, who defend an alleged authenticity of non-Western cultures, can convincingly account for the phenomenon.

It is necessary to regain a more clear-cut picture of the issue. A proposal by the anthropologist Arturo Escobar is helpful, who claimed in a seminal study on the practice of development that “one should investigate the epistemological and cultural conditions of the production of discourses that command the power of truth and the specific mode of articulation of these discourses upon a given historical situation”.¹⁶ However, I would suggest such a line of inquiry not primarily just in order to interpret development economical knowledge as an ideological tool to secure Western power. As Frederick Cooper and Randall Packard have pointed out, development discourse was not in itself hegemonic, but has been used instrumentally to build up hegemonic situations – and to destroy them at times.¹⁷ Thus, it is interesting to ask, as to what extent specific modes of knowledge have opened up a quite universally shared frame of reference in which a North-South-Divide became operational.

One way of doing this is to “travel” through development history with the GDP. Let us go back to the beginnings of the endeavour, i.e. the 1940s and 1950s, and concentrate on the ways of economic knowledge production within what was later labelled the American Modernization Theory.¹⁸ Such an approach makes use of the practice turn in the field of science and technology studies and builds its historical account not upon a succession of leading concepts but upon

¹⁶ Escobar, *Encountering Development. The Making and Unmaking of the Third World*, p. 84.

¹⁷ Frederick Cooper and Randall Packard, "Introduction," in *International Development and the Social Sciences. Essays on the History and Politics of Knowledge*, ed. Frederick Cooper and Randall Packard (Berkeley, Los Angeles, London, 1997), p. 131.

¹⁸ Michael E. Latham, "Modernization," in *The Modern Social Sciences*, ed. Theodore M. Porter and Dorothy Ross, *The Cambridge History of Science* (Cambridge, 2003).

concrete scientific practice.¹⁹ Shedding light on the instruments and procedures with which early development economists explored their topics and conceived development as an object of knowledge makes visible rather unexpected instances of continuity. Of course, the prominence of the notion of GDP per capita in development discourse has been observed – and criticised – repeatedly. However, these technical formulations have not very often been put to the centre of a historical narration of the field. Instead, the received accounts of the history of development thinking usually focus on paradigm shifts, say from Modernization to Dependency Theory and then to the neo-liberal concept of structural adjustment. The fact, that all of these models and theories based their assumptions on data gained through the procedures of national accounting has largely been overlooked. It seems important to insist on the analysis of the technical level as it offered a source of considerable stability across all changes in theoretical modelling. Arthur Lewis and Walt Rostow, Raul Prebisch and Andre Gunder Frank, just as well as World Bank's John Williamson, who coined the „Washington Consensus“ in 1990, to name just a few, based their arguments on figures like the Gross Domestic Product and on indicators derived from it.

However, the technical history of development economics not only shows surprising continuity, but also some ruptures. It has been argued that while early development discourse was marked by a specific technocratic reductionism to economic performance, today broader approaches are in use.²⁰ But this account, which presents

¹⁹ Theodore R. Schatzki, Karin Knorr Cetina, and Eike von Savigny, eds., *The Practice Turn in Contemporary Theory* (London, New York, 2001); Andrew Pickering, "The Mangle of Practice: Agency and Emergence in the Sociology of Science," in *The Science Studies Reader*, ed. Mario Biagioli (London, New York, 1999 (1993)); Hans-Jörg Rheinberger, *Epistemologie des Konkreten. Studien zur Geschichte der modernen Biologie* (Frankfurt am Main, 2006).

²⁰ One thinks, for example, of the Human Development Index (HDI), which was based on work by Amartya Sen and Mahbub ul Haq and has reached considerable acceptance during the 1990s. It is, however, important to note that the HDI does not replace GDP per capita as

development thinking as gradually evolving in complexity, is, to say the least, imprecise. Already in the so-called technocratic early years, i.e. the 1940s and 1950s, there were rich and elaborate debates about the limits of the GDP-approach. In fact, these debates formed the intellectual environment, in which the procedures of national accounting were initially shaped. As a framework of inquiry the national accounts deployed a tendency to reproduce themselves and to gain stability by aggregating links to other forms of economic knowledge production and to economic policy. In the 1960s, however, debating the accounting systems became a specialised task for applied economists and statisticians while theoretical economists and policy advisors started to take the figures for granted. A specific division of academic labour came into existence, which was instrumental in the rise of technocratic approaches towards the complex question of economic change.

I assume that these practices, irrespective of their success in advancing general welfare on the planet, have been important in structuring not only development thinking on all sides of the political spectrum, but also in changing the socio-economic realities of a large part of the world. A shared set of notions concerning economic difference and change emerged, which gave rise to new global imaginations and new local imaginaires of the world. Development historiography needs to be complemented by a genealogy of these world-views.

How could such a genealogy look like? In the following paragraphs the genesis of the GDP-concept is briefly sketched, and it is asked, in what way it allowed for macroeconomic facts to travel around the globe. GDP per capita is a highly contested indicator for development – but despite the many critiques it is still in use today.

an indicator of development but merely extends it by including information concerning educational possibilities and life expectancy. United Nations Development Programme, *Human Development Report* (Basingstoke, 1990).

Three reasons will be given why the concept has proved to be so stable.

II. Analytical travelling: GDP as a travelling fact

Modern economics envisions its object mainly by quantification, mathematizing and modelling. In what has been termed the “Age of Economic Measurement”, starting around 1870 a whole range of quantifying instruments were designed and put to use, such as index numbers, accounting tables, indicators or social surveys. These techniques allowed for the shaping of economic interaction in mechanical terms. Economics became a kind of engineering science insofar as economists assumed that one could “fine-tune” the economic machine, and intervene with the mechanism.²¹

One arsenal of such quantifying instruments was national income statistics, a field greatly advanced by authors like Simon Kuznets in the USA or Colin Clark in Great Britain and Australia during the interwar period. To follow one prominent historian of economic thinking, H. W. Arndt, these practices were crucial in the co-evolution of development economics on the one hand and economics of growth on the other hand, a new professional preoccupation that arose in the 1940s in all Western countries.²²

The practice of national income accounting was designed as an instrument to make visible the structure of wealth within a given economic entity. In order to gain such a quasi cartographic view, scholars compiled data from tax registers and other sources to add up the full activity of one nation’s economy. The total product of an economy was assumed to cover all actors (businesses, households, state) and could be expressed either in terms of their respective

²¹ Mary S. Morgan, "Economics," in *The Modern Social Sciences*, ed. Ted Porter and Dorothy Ross, The Cambridge History of Science (Cambridge, 2003).

²² Arndt, *The Rise and Fall of Economic Growth. A Study in Contemporary Thought*, p. 21.

incomes, expenditure, or outputs, which in a closed system must sum up to an equal amount. If the results were then related to population figures, income groups could be formed and the social distribution of wealth could be displayed accordingly.

To put it in the terms suggested by Bruno Latour, these procedures can be seen as “inscription devices” which generated a new kind of visibility.²³ In so far as they referred to increasingly complex phenomena not accessible otherwise, one is tempted to attribute to them a productivity that exceeds mere representational mechanisms.²⁴ They shaped the realm of economic transactions in an engineering perspective which allowed for specific policy interventions. And they set up a comparative framework in which the organization of one economic entity could easily be compared to the institutions of another economic sector, or to another nation.

In 1933, Simon Kuznets stressed the usefulness of computing gross economic totals as an instrument to “appraise the prevailing economic organization in terms of its returns”. In other words, estimating the end product of a country’s economic activity gave rise to the question, whether a change in economic organization would lead to a change in returns.²⁵ Evidence for such inquiries could be gathered in principle through comparative investigations. By offering more or less stable inscriptions of the condition of one economic entity at one point in time, the accounting procedures made it possible to relate several such inscriptions to each other. To take up Bruno Latour’s vocabulary again,

²³ Bruno Latour, *Science in Action. How to Follow Scientists and Engineers through Society* (Cambridge Mass., 1987), p. 68.

²⁴ Mary Morgan, "Perspective. Making Measuring Instruments," in *The Age of Economic Measurement*, ed. Judy L. Klein and Mary Morgan, Ann. Suppl. To Vol 33 of *History of Political Economy* (Durham, London, 2001).

²⁵ Simon Kuznets, "National Income," in *Encyclopedia of the Social Sciences*, ed. Edwin R. A. Seligman (New York, 1933), p. 205. See also Mark Perlman, "Political Purpose and the National Accounts," in *The Politics of Numbers*, ed. William Alonso and Paul Starr (New York, 1987), and Vibha Kapuria-Foreman and Mark Perlman, "An Economic Historian's Economist: Remembering Simon Kuznets," *The Economic Journal* 105 (1995).

“cascades of inscriptions” could be arranged through which economic facts would move in the form of “immutable mobiles”.²⁶

One important step in this direction was to take total income for a given year (as measured in terms of the Gross Domestic Product), and then connect the resulting figure to estimates of earlier years, thus composing a time series out of which yet another inscription could be derived, namely a rate of growth.²⁷ However, Kuznets was quite sceptical towards this kind of mobilization of facts. Comparing different sets of national accounts was in his view very difficult because he considered the scope of economic activity within a given society to be essentially contingent. He remarked with emphasis: “Being conditioned by the institutional set up of the family and of economic society, the line between economic and non-economic activity shifts from country to country and from time to time”²⁸. The measuring procedures of income accounting thus had to reflect the socio-cultural structure of the entity it wanted to depict. It had to be grounded in local specificities and in the contingency of history. In fact, it was Kuznets’ conviction that one had to design a specific procedure of quantification for each entity in time and space. This of course rendered the comparison of data rather problematic.

How well do facts travel? For Kuznets, an economic abstraction like the GDP could not easily be cut off from its locus of origin. But for other authors in the field, the power of national accounting lay precisely in the drive towards international comparison. The problem of generalizing national income accounting was one of the main interests of Colin Clark who is said to have been among the first economists to

²⁶ Bruno Latour, "Drawing Things Together," in *Representation in Scientific Practice*, ed. Michael Lynch and Steve Woolgar (London, 1990), p. 27.

²⁷ For the history of statistical time series see Judy L. Klein, *Statistical Visions in Time. A History of Time Series Analysis, 1662-1938* (Cambridge, 1997). The immediate problem at hand was of course the change in prices over time. For the history of techniques of deflation see Studenski, *The Income of Nations*, p 217ff.

²⁸ Kuznets, "National Income.", p. 209.

think in terms of an annual growth rate of real income per head of population.²⁹ His notion of “GDP per capita” (GDP divided by population size) became one of the centrepieces of economic theories of growth and development. But Clark was not only interested in the temporal but even more so in the territorial expansion of the instrument at hand, which is why he later on gained the status of one of the “pioneers in development.”³⁰ Travelling through early development economics’ history along the GDP-abstraction leads us to an important publication by Clark in 1940. This work attempted to clarify “The Conditions of Economic Progress”, as the ambitious title suggested, by offering a cross-border analysis of quantitative indexes. The book included national income data for many countries.

In the transparent space provided by Clark’s statistical figures a previously unseen image of the world appeared (Figure 1).³¹ Clark presented total income per capita for each country in an artificial currency unit of assumedly constant purchasing power. And he grouped the countries according to continent and income. The material showed more than half of the world population living in countries with an average income below 200 units, which amounted to less than one-sixth of the average income of the USA. Despite harsh criticism concerning the quality of his data, the study was widely appraised for demonstrating that the world was basically “a wretchedly poor place”.

²⁹ Arndt, *The Rise and Fall of Economic Growth. A Study in Contemporary Thought*, p. 21.

³⁰ Colin Clark, "Development Economics. The Early Years," in *Pioneers in Development*, ed. Dudley Seers and Gerald M. Meier (New York, 1984).

³¹ Colin Clark, *The Conditions of Economic Progress* (London, 1940). For a history of early techniques to render different currencies comparable see Studenski, *The Income of Nations*, p 224ff.

	EUROPE	AMERICA	ASIA	AFRICA	OCEANIA
1300-1400	..	U.S.A. ¹ 128·04			
1200-1300	..	Canada .. 10·98	..	..	New Zealand 1·57
1000-1100	Great Britain ² 47·14 Switzerland ³ 4·17	Argentina 12·37			
900-1000	..	..	..	..	Australia 6·75
800-900	Holland 8·47				
700-800	Irish Free State 2·97				
600-700	France ⁷ 41·92 Denmark ⁴ 3·73 Sweden 6·25 Germany ⁵ 67·51 Belgium ⁶ 67·60	Uruguay 2·04			
500-600	Norway ⁸ 2·88 Austria 6·76 Spain ⁹ 24·87	Chile 4·51			
400-500	Czechoslovakia 15·16 Yugoslavia 14·95 Iceland 0·12	Brazil 41·56			
300-400	Greece 6·84	Rest of America ¹⁰ 63·75	Japan ¹¹ 69·83 Palestine ¹² 1·60 Philippines 13·26	Algeria 7·21 Egypt 15·47	Hawaii and Guam 0·41
	Finland 3·58 Hungary 8·94 Poland 33·82 Latvia 1·96 Italy ¹³ 42·57 Estonia 1·13 U.S.S.R. 173·00 Portugal ¹⁴ 7·22	..	Turkey 16·25 Syria 3·30 Cyprus 0·36	South Africa 9·50 Morocco ¹⁵ 7·23 Tunis 2·60	
200-300	Bulgaria 6·17 Roumania 19·20 Lithuania 2·50 Albania 1·09	..	China ¹⁶ 450·0 India ¹⁷ 370·5 Dutch Indies 65·42 Rest of Asia ¹⁸ 117·8	Rest of Africa ¹⁹ 106·09	Rest of Oceania 1·66
Under 200	..	..	

¹ Including Alaska.
² Including Isle of Man, Channel Islands and Northern Ireland.
³ Including Liechtenstein.
⁴ Including Faroe Islands.
⁵ Including Danzig.
⁶ Including Luxemburg.
⁷ Including Monaco.
⁸ Including Svalbard.
⁹ Including Andorra and Gibraltar, Canaries.
¹⁰ Newfoundland with St. Pierre and Labrador (0·30), Mexico (18·77), Costa Rica (0·58), Cuba (4·29), Dominica (1·49), Guatemala (2·37), Haiti (2·60), Honduras (0·98), Nicaragua (0·85), Panama (0·52), Salvador (1·60), British West Indies (2·25), American West Indies (1·79), French West Indies (0·51), Dutch West Indies (0·08), Bolivia (3·00), Colombia (8·58), Ecuador (2·00), Paraguay (0·90), Peru (6·90), Venezuela (3·36), Falkland Islands (0·003), British, French and Dutch Guianas (0·55), Greenland (0·002).
¹¹ Including Sakhalin but not Corea or Formosa.
¹² Including Transjordan.
¹³ Including Malta, San Marino and Vatican.
¹⁴ Including Azores.
¹⁵ French and Spanish Morocco, Tangier, Spanish North Africa.
¹⁶ Including Manchuria, Outer Mongolia and Tibet.
¹⁷ Including Native States.
¹⁸ Afghanistan (7·00), Arabia and Bahrein (7·12), Bhutan (0·25), Irak (3·60), Iran (15·00), Nepal (5·60) Siam (13·24), Ceylon (5·70), Malaya (4·61), other British colonies (2·03), Indo-China (22·90), other French colonies (0·55), Aegean Isles (0·13), Korea (22·99), Formosa and Pescadores (5·31), Kwantung (1·70), Portuguese colonies (1·27).
¹⁹ Liberia (2·50), British West Africa (24·49), Kenya and Uganda (6·76), Northern and Southern Rhodesia (2·67), Sudan (5·90), other British colonies and mandates (10·19), Belgian Congo and Ruanda-Urundi (12·90), French colonies and mandates (25·28), Italian colonies (7·86), Portuguese colonies (7·50).

Figure 1: Income groupings of the countries of the world. Average yearly income per head 1925-34 is given in an artificial unit in the left column. Population figures for 1935 are given in millions next to the country's name. (Clark 1940, p. 54)

His work had a huge impact on development economics because it so impressively visualized the differences in wealth among the countries of the world. This message seems to have been strong enough to not only promote its contents, but also the means and media of their production. The United Nations and its Statistical Office started to publish comparable surveys as of 1948.³² Clark's work and the UN reports helped make national income accounting become the single most important instrument by which development economists henceforth framed their problem. They did so, of course, by duly debating the accuracy of the instrument. And the GDP has remained a contested abstraction in the history of development expertise until today. Even by the early 1950s, scholars confronted with the problems of collecting data were quick to put the use of national income accounting in developing economies into question.

One important debate concerned the influence of international transactions and focussed on the question, whether sum totals should be given in terms of a Gross Domestic Product (GDP) or a Gross National Product (GNP).³³ Another objection stated that the economies of poor states, especially large ones like Brazil or India, lacked internal integration to such an extent that they could not be turned into a meaningful basic unit of analysis. In African countries national markets for factors and for products seemed to be too poorly evolved to use

³² Such as a report on "Salient Features of the World Economic Situation, 1945-47" (January 1948), a "Supplement to the Economic Report" (March 1948) and "Selected World Economic Indices" (July 1948). Joseph D. Coppock, "Review of Economic Publications of the United Nations," *The American Economic Review* 39 (1949). See also Michael Ward, *Quantifying the World. UN Ideas and Statistics*, United Nations Intellectual History Project (Bloomington, 2004), p 72ff.

³³ D. A. Lury, "National Accounts in Africa," *The Journal of Modern African Studies* 2 (1964), p. 100. While both conceptions accounted for import and export activities, the domestic conception (GDP) measured total income within national borders and also included the local activity of businesses owned by foreigners. In contrast, the national conception (GNP) measured total income earned by all nationals within the national territory as well as abroad. In industrialized countries GDP and GNP did not seem to vary strongly, because the foreign engagement of nationals was usually as strong as the domestic activity of foreigners. In developing countries however, differences could be considerable due to foreign dominance within the national economy.

local prices in the different regions to aggregate incomes, output, and expenditures, even if a single unit of currency prevailed. Also, the line between gross and net income was hard to draw because depreciation turned out impossible to measure in economies where units of production were generally small and equipment was under constant repair.³⁴

Out of the many critical points I would like to focus upon one fundamental complication. It concerned the problem of subsistence activities. Phyllis Deane, a British economist who embarked in 1945 on an eighteen month field trip to Central Africa, wrote in the following 1953 publication on measurement of colonial national income:

The problem of obtaining adequate data on the rural economies of Africa is the most serious obstacle in the way of framing satisfactory national income estimates for these territories. ... The accounting problem is not simply that of the acute scarcity of quantitative data ... it is also a qualitative problem, which brings into question the fundamental validity for primitive communities of the social accounting concepts themselves.³⁵

Deane was frustrated by the fact that the compilation of national accounts required quantitative information in the form of money prices. But subsistence production and barter trade largely dominated the entities of her study. How to account for economic activity outside the market economy remained controversial for years. Dudley Seers, another practically experienced economist, alluded to the problem in 1952 by calling it “the well-known morass which those estimating national incomes of underdeveloped areas either skirt, rush across, or

³⁴ Harry T. Oshima, "National Income Statistics of Underdeveloped Countries," *Journal of the American Statistical Association* 52 (1957), p. 162.

³⁵ Phyllis Deane, *Colonial Social Accounting* (Cambridge, 1953), p. 115.

die in.”³⁶ Some scholars designed sophisticated methods to render non-monetarised economic activity quantifiable by taking bride-prices into account or by assuming that livestock filled the role of money in pastoral societies.³⁷ But these techniques were not introduced into the standard procedures of income accounting.

For Seers, as for Deane, the problem was fundamental, because it meant that national income accounts and their sum total did not give a correct picture of the real economic activity. This had, of course, serious consequences for the accuracy of subsequent inscriptions such as international comparisons or growth rates. Also Simon Kuznets warned development economists against relying on “mechanistic, cross-section comparisons of quantitative indexes.” Instead, in a 1953 paper he stressed the historical contingency of the experience of each of the economic entities at hand. Such reasoning, he argued, might “at least prevent us from placing too much confidence in a succession of theories that so often magnify partial and transient conditions into universal and immutable factors”.³⁸ Such limits of the national accounting framework appeared also in advanced economies where they mainly concerned the non-accountability of female reproduction work in the household. However, gender aspects of economic activity were considered to be temporary because of the assumption that household work would be capitalized in the further course of social change with technical devices taking over most of the tasks. In the

³⁶ Dudley Seers, "The Role of National Income Estimates in the Statistical Policy of an under-Developed Area," *The Review of Economic Studies* 20 (1952), p. 166. See also Melville J. Herskovits, "African Economic Development in Cross-Cultural Perspective," *The American Economic Review* 46 (1956), p. 460.

³⁷ A. R. Prest and I. G. Stewart, *National Income of Nigeria*, vol. 11, Colonial Research Studies (London, 1953); Harold K. Schneider, "A Model of African Indigenous Economy and Society," *Comparative Studies in Society and History* 7 (1964).

³⁸ Simon Kuznets, "International Differences in Income Levels: Reflections on Their Causes," *Economic Development and Cultural Change* 2 (1953), p. 26.

development context, gendered economic activities were not addressed before 1970.³⁹

Travelling with the GDP through development economics' history brings us to the Ethiopian capital of Addis Ababa in 1961. Here a regional conference of the International Association for Research in Income and Wealth (IARIW) and a Meeting of the UN Economic Commission for Africa took place, at which the accuracy of GDP growth as an indicator of development was a main issue.⁴⁰ World leading specialists in the field met to discuss necessary adjustments of the emerging standardized system of national accounts to African realities. In accordance with the cautionary remarks by Kuznets, one of the contributors stressed the fact that the relative importance of subsistence activities within a national economy was to diminish in the course of its development. Thus, if one was to measure only transactions within the market economy and to calculate a growth rate from such yearly totals, the resulting figure would primarily depict a change in the location of the line between "economic" and "non-economic activity", i.e. the expansion of the market economy – but it would not necessarily indicate advances in welfare.⁴¹ However, there was no agreement as to the importance of the complication. The majority of statisticians were quite confident that the problem would be resolved automatically with the market economy further permeating African countries. For them, it did not really matter whether the instrument visualized economic growth or merely market integration, as both processes were thought to be intrinsically linked to economic development.

³⁹ Ester Boserup, *Woman's Role in Economic Development* (London, 1970).

⁴⁰ Lury, "National Accounts in Africa.", p. 99. The contributions to the IARIW-Conference are collected in L. H. Samuels, ed., *African Studies in Income and Wealth* (Chicago, 1963). See also UNECA, "National Accounts in Africa and Relevant ECA Activities," *Economic Bulletin for Africa* 1 (1961).

⁴¹ G. C. Billington, "A Minimum System of National Accounts for Use by African Countries and Some Related Problems," in *African Studies in Income and Wealth*, ed. L. H. Samuels (Chicago, 1963), p. 10.

To sum up, GDP as an instrument to visualize international differences in income levels – and hence to depict stages of economic development – deployed a productivity that clearly exceeded mere representational mechanisms. First, it produced a norm. Weakly developed African economies, for example, were carefully analyzed and framed in a way that suited their assumed future compliance with the industrialized model. But the representational techniques did not necessarily depict their present state in an adequate way. Simon Kuznets objected powerfully to this normative approach, measuring instruments necessarily have to rely upon normative instances, which were in this case the structures of the Australian, the British and the American economies of the interwar period.

Second, it produced a homogenous space in which it became possible to acquire comparative knowledge about development issues. One might call this an epistemic space in which the discipline of development economics found its well-suited niche. And its main intellectual currency – so to speak – was the macroeconomic abstraction of national accounting. Notions like the GDP per capita – but also much more sophisticated indicators like the incremental capital-output ratio (ICOR), enabled the experts to travel easily from one developmental case study to another. The performance of the Mexican economy could be used as a benchmark for Nigeria and the East African Community seemed comparable to Indonesia.

Despite the fundamental flaws of its construction, GDP proved to be surprisingly stable and gained, so to speak, a life of its own. When from the early 1970s onwards the desirability of growth and its identity with development came under increased criticism, alternative conceptions were designed to include also social and/or ecological aspects. The latest suggestions are for example a “Green GDP” or the

“Human Development Index” (HDI) promoted by the United Nations Development Programme (UNDP) since 1990.⁴² But while economists always were well aware of the shortcomings, there still is no other indicator in economics as universal and as widely accepted as the GDP.

III. Three reasons for the stability of the GDP

Why has the GDP as an index for development proved so stable? Or to put it historically: why have the objections made by Kuznets in the 1930s not prevented GDP per capita from becoming one of the more prominent travelling facts in global economic thought and interactions? I will offer three reasons. The first is internal to economic knowledge production. The second refers to the role of the state. And the third makes a case of the universalism in economic abstraction.

First Reason for Stability:

An Environment for Scientific Experimentation

Modern economics has shaped its venture by emulating other disciplines, most prominently physics and biology.⁴³ For example, models of circular flows have a long history in economic thought. It has been a major concern of economists in the early decades of the 20th century to describe more precisely economic life as (quote Ragnar Frisch) “a complex network of relationships operating in all directions”,⁴⁴ and to single out experimentally the effects of one economic factor with respect to the whole system. One example of such a line of reasoning is the quest for a “production function” pursued by Cobb and Douglas in

⁴² Charles I. Jones, *Introduction to Economic Growth* (New York, 2002).

⁴³ For mechanical analogies see for example Margaret Schabas, "From Political Economy to Market Mechanics: The Jevonian Moment in the History of Economics," in *The Natural Sciences and the Social Sciences. Some Critical and Historical Perspectives*, ed. I. Bernard Cohen (Dordrecht, 1994). For biology see for example Camille Limoges and Claude Ménard, "Organization and the Division of Labor: Biological Metaphors at Work in Alfred Marshall's Principles of Economics," in *Natural Images in Economic Thought. 'Markets Read in Tooth and Claw'*, ed. Philip Mirowski (Cambridg MA, 1994).

⁴⁴ Ragnar Frisch, "Editor's Note," *Econometrica* 1 (1933), p. 1.

the late 1920s. The two authors searched for a mathematical expression of the relative importance of capital and labour for production. Many other examples could be found.

In so far as this early econometric approach did not restrict itself to the unaided observation of the material at hand but, in contrast, proceeded through active interrogation, one could define its epistemic mode as experimental. Active interrogation meant the selective change of single variables under the condition of *ceteris paribus* – assuming that all other things stayed unchanged.⁴⁵

From the 1930s onwards, national income accounting was intrinsically linked to this experimental perspective in that it did not restrict itself to establishing an overall figure of productivity or income, but tried to substantiate the relative importance of the different entities within a national economy – be they institutional sectors, forms of economic activity or types of transactions. In the design that became constitutive for development economics, the national accounts included a standard set of tables representing total product, total expenditure, total income, domestic capital formation, the household sector and general government. A sixth table summed up all interactions across national borders in what was called the “Rest-of-the-world account.”⁴⁶

It might be argued that the statistical space opened up in this way strongly advanced the possibilities of a functional analysis of parts to the total and that it was helpful in expanding the setting of economist’s investigations to a larger scale. Colin Clark suggested such a perspective. Much to the applause of Paul H. Douglas he applied the Cobb-Douglas production function to his estimates of different nations’

⁴⁵ Theodore Arabatzis, "Experiment", in: *New Dictionary of the History of Ideas*, Vol. 2, ed. M. Horowitz (Detroit, 2005), p. 765.

⁴⁶ United Nations Statistical Office, *A System of National Accounts and Supporting Tables*, vol. 2, Studies in Methods, Series F (New York, 1953).

total income, total capital and total labour.⁴⁷ This line of reasoning did not only generalize specific findings in space but it also worked in the dimension of time by linking the past to the present in a characteristic way. In fact, the rise of national income accounting fostered a new interest in economic history, or, to be more precise, in historical statistics of economic change. Phyllis Deane, for example, turned her attention in the 1950s from the colonial setting to early British economic history.⁴⁸ Depicting the past in the terms of current national income accounting rendered historical experience useful for the analysis of present problems of growth and development.

By allowing for historically informed international comparisons and thus by offering innumerable possibilities for scientific research, the national accounts were crucial for development economics to have been constituted as a part of the more general economic study of growth. Important findings, such as the work of the Keynesian economist Evsey Domar concerning the importance of savings in the process of economic growth, published in 1946,⁴⁹ could be transferred relatively easily from their original environment, the past of the US economy, to other cases within the global transparency of Clark's world survey. Even though Domar later on objected to the instrumental generalization of his theory, it became known as the Harrod-Domar model postulating that investing capital savings leads to economic

⁴⁷ Clark, *The Conditions of Economic Progress*, p. 12; Paul H. Douglas, "Review of the Conditions of Economic Progress by Colin Clark," *Journal of the American Statistical Association* 36 (1941).

⁴⁸ Phyllis Deane, *The First Industrial Revolution* (Cambridge, 1967); Phyllis Deane and W. A. Cole, *British Economic Growth 1688-1959, Trends and Structure* (Cambridge, 1962); Phyllis Deane, *Aggregate Comparisons: The Validity and Reliability of Economic Data*, vol. 287, DAE Paper (University of Cambridge, 1968). The new perspective was strongly advanced by Alexander Gerschenkron. See Alexander Gerschenkron, "Economic Backwardness in Historical Perspective," in *The Progress of Underdeveloped Areas*, ed. Bert F. Hoselitz (Chicago, 1952). For an overview see Cristel de Rouvray, "Economists Writing History. American and French Experience in the Mid 20th Century" (Ph. D. thesis London School of Economics and Political Science, 2005); Cristel de Rouvray, "'Old' Economic History in the United States 1939-1954," *Journal of the History of Economic Thought* 26 (2004).

⁴⁹ Evsey D. Domar, "Capital Expansion, Rate of Growth, and Employment," *Econometrica* 14 (1946).

growth through the process of capital accumulation. In a simplified form, assuming that GDP growth is proportional to the share of investment spending in GDP, development economists used the model widely to calculate the investment rate required to achieve a given target growth rate for an underdeveloped economy.⁵⁰ Similar modes of generalization could be analyzed for the revised growth model suggested by Robert Solow in the course of the 1950s.⁵¹

If fed with consistent data, these theories and mathematical formulae converted the problem of development into a technical matter of calculating specific requirements for growth. For early authors like Arthur W. Lewis or Walt W. Rostow who focused exclusively on capital accumulation, the crucial figure was the amount of savings invested compared to total GDP. They argued that Western economic success was due to such a ratio of between 10 and 15% and postulated, that underdeveloped economies could experience a kind of “take-off” into self-sustained growth if they reached a comparable percentage.⁵²

Such assertions of course gave rise to heated debate at the time. To name just one line of the debate: Raul Prebisch and Hans Singer soon criticized the internalist view on single economic entities and strongly emphasized the embeddedness of underdeveloped economies in an international “centre-periphery” system.⁵³ But apparently, these contestations were increasingly detached from the questioning of national income accounting sketched in the section above. In contrast,

⁵⁰ Easterly, *The Elusive Quest for Growth. Economists' Adventures and Misadventures in the Tropics*, pp. 28-29. The name of the model also takes the contributions of the British economist Roy F. Harrod into account which were published in 1939. Roy F. Harrod, "An Essay in Dynamic Theory," *Economic Journal* 49 (1939).

⁵¹ Robert M. Solow, "Technical Change and the Aggregate Production Function," *The Review of Economics and Statistics* 39 (1957). This paper laid the basis for an exogenous growth theory with the central factor of economic growth being technical change.

⁵² W. W. Rostow, "The Take-Off into Self-Sustained Growth," *The Economic Journal* 66 (1956); W. Arthur Lewis, *The Theory of Economic Growth* (London, 1955), p. 202.

⁵³ Raul Prebisch, *The Economic Development of Latin America and Its Principal Problems* (Lake Success NY, 1950); Raul Prebisch, "Commercial Policy in the Underdeveloped Countries," *The American Economic Review* 49 (1959).

the very usefulness of GDP estimates and accounting tables for the production of knowledge concerning growth and development further strengthened GDP as a tool. Studying the mechanisms of growth within a system of economic interactions on the one hand, and thinking about the legitimacy of representing economic entities by means of national accounts on the other hand, became two distinct and only loosely connected fields of inquiry.

One could assess this situation by differentiating technical and epistemic things.⁵⁴ In this analytic framework, which has been put forward by Hans-Jörg Rheinberger, an epistemic thing is called epistemic because it has the capacity to surprise, i.e. to generate new knowledge. The technical thing, in contrast, always behaves in expectable ways and thus constitutes the known background in front of which new insights become visible. The quality of being epistemic or technical is not inherent to the things in front of the researchers' eye but depends upon the experimental setup. Thus, in experimental systems the objects of inquiry and the technical means of their production are inextricably intertwined and constitute each other, at least to a certain degree, mutually. For economic theorists focussing on mechanisms of change, as their epistemic thing, GDP composition and national accounts were technical things, which were assumed to be consistent and not a source of irregularity in the course of the statistical experiments to be conducted.

One could therefore argue that one of the effects of theoretical knowledge production in economics was to strengthen the technicality and the stability of the figures it worked upon. In this sense, national accounts acquired the qualities of a second nature with their representational character gradually vanishing behind an assumed self-

⁵⁴ Hans-Jörg Rheinberger, *Toward a History of Epistemic Things. Synthesizing Proteins in the Test Tube* (Stanford, California, 1997), prologue.

evidence. From the 1960s onwards, their correspondence to socio-political reality, or to what could be imagined as “first nature”, did not have to be problematized anymore by development economic theory. Experts in statistics and applied economics like Richard Stone or Richard and Nancy Ruggles for the UN and later Angus Maddison for the OECD took over this troublesome task.⁵⁵ These specialists guaranteed the seamlessness of the economists’ representation of the world and thus produced the condition of possibility for facts like the GDP per capita ratio to travel so easily through time and space. It must be asked why this separation could be upheld so successfully and in doing this, one has to look at the role of the state.

Second Reason for Stability:

An environment for political experimentation

Of course, for the figures of national income accounting to be useful for economic analysis, the categories had to be consistent over as long a time period as possible. Such qualities could only be secured by the state.⁵⁶ Until the 1920s scholars interested in macroeconomic interrelations had to gather data mostly privately. Then, beginning with Canada and the Soviet Union in 1925 and Germany in 1929, governments started to take over national income estimation. The Great Depression strengthened this drive. Simon Kuznets conducted his pioneering work from 1931 onwards as a staff member of the US National Bureau of Economic Research. And in Great Britain it was John Maynard Keynes who convinced the British government in 1941 to consider the statistical estimates of national income and expenditure to

⁵⁵ Flavio Comim, "On the Concept of Applied Economics. Lessons from Cambridge Economics and the History of Growth Theories," in *Toward a History of Applied Economics*, ed. Roger Backhouse and Jeff Biddle (Durham, 2000).

⁵⁶ The problem has been discussed for population statistics. Libby Schweber, *Disciplining Statistics. Demography and Vital Statistics in France and England, 1830-1885* (Durham, London, 2006).

be of public interest. Now, data collection, computation and publication of figures became a government task in a constantly increasing number of countries.⁵⁷

In order to ease international comparisons, the problem of different categories and accounting systems had to be tackled. This homogenizing work was done by international organizations like the UN and OEEC who took up the issue and successfully promoted the standardization of the accounts. The UN were interested in a wide spread of accurate national accounts because the estimates were used to establish the share of each member state in financing the organisation. In 1953 the first System of National Accounts (SNA) was published and promoted by the offer of technical assistance in the art of statistics especially to less developed countries.⁵⁸

But government was not only a concrete actor. Most importantly, it has to be kept in mind that in all instances of national income accounting, the nation state was reified as a category of knowledge and hence enormously stabilised as a historic entity. In many cases, the attention of governments to the field was of course an expression of the new Keynesian conception of the relationship between the state and the economy. Alain Desrosières has called this a “co-construction” of state and statistics.⁵⁹ Keynes had made national product and the expenditures for final products by the different sectors central to his theory of income determination. He conceived government itself to be one of the key economic actors whose income and expenditure necessarily had to be included into any national account. And he

⁵⁷ Studenski, *The Income of Nations*, chapter 10.3.

⁵⁸ Ward, *Quantifying the World. UN Ideas and Statistics*, p. 76f. United Nations Statistical Office, *A System of National Accounts and Supporting Tables*. A comparable issue of statistical homogenization has been historically analyzed by Benoît Godin, *Measurement and Statistics on Science and Technology. 1920 to the Present*, ed. John Krige, vol. 22, Routledge Studies in the History of Science, Technology and Medicine (London, 2005).

⁵⁹ Alain Desrosières, "Managing the Economy," in *The Modern Social Sciences*, ed. Theodore M. Porter and Dorothy Ross, Cambridge History of the Sciences (Cambridge, 2003), p. 560.

prominently stated that governments could improve the overall economic situation by deliberately changing their expenditures.⁶⁰ During World War II, Keynes advised the government of Great Britain how to pay for the war. In parallel, though on a somewhat different theoretical basis, the national economy of the United States was re-engineered under the auspices of Simon Kuznets in order to reach the specific productivity necessary for the war effort. These successful interventions enormously strengthened the standing of national income accounts as a tool for economic planning. In France, as from 1945, the endeavour of “planification” was firmly based upon such tables and the set up of the Marshall Plan for European reconstruction would probably have been impossible without their help.⁶¹ Also, in the Netherlands, Jan Tinbergen fostered a unique co-construction of economic policy, statistical data collection and econometric theory production.⁶²

Given the extraordinary circumstances of war, the instrument had opened up a space for real experiments in the delicate machinery of the economic network of relationships.⁶³ It seems important to note that two quite distinct modes of experimentation can be discerned in this field that are associated with the two-sided character of economics as an applied and a theoretical science. One side strives for theoretical insights while the other focuses on re-engineering the machinery of the economy through policy decisions. It was only a small step for economists to change from the analytic perspective of describing laws and mechanisms of growth to the formulation of prescriptions for policy

⁶⁰ John Maynard Keynes, *The General Theory of Employment, Interest and Money* (London, 1936). For Keynes' international impact see Peter A. Hall, ed., *The Political Power of Economic Ideas: Keynesianism across Nations* (Princeton, 1989).

⁶¹ Pierre Bauchet, *La Planification Française. Quinze Ans D'expérience* (Paris, 1962); François Fourquet, *Les Comptes De La Puissance. Histoire De La Comptabilité Nationale Et Du Plan* (Paris, 1980).

⁶² Marcel Boumans, *How Economists Model the World into Numbers* (London, 2005).

⁶³ For the notion of real experiments – „Realexperimente“ – see Matthias Gross and Wolfgang Krohn, "Society as Experiment: Sociological Foundations for a Self-Experimental Society," *History of the Human Sciences* 18 (2005).

makers. The easy switch between the academic realm and the world of public administration and planning can be shown in the biographies of many economists.

Third Reason for Stability:

Universalism

Searching for reasons for the stability of the post-colonial development concepts leads to questions of political dominance and hegemony. The neo-Marxist tradition of development critique offers some explanations of the phenomenon by referring to Cold War politics. The inherent weakness of the claims of the American Modernization Theory of economic growth and development, so it is argued, has been made up for by its proximity to US power. Indeed, Walt W. Rostow did not hesitate to label his model of growth a “non-communist manifesto”.⁶⁴ If the epistemic space of economic knowledge production did not properly correspond to the economic reality of the world of the 1950s, then at least it anticipated the seamless planetary space of capitalist market logic which it was a declared aim of US policy to establish.⁶⁵ I do not want to develop here a critique of this analysis of development economics as an instrument of postcolonial US world dominance. The argument has some truth to it, but it seems oversimplified and too unidirectional. In contrast, as a way of conclusion, I would argue that the technocratic language of national accounting strengthened a specific universalism that was very political in the age of decolonization. Economic abstractions helped creating a world wide communicative community, which allowed for basic conceptual agreements concerning issues of difference and inequality.

⁶⁴ W. W. Rostow, *The Stages of Economic Growth, a Non-Communist Manifesto* (Cambridge [Eng.], 1960).

⁶⁵ Serge Latouche, *The Modernization of the World: The Significance, Scope, and Limits of the Drive Towards Global Uniformity* (Cambridge, MA, 1996).

It has become clear, I hope, from my analysis, that the central assumptions of development economics could only become operable by either consciously excluding or simply ignoring the world's manifold cultural differences. This reductionism was Simon Kuznets' most important caveat in the 1930s, when he objected to his colleagues' deliberateness in turning the GDP into a travelling fact. However, in the 1950s, he gave up this systematic doubt and instead proposed a highly sophisticated procedure of making use of the GDP-approach in development economics. An impressive series of articles in the Chicago-based journal *Economic Development and Cultural Change* bears witness of this attempt at allowing the GDP to travel across the North-South-Divide despite the fundamental flaws of the concept.

Economists framed the problem of development in the terms of universal laws of unrestricted applicability. This phenomenon has to be located in the context of the strong universalism promoted by the United Nations, which was expressed in the Universal Declaration of Human Rights in 1948 as well as in the discussions concerning the UNESCO Statement on Race in the early 1950s.⁶⁶ Evidently, the fact that different societies enjoyed different levels of economic wealth was known well before Colin Clark presented his tables. And one historically highly loaded explanation for these differences in economic performance had long been given by reference to racial characteristics. The new discourse abstained from such factors. When Simon Kuznets in 1953 listed some explanations for the apparent differences in international income levels, he explicitly rejected the category of race.

For Kuznets, the very ability of any group of human beings to achieve a high level of economic wealth was an anthropological fact. The question to be addressed, then, was that of obstacles hindering

⁶⁶ Staffan Müller-Wille, "Race and Ethnicity. Human Diversity and the Unesco Statement on Race (1950-1951)," (Manuscript, ESRC Centre for Genomics in Society, University of Exeter, UK, 2007).

economic advancement. He basically named three: the difficulty of transferring knowledge across cultural boundaries; the existence of institutions hindering economic profit seeking; and the fact that more advanced economies profited from keeping latecomers low.⁶⁷ Thus, while the possibility of development was held universally, its impediments were consigned to historically contingent social institutions and political power relations – which in principle could be overthrown. This construction had, of course, a strong appeal to the leaders of independence movements and to the elites of the new postcolonial states because it so clearly stated the feasibility of change.⁶⁸ Indian scholars like V. K. R. V. Rao and P. C. Mahalanobis excelled in the production of policy relevant economical statistics.⁶⁹ And the early writings of African intellectuals like Julius Nyerere, Tom Mboya or B. T. G. Chidzero clearly embraced the promises of development economics.⁷⁰ The newly independent African states made the advancement of national accounting a core issue on the agenda of the UN Economic Commission for Africa.⁷¹ For them, estimating a Gross Domestic Product for their countries equalled an act of sovereignty. In the mode of macroeconomic knowledge, the very existence of their new political bodies and their developmental potential could be displayed powerfully on the international political stage.

⁶⁷ Kuznets, "International Differences in Income Levels: Reflections on Their Causes", p. 10.

⁶⁸ Frederick Cooper, "Modernizing Bureaucrats, Backward Africans, and the Development Concept," in *International Development and the Social Sciences. Essays on the History and Politics of Knowledge*, ed. Frederick Cooper and Randall Packard (Berkeley, Los Angeles, London, 1997).

⁶⁹ Prasanta Chandra Mahalanobis, *The Approach of Operational Research to Planning in India* (Calcutta, 1955); C. R. Rao, "Prasanta Chandra Mahalanobis 1893-1972," *Biographical Memoirs of Fellows of the Royal Society* 19 (1973); V. K. R. V. Rao and S. L. Rao, *The Partial Memoirs of V.K.R.V. Rao* (New Delhi, New York, 2002).

⁷⁰ Tom Mboya, "Tensions in African Development," in *The Challenge of Nationhood. A Collection of Speeches and Writings*, ed. Tom Mboya (London, Ibadan, Nairobi, 1970 (1961)); B. T. G. Chidzero, "The United Nations Economic Commission for Africa," *African Studies Bulletin* 6 (1963).

⁷¹ Adebayo Adedeji, "The ECA: Forging a Future for Africa," in *Unity and Diversity in Development Ideas. Perspectives from the Un Regional Commissions*, ed. Yves Berthelot (Bloomington, 2003).

Thus one could argue that the epistemic space of macroeconomics, in which abstractions like the GDP could easily travel, reflected the universalist assumption that the people of the world equalled one family. Obvious differences within this “family of man”, like different social institutions, value systems, and beliefs were conceived of as non-economic factors. How to assess their role for development remained a controversial question. The technical and formal procedures of economic knowledge production tended to ignore these differences. But still, even within the resulting homogenous representation of the world, at least one fundamental difference reappeared.

Colin Clark's tables opened up an outlook on the economic condition of the emerging world community that lined up each nation in a continuous ranking from rich to poor. Changes in relative position were possible and encouraged. But at the same time, the new vocabulary offered a way to delineate a fundamental divide between the rich and the poor, or the North and the South. Clark drew this line at a per capita income of 200 international units. In a series of international documents, starting with the Havana Charter of the International Trade Organization in 1948, such a line has been installed to structure the world of development politics. In its 1982 report the World Bank, for example, issued a benchmark of a per capita share in GDP of 2650 \$ to define those ‘poor’ countries to which it offered favourable financing conditions.⁷² Thus, there have been – and there still are – quite obvious interests for governments all over the world to keep the macroeconomic representations stable and to allow for easy travelling of facts like the GDP.

⁷² It is interesting to note that these benchmarks created an incentive for underdeveloped countries to keep their official GDP figures low. Raymond Vernon, "The Politics of Comparative Economic Statistics. Three Cultures and Three Cases," in *The Politics of Numbers*, ed. William Alonso and Paul Starr (New York, 1987), p. 65.

**LONDON SCHOOL OF ECONOMICS
DEPARTMENT OF ECONOMIC HISTORY**

**WORKING PAPERS IN: THE NATURE OF EVIDENCE: HOW WELL
DO “FACTS” TRAVEL?**

For further copies of this, and to see other titles in the department's group of working paper series, visit our website at:
<http://www.lse.ac.uk/collections/economichistory/>

2005

- 01/05: Transferring Technical Knowledge and innovating in Europe, c.1200-c.1800
Stephan R. Epstein
- 02/05: A Dreadful Heritage: Interpreting Epidemic Disease at Eyam, 1666-2000
Patrick Wallis
- 03/05: Experimental Farming and Ricardo's Political Arithmetic of Distribution
Mary S. Morgan
- 04/05: Moral Facts and Scientific Fiction: 19th Century Theological Reactions to Darwinism in Germany
Bernhard Kleeberg
- 05/05: Interdisciplinarity “In the Making”: Modelling Infectious Diseases
Erika Mattila
- 06/05: Market Disciplines in Victorian Britain
Paul Johnson

2006

- 07/06: Wormy Logic: Model Organisms as Case-based Reasoning
Rachel A. Ankeny

- 08/06: How The Mind Worked: Some Obstacles And Developments In The Popularisation of Psychology
Jon Adams
- 09/06: Mapping Poverty in Agar Town: Economic Conditions Prior to the Development of St. Pancras Station in 1866
Steven P. Swenson
- 10/06: "A Thing Ridiculous"? Chemical Medicines and the Prolongation of Human Life in Seventeenth-Century England
David Boyd Haycock
- 11/06: Institutional Facts and Standardisation: The Case of Measurements in the London Coal Trade.
Aashish Velkar
- 12/06: Confronting the Stigma of Perfection: Genetic Demography, Diversity and the Quest for a Democratic Eugenics in the Post-war United States
Edmund Ramsden
- 13/06: Measuring Instruments in Economics and the Velocity of Money
Mary S. Morgan
- 14/06: The Roofs of Wren and Jones: A Seventeenth-Century Migration of Technical Knowledge from Italy to England
Simona Valeriani
- 15/06: Rodney Hilton, Marxism, and the Transition from Feudalism to Capitalism
Stephan R. Epstein

2007

- 16/07: Battle in the Planning Office: Biased Experts versus Normative Statisticians
Marcel Boumans
- 17/07: Trading Facts: Arrow's Fundamental Paradix and the Emergence of Global News Networks, 1750-1900
Gerben Bakker

- 18/07: Accurate Measurements and Design Standards: Consistency of Design and the Travel of 'Facts' Between Heterogenous Groups
Aashish Velkar
- 19/07: When Rabbits became Human (and Humans, Rabbits): Stability, Order, and History in the Study of Populations
Paul Erickson and Gregg Mitman
- 20/07: Contesting Democracy: Science Popularisation and Public Choice
Jon Adams
- 21/07: Carlyle and the French Enlightenment: Transitional Readings of Voltaire and Diderot
T. J. Hochstrasser
- 22/07: Apprenticeship and Training in Premodern England
Patrick Wallis

2008

- 23/08: Escaping the Laboratory: The Rodent Experiments of John B. Calhoun & Their Cultural Influence
Edmund Ramsden & Jon Adams
- 24/08: Travelling in the Social Science Community: Assessing the Impact of the Indian Green Revolution Across Disciplines
Peter Howlett
- 25/08: Circulating Evidence Across Research Contexts: The Locality of Data and Claims in Model Organism Research
Sabina Leonelli
- 26/08: The Lives of 'Facts': Understanding Disease Transmission Through the Case of *Haemophilus influenzae* type b Bacteria
Erika Mattila
- 27/08: Regulating Data Travel in the Life Sciences: The Impact of Commodification
Sabina Leonelli

- 28/08: A Journey Through Times and Cultures? Ancient Greek Forms in American Nineteenth-Century Architecture: An Archaeological View
Lambert Schneider
- 29/08: Behind the Façade: Elias Holl and the Italian Influence on Building Techniques in Augsburg
Simona Valeriani
- 30/08: What happens to facts after their construction? Characteristics and functional roles of facts in the dissemination of knowledge across modelling communities
Erika Mansnerus (formerly Mattila)
- 31/08: 'Voice' and the Facts and Observations of Experience
Mary S. Morgan
- 32/08: Dilemmas in the Constitution of and Exportation of Ethological Facts
Richard Burkhardt
- 33/08: Travelling With the GDP Through Early Development Economics' History
Daniel Speich
- 34/08: 'On a Mission' with Mutable Mobiles
Mary S. Morgan