Chapter 6
Non-Marxist Reactions to the Marxist Problematization of Spatial Unevenness

6.1 Antecedents in Practical Life

Even before non-Marxist thinkers first responded to the Marxist problematization of uneven spatial development, the spatial imprint of social inequalities had not remained totally invisible to them. As was presented in Sect. 4.2, the nineteenth century had already brought increasing scientific interest in spatial disparities, especially those emerging within the urban space due to the polarizing effects of the industrial revolution. After this first wave of non-Marxist spatial disparity research, the second era to pay considerable attention to similar issues began in the 1930s. Since the Great Depression hit various regions to differing extents, the negative consequences of the crisis seemed to be concentrated in specific geographical areas. Furthermore, the rapid decrease in real incomes and skyrocketing unemployment also drew attention to the historically rooted problems of certain poor regions. Coming out from an already low pre-crisis standard of living, these areas faced a complex set of social problems during the recession.

In the light of these, the political goal to reduce rapidly increasing disparities in order to cure social tensions became manifest in geographically focused programs. The goal was to close the opening gap between the major "losers" of the crisis and the regions left relatively intact by the depression. Spatial disparity became regarded a problem to be solved. Driven by this notion, from the 1930s onwards several capitalist countries made efforts to reduce spatial disparities (Glasmeier and Wood 2005). An emblematic example was the establishment of the Tennessee Valley Authority (TVA) in the United States in 1933. The initiative, called by Scott (1988) "the granddaddy of all regional development projects" (p. 6), was introduced in a region with traditionally poor indicators regarding the overall level of income and education.

Actually, the United States was not the only country to realize the serious challenge posed by regional disparities. In the United Kingdom inequalities caused by the long-lasting depression of industrial areas in the North and in Wales likewise gained attention (Hoover 1969). In 1936 the British Government appointed the

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Royal Commission on the Distribution of the Industrial Population, or, in its simple name, the Barlow Commission, to analyze the situation and make suggestions for its solution. The commission emphasized in its 1940 report that "the disadvantages in many, if not in most of the great industrial concentrations ... constitute ... dangers to the nation's life and development". Thus, they urged that "definite action should be taken by the Government towards remedying them" (quoted in Duxbury 2009, p. 5). In the following years, these words gave impetus to national policies to disperse industry within the United Kingdom for the benefit of regions with structural problems (Gilbert 1976).

Increasing interests in spatial disparities, however, proved temporary in many cases. As the depression was gradually left behind and the economy showed again the signs of recovery, the general attitude towards social disparities also changed. In the United States, for instance, the temporary boom in aid programs ended as soon as the economic circumstances of middle-class households stabilized again. Most people tended to think again that social disparities and poverty in a world after economic recovery were the results of laziness and shiftlessness of the poor, who were themselves blamed for their unfavorable situation. This shift also affected many programs with spatial focus negatively (Glasmeier 2002), even if the TVA remained one of the few counterexamples[1] (cf. Ekbladh 2002). Moreover, it is especially striking from our point of view that the temporarily increasing interest in spatial disparities did not result in the emergence of a massive set of scientific works concerning the theory of unevenness in space. A heyday of theoretical conceptualization of spatial disparities within non-Marxist circles was still not to come.

6.2 Spatial Disparities as the Focus of Scientific Interest: The Cold War Context

The interest of non-Marxist researchers turned to the theory of spatial disparities only beginning in the mid-1950s. But then, the outcomes of this shift were as remarkable as how late the boom began. Within only one decade, a number of groundbreaking theoretical works on spatial disparities were released (especially influential were the publications of Myrdal 1957; Hirschman 1958; Borts and Stein 1964; Williamson 1965; Friedmann 1966). Although with certain differences in their argumentation, these publications were common in considering spatial disparity a problem, and in the notion to explain its causes and identify the potential cures

[1] As Ekbladh (2002) shows, reasons for this exception were manifold, ranging from the agility of the leadership of TVA to the propagandistic value of large-scale investments. These had a crucial role in protecting the TVA and convincing decision-makers as well as everyday people about the desirability of the project in times of economic growth as well. It should be underscored, however, that the main focus of TVA also shifted from more classical attempts of regional industrialization to hydropower production, which gained strategic importance for the federal government during World War II.

for it. Moreover, in the years coming, these were the works to determine the way spatial disparities were conceptualized and interpreted, both in scientific and political thinking. Thus, the issue became a highly important item in the research agenda of various disciplines interested in spatial issues, especially spatial economics.

The reasons for this shift in the scientific interest and for the rapidly increasing popularity of spatial disparity research can be found in the specific geopolitical context of the era. World War II dramatically reshaped the global political arena. While the Axis suffered crushing defeat on all fronts, the economy and military power and, thus, the geopolitical influence of the whole of Europe remarkably decreased. Meanwhile, the United States and the Soviet Union emerged as new superpowers, with decisive roles in world politics in the post-war era.

The fragile cooperation, which the two countries had sustained during the war, was gradually replaced by fierce rivalry. As formulated by the high-ranking American diplomat George Kennan, often called "the architect of the Cold War" (BBC 2005, March 18; USA Today 2005, March 18) due to his decisive role in shaping US Cold War policies during the Truman administration: "[the United States] must continue to expect that Soviet policies will reflect . . . a cautious, persistent pressure toward the disruption and weakening of all rival influence and rival power" (X 1947, pp. 580–581).[2] Under these circumstances the United States was urged to follow "a policy of firm containment, designed to confront the Russians with unalterable counter-force at every point where they show signs of encroaching upon the interests of a peaceful and stable world" (ibid., p. 581). These ideas soon shifted to the level of national security policy. As a then classified US intelligence report put it in 1950, the Soviet Union sought "to impose its absolute authority over the rest of the world" (National Security Council 1950), and in this effort, they regarded "the United States as the only major threat" (ibid.). Thus, the United States, the "principal enemy" of the Soviet bloc, positioned itself as the defender of the whole "free world" and the ethos of "free society" (Dorband 2010).

This new geopolitical role also imposed new responsibilities and tasks on the United States. On the one hand, the capitalist superpower had to represent and protect the whole Western Bloc. Any forms of military, political or institutional intrusion from the Soviet side into the affairs of the "free world" had to be avoided. On the other hand, the communist[3] ideology seemed likely to infiltrate into every

[2] For the political sensitivity of the issue, Kennan's article was published under the pseudonym "X". However, some media workers soon brought to light the identity of the author (Paterson 1988).

[3] At this point we should refer to some challenges for and political overtones connected to the use of the terms "communist" and "socialist". In the Western world, the political and economic system in the Eastern Bloc, its underlying ideology, and its advocates are commonly called "communist (s)". This is how they are distinguished from socialist (social democratic) ideology, socialist politicians and sympathizers, and social democratic systems. In this approach the dividing line between the two terms lies along the boundary between authoritarian and democratic means of agency.

region having been in geopolitical vacuum previously. From the early 1950s on, this became the main fear of US decision makers, since the presumed probability of a direct military attack from the Soviet side significantly decreased (Dorband 2010). Thus, the United States needed to take steps in countries all over the world to convince them to follow the American model instead of the Soviet one.

In fact, the establishment of an international institutional framework to underpin global US endeavors had begun even before World War II ended. That led to the creation of new organizations "to build and sustain international regimes of political and economic order under American leadership" (Dorband 2010, p. 91). Thus, unlike Western colonial powers, the United States wanted its international influence not to be guaranteed by a new colonial empire. As Agnew (1993) points out, US decision-makers rather considered the latter as a "burden" (p. 209). Instead, the presumed post-war world order was to be guaranteed mainly by the United Nations Organization and the Bretton Woods System, "two key organizations to safeguard international peace and security, and to support international economic liberalism" (Dorband 2010, p. 91). The creation of these institutions happened, however, in a still very turbulent international political context, and events in the succeeding years rapidly showed that the United States had to make further attempts to stabilize its international influence. This became especially clear as US-allied former colonial powers proved less and less able to sustain their colonial empires and hold them together under the aegis of Western political goals. In some areas, this problem emerged as early as World War II ended. As the US State Department warned in

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In countries once belonging to the Eastern Bloc, however, the current discourse applies the two terms rather in line with their Marxian meaning. Communism in this sense refers to an envisioned condition of a profoundly classless society with a perfect dominance of common property, while socialism embraces only the transitory period from capitalism to communism. In this view, circumstances in the former Eastern Bloc are tendentiously called "socialist" since communism in a Marxian sense was not achieved in any of these countries, neither in fact nor according to then official propaganda. Thus, the distinction between communism and socialism comes here from the original works of Marx, and it follows Marxist terminology.

In fact, the latter use has political relevance as well since former supporters of the dictatorial regimes consistently prefer the term "socialism" to "communism" when speaking about the decades before the transition, so thus their former activity can be presented in a somewhat less negative or more tolerable light. (However, the Marxian use of "socialism" and "communism" is in itself no proof of once having been a supporter of the dictatorial regime since this is the usage recently preferred in most contexts, especially in intellectual debates. Yet, it is true that the Western-type application of the two terms, where the former regime together with its ideology and its supporters are called "communist", appears in the countries of transition generally in right-wing discourses.)

In our work a specific terminology is used to reduce possible misunderstandings to a minimum. In line with the ideas of Marx, we refer to the social, economic and political *conditions* in the former Eastern Bloc as "socialism", sustaining the term "communism" for envisioned conditions. However, for underlying *ideology*, the *persons* having supported these regimes, and these *states* themselves are called "communist(s)", expressing that they set as their long-term goal the establishment of communism in the Marxian sense. This use is the same as calling those arguing for monarchy in a republic as well as their underlying ideology "royalist(s)", even if the actual conditions within the country meet the requirements of a republic and not those of a monarchy.

late 1945: "The British publicly admit that they are no longer able to keep the Middle East in order without our help" (quoted in Little 2002, p. 120). The United States had to face many similar challenges in the next few years. In 1947, for instance, the United Kingdom got in trouble again, that time in the Mediterranean Europe. The British leadership supported the right-wing government of Greece with financial and military means during the civil war against communist-led forces from 1946 to 1949 (Dorband 2010). In the second year of the conflict, "British officials informed President Truman that they could no longer hold up that commitment due to economic problems at home and urged Washington to step in" (ibid., p. 103; based on Little 2002, p. 119).

In the light of these trends, the colonial empires of Western European powers were likely to weaken and collapse soon, opening the way for the establishment of a number of new independent countries all over the world. These areas were regarded as especially sensitive and important in the global geopolitical struggle. Fears of losing these territories for the benefit of the communist bloc became even stronger during the early 1950s. Considering that the victory of Mao's communists in China in 1949 had been followed by the Korean War in 1950, the United States was afraid that a communist turn in a given country could induce similar changes in neighboring countries. This was what President Eisenhower called the "falling domino principle" in 1954. As he put it:

> "You have a row of dominoes set up, you knock over the first one, and what will happen to the last one is the certainty that it will go over very quickly. So you could have a beginning of a disintegration that would have the most profound influences." (Eisenhower 2005 [1954], p. 383)

Under such geopolitical circumstances, spatial disparity became an issue that science and politics in the Western bloc could not neglect anymore, and the problematization of which it had to accept.[4] And it was not only since the Stalinist argumentation blamed all disparities in society and space on capitalism, a system whose emblematic representative was the United States. An even greater problem was that in several colonial territories the various forms of spatial disparity produced by the policy of colonial powers were everyday reality for most inhabitants. This experience, together with other aspects of colonial repression, was also a potential root of fierce opposition not only to the colonial powers, but to the whole economic and political order which they ran. Thus, the US side neglecting the issue of spatial disparities threatened with a massive turn towards the Soviet Bloc in many colonial territories.

[4] Cf. Sect. 2.6 about the altering position of slogans in changing contexts in the disparity discourse.

6.3 Geopolitical Struggle and the "Relevant" Forms of Disparity in Space

In the eyes of US government think tanks, two forms of spatial disparity seemed especially dangerous in Cold War competition against the Soviet Union. First, the divide between "wealthy" and "poor nations", and second, the gap between various regions within given countries. The former issue had already gained a lot of attention from President Harry S. Truman in his 1949 inaugural address. For him, the desirable equality of everyone was derived from the same Christian principles upon which the entire US political tradition was based, namely that "all men are created equal because they are created in the image of God" (quoted in Woolley and Peters, n.d.). Thus, in his view, "the American people . . . are determined to work for peace on earth – a just and lasting peace – based on genuine agreement freely arrived at by equals" (ibid.). This meant that he found necessary "to work for a world in which all nations and all peoples are free to govern themselves as they see fit, and to achieve a decent and satisfying life" (ibid.).

In other words, Truman urged for diminishing inequality among various countries and their people in order to establish and enjoy permanent peace, freedom and prosperity. These values, however, were all to be traced back to the same *economic-technical* prerequisite in his eyes. As he put it: "*Greater production* is the key to prosperity and peace. And the key to greater production is a wider and more vigorous application of modern scientific and technical knowledge." (our emphasis; ibid.). Thus, the disparity between countries was interpreted by Truman as a result of uneven production, which he considered a function of the different level of scientific and technological improvement.

In consequence, the Cold War competition to win those allies who would otherwise drift into the Soviet sphere of influence was also interpreted in this conceptual framework. As a 1955 analysis of the influential American think tank The Twentieth Century Fund put it: "A country of satisfactory material well-being is rarely, if ever, a voluntary convert to the ranks of Communism. Even if the level of living is painfully low, if there is a reasonable chance of betterment, if the way to economic progress seems to lie open . . . it is unlikely that these cravings will impel a country to sacrifice its independence to a foreign monster" (Buchanan and Ellis 1955, p. 429; quoted in Pounds 1963, p. 376). A similar stance was made in an official 1959 report on US foreign policy, which tried to conceptualize the threat posed by spatial disparities at the international level: "if the non-Communist nations fail to achieve adequate rates of *economic growth*, more and more people will be persuaded by the arguments of the Communists and more and more of the world will fall prey to Communist political systems" (our emphasis; Council on Foreign Relations 1959, p. 17; quoted in Pounds 1963, p. 376). As has already been underscored, these fears were especially immense with regard to former colonies since their drive for "freedom from alleged exploitation and with an accession of wealth" was considered to have failed due to a lack of economic growth after gaining independence. This was put by Pounds (1963) as follows: "*economic*

depression breeds unrest, weakens the fledgling governments of the new states, and creates the openings through which the economic and political influence of the Communist bloc may insinuate itself" (our emphasis; p. 358).

The other critical form of spatial disparities for the US political leadership was the unevenness between regions within a given country. This was regarded as an especially serious problem in many newly-established African countries, where, in the words of Pounds (1963), "the raisons d'être" of states often "lie entirely in the fact that that is how the imperial powers of the nineteenth century shaped them" (p. 360). And these political boundaries inherited from the colonial times were often the outcomes of an absolute negligence of local people's interests from the side of imperial powers. They rather reflected, on the one hand, the power relations of European colonial powers competing for the domination of other continents. On the other hand, inner boundaries in the areas possessed by the same colonial power were usually the outcomes of a well thought out policy of divide and rule. They were simply aimed at "separating friendly tribes and throwing hostile tribes together" (p. 359) to prevent local tribes from cooperating against the colonizers.

In consequence of this historical heritage, most new states were extremely fragile, and the threat of political disintegration was very high. This issue appeared that time in many government requested analyses, scientific works, and in mass media as well. For instance, an official commission, which was appointed by the British government before it surrendered its authority in Nigeria, put it in its 1958 report as follows: "in each of the three Regions of Nigeria ... we found either a minority or a group of minorities who described fears and grievances which they felt would become more intense when the present restraints were removed and who suggested as a remedy a separate state or states" (Colonial Office 1958; quoted in Pounds 1963, p. 359). Two years later, an article in The New York Times described similar challenges in Cameroon:

> "Cameroon's trouble springs from the fact that she has no ethnic, religious, or geographic unity. Her densely populated north is dominated by a powerful Moslem ruling class that threats the pagan masses as virtual slaves. *The north is fifty years behind the rest of the country in social and educational development*." (our emphasis; Bigart 1960, January 3, p. 20; quoted in Pounds 1963, p. 359)

Reflecting on these lines, Pounds (1963) underlined in his academic textbook *Political Geography* that "even among the more developed Bamileke peoples of southern Cameroon there are *strong economic and social differences* that have led to violence" (our emphasis; p. 359). Furthermore, he raised attention to similar challenges in Mauritania, Gambia, and Congo as well (cf. Pounds 1963).

In all these cases, ethnic and/or religious issues were regarded as crucial reasons for political tensions, but the importance of economic factors was likewise strongly emphasized. In this context, spatial economic differences were presented as being a catalyst for culturally grounded political tensions. In certain cases, economic unevenness, especially in terms of the accessibility of natural resources, seemed strong enough to cause frictions that otherwise may not emerge. As an example Pounds (1963) referred to Congo, where "the ethnic diversity is matched by the

variety of physical environment" since "the southern province ... known as Katanga, is a plateau region, clothed with savanna and containing rich deposits of copper" (p. 360). For him, this physical divide tended to discourage unity and fuelled a threat from Rhodesia to the Katanga province (ibid.). This fear seemed substantiated since the Katanga region witnessed in 1960 the proclamation of the internationally unrecognized State of Katanga, which existed for 3 years before UN intervention put an end to the further escalation of the conflict (Epstein 1965).

Such conflicts fuelled by economic disparities had obvious geopolitical relevance for the superpowers. On the one hand, the cultural and economic disparities within newly established countries were likely to end up in redrawing the boundaries in the political map of former colonial territories. These presumed changes were interpreted as a potential source of geopolitical risk in themselves since the transformation process was likely to open the way for a series of events impossible to predict. Under such circumstances it seemed possible that the rival superpower might prove more efficient in fishing in troubled waters, and could expand its sphere of influence through enticing further countries to itself. On the other hand, serious frictions between various regions of the same country, the secession of a given district, or the conflict of two countries over a disputed area were automatically to result in local conflicts copying the global Cold War scheme. In these cases, rival groups at the local level were very likely to turn to the rival superpowers for support. And this was a problem not only due to its negative implication on geopolitical stability. In fact, if a former colony was torn in two and one of the two local rivals asked for Soviet assistance, it meant that half of the country was lost for the United States as a potential ally. Both examples suggested in a US point of view that the smooth American alignment with all former colonies of Western European powers could easily be challenged if spatial disparities within these former colonies were not reduced significantly. For the same reason, inequalities at lower spatial levels (for instance between or within settlements) seemed barely interesting. These actually did not pose a considerable threat to the geopolitical status quo since a town or a village, if its inhabitants feel discontented with disparities, cannot claim its independence or simply change its national affiliation. In most cases this simply does not happen for geographical reasons (e.g. for a town in the middle of a country). And even where it is possible from a pure "cartographic" sense (border towns, for instance, which could switch to the neighboring country), it is still highly impossible since a town or a village does not have the catchment area to efficiently struggle against either the national or the regional government. For this reason, spatial disparities between countries and regions seemed very interesting from a Cold War point of view, while lower geographical levels raised virtually no attention.

6.4 Spatial Disparity Research: Analytical and Propagandistic Objectives

Since spatial disparities between "rich" and "poor" countries as well as within former colonies were considered as economic in nature to a great extent, the US political establishment became highly interested in two issues. First, it seemed necessary to analyze how economic growth could be stimulated in "poor" countries and regions with colonial background. This notion embraced both the investigation of the theoretical aspects of economic growth and the outlining of feasible practical steps. It was this endeavor to open the way for the project of *developmentalism*, whose initial goals (be they explicit or implicit) and outcomes have been analyzed over the last decades from various points of views in a huge number of scientific works (e.g. Gonçalves 2005; McEwan 2009; Potter et al. 2008; Potter and Conway 2011; Sachs 1992; Ziai 2006).

Meanwhile, however, a second issue likewise gained great attention: it was the relation of economic growth to spatial disparities of economic production and material well-being. Here, the point was on the one hand to see whether, and if so, how the international expansion of capitalism could handle the problem of spatial disparities at an international level (between countries). On the other hand, the ability of capitalist production to diminish spatial disparities *within* given countries was also an issue of high importance. Therefore, a remarkable "boom" began in the market of scientific works concerning the theory of spatial economic disparities as well as the practical means to reduce disparities. And, in accordance with underlying geopolitical interests, these concepts had two common features. First, they dominantly concentrated on the global (international) and regional (intranational) scales. Second, their main interest was in economic issues. Hence, they tended to emphasize (or even overemphasize) the inequalities of production and income among the many aspects of spatial disparities.[5, 6]

The objective of research both about "development" and spatial disparities was twofold. First, they served analytical goals. Just as has been mentioned, they were aimed at revealing the reasons and cure for what was called "underdevelopment" and a politically dangerous level of spatial disparities. In the meantime, however, they also had important propagandistic goals. Although the latter was rarely made explicit in corresponding academic works, it was no secret that the creation of propagandistic knowledge in general was of elementary political importance here. "Cold War architect" George Kennan put this as follows:

> "It is entirely possible for the United States to influence by its actions the internal developments, both within Russia and throughout the international Communist movement . . . [This] is . . . a question of the degree to which the United States can create among the peoples of the world generally *the impression of a country which knows what it wants*,

[5] For a concise overview of the shortcomings of such a selective focus see Gerhard (2011).

[6] This relative one-sidedness, however, certainly seemed less remarkable in that context given the firm economic bias in Marxist concepts about spatial disparities.

> which is *coping successfully with the problems* of its internal life and with the responsibilities of a World Power, and *which has a spiritual vitality* capable of holding its own among the major ideological currents of the time. To the extent that such an impression can be created and maintained, the aims of Russian Communism must appear sterile and quixotic, the hopes and enthusiasm of Moscow's supporters must wane, and added strain must be imposed on the Kremlin's foreign policies. For the palsied decrepitude of the capitalist world is the keystone of Communist philosophy." (our emphases; X 1947, p. 581)

In an epistemological approach this meant that knowledge production, especially with regard to issues of geopolitical relevance, was expected to produce both forms of knowledge, factual as well as orientation knowledge. The latter and its capacity to make "definitions, categorizations and interpretations" and "moral judgments on friends and enemies" in order "to give order, identity, coherence and *legitimacy* to the system" (our emphasis; Meusburger 2005, p. 152) was also extremely important for Cold War US political leadership, thus, significant resources were allocated for the production of orientation knowledge. It was especially important to disseminate American propaganda among foreign intellectuals, for obvious reasons. This social stratum has a crucial role in each society in legitimizing power in the eyes of the masses and also in shaping the view of the political elite[7] (Meusburger 2005). The extent of US efforts to reach these goals was exemplified well by a major project launched by the American government in 1947. The secret program under the aegis of CIA used culture as a means of mediating orientation knowledge, mainly among the intelligentsia of Western Europe (Saunders 1999). The initiative intended "to inoculate the world against the contagion of Communism, and to ease the passage of American foreign policy interests abroad" (p. 2). To reach these goals, the project was based on "an extensive, highly influential network of intelligence personnel, political strategists, the corporate establishment, and the old school ties of Ivy League universities" (pp. 1–2). In other words, a great deal of politically reliable key persons in the American intelligentsia were mobilized to find out how to convince the intellectuals of foreign countries that "the world needed a *pax Americana*, a new age of enlightenment" (emphasis in original; p. 2).,[8, 9]

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[7] The latter capacity made intellectuals especially important for US strategists since they were fully aware of what the Germany-born American political scientist Arnold Wolfers put as follows: "As a rule, the most effective type of aid will be the aid that promises to give the greatest satisfaction to those élite groups who are eager to keep the country out of communist or Soviet control" (Wolfers 1960, p. 386). This obviously included propagandistic aid as well, which could play an important role in getting the support of local elites – not only by financial or military assistance, but also by symbolical gestures.

[8] We should underscore here that Saunders takes in his book a rather critical stance towards the project. This is also emphasized in a review of the essay's US edition by Troy (2002), whose opinion is otherwise similarly unlikely to be politically unbiased since he had worked in the CIA's Directorate of Intelligence. However, except for a few small mistakes, Troy (2002) confirms the validity of the empirical information to be found in Saunders's book. Thus, for its empirical content, we have regarded this essay as a relevant source of information.

[9] For specific details of the "Cultural Cold War" in Western Europe also see Scott-Smith and Krabbendam (2003).

It was in this context that Western scholarly interests in "development" and spatial disparities began to increase rapidly. Thus, we have every reason to hypothesize that these two analytical streams could also not remain unaffected by the general circumstances of the Cold War. In other words, it can be supposed that these research projects necessarily tended to produce not only factual knowledge, but orientation knowledge as well—either unconsciously, under the influence of *zeitgeist*, or consciously and on purpose. For spatial disparities, it is likely that concepts were not only to reveal why these inequalities emerged and how they were to be cured. They could reasonably contribute to the success of American foreign policy at least in two further points. First, by presenting the United States as a superpower capable of solving these problems; and second, by presenting capitalism as an economic order to cope with such challenges under any circumstances.

Of course, this motivation was similarly present in Stalin's endeavor to improve existing Marxist concepts about spatial disparities and to claim the uniqueness of socialism to solve the problem. It is certainly no accident that Stalin's concept also emerged in the early 1950s, at the first peak of Cold War, and that he urged for an international expansion of the theory in a planned "Marxist textbook on political economy" (Stalin 1972[1952], p. 46). In his eyes, such a theoretical work was "particularly needed by Communists and communist sympathizers in all countries", especially as a "reference book for the revolutionary youth" (ibid.). Furthermore, as Stalin put it: "in view of the inadequate level of Marxist development of the majority of the Communist Parties abroad, such a textbook might also be of great use to communist cadres abroad who are no longer young" (p. 47) (also cf. Pollock 2006). In fact, the creation of this textbook was part of a broader campaign, where Soviet scientists were expected to sustain "the argument that communism was the only viable way to organize society" (Pollock 2006, p. 5) and "to win the hearts and minds of people around the globe" (p. 6). Thus, Soviet leaders and Stalin himself were also aware of the importance of manufacturing and propagating orientation knowledge about potentials of their economic system, where a crucial point was to seem able to eliminate spatial disparities. In Marxist ideology, however, this argument was not new, while American science turned towards the issue for the first time, to give a capitalistic answer to the Marxist problematization of spatial inequalities.

6.5 The Need for Scientific Substantiation and the Rising Star of Spatial Economics

In the Western Bloc's struggle for mastery over the spatial disparity discourse, the leading role was obviously that of economists. Although the issue of spatial disparities owes a geographical relevance difficult to doubt, at that time Western geographical research showed relatively little interest in spatial inequality and its geopolitical relevance as separate research topics. This did not mean a total lack of

geographical works concerning disparities in the geographical space, but that their main focus was on other issues, such as hierarchies in the urban network and the categorization of urban centers (e.g. following Christaller 1933; cf. Blotevogel 1996; Heineberg 2006, pp. 17–19). Analyses with geopolitical orientation were, however, almost non-existent in postwar geography, mainly due to the highly contested role the infamous German *Geopolitik* played in World War II. Besides, for spatial disparity as a phenomenon and problem, remarkable contributions to the issue from representatives of various social sciences (see Sects. 4.2, 5.1–5.3) were virtually ignored by geographers, and vice versa, since the reputation of the discipline among outsiders was also not especially high. Geography in those years was still dominated by the regionalist paradigm, in Europe as well as the United States, where this was introduced by Richard Hartshorne (Barnes and Farish 2006; Johnston 1978). This approach put at its forefront the analysis of uniqueness of given areas, favoring in Hartshorne's (1939) words (going back to the German Neo-Kantian philosopher Wilhelm Windelband) an "idiographic" approach instead of taking a "nomothetic" approach and focusing on general similarities. This way of seeing, which did not stimulate the application of mathematical methods in an abstract, geometrical space, proved barely useful in World War II in knowledge production for practical (military and strategic political) ends. Thus, for chief analysts and political leaders, who became key figures in Cold War decision-making, geography did not seem particularly useful. Instead, they needed science (and not only natural, but social science as well) (Barnes 2008) to solve technical problems, and predict future consequences of certain decisions. These abilities increased the presumed potential of a discipline to efficiently aid decision-making, while also having an extreme propagandistic value since statements from such disciplines could easily be presented as the "truth".[10] For these reasons, while top leaders urged an intensive cooperation of science and political decision-making, geography did not seem a science for them, at least not "a science in the way it was becoming defined during the War and early Cold War" (Barnes and Farish 2006, p. 817). A shining example of this was the closure of Harvard University's Department of Geology and Geography in 1948, when expenditures on science and technical development were otherwise boosted (ibid.).

Economics, however, "fit the bill". To a great extent it did since this discipline was the first among social sciences to diverge from its traditional viewpoint and to open to mathematics, quantification and "'predictive' model building"

[10] One can find a perfect example of how great the propagandistic importance of spatial research was for US strategists in the autobiographical essay of André Gunder Frank, later to become a key thinker of neo-Marxist dependency theories (cf. Sect. 8.1.3). Frank points out that in the 1950s as a young researcher he joined the University of Chicago's Research Center in Economic Development and Cultural Change. Here he worked on a project on the Soviet economy, "whose final client was the US Army Psychological Warfare Division" (Frank 2000, p. 187).

(Mercer 1984, p. 157; also cf. Keeble 1967).[11] It also began to exploit the analytical potential of computers much earlier than other social sciences, including human geography. In these disciplines it was merely a few "early birds" who got involved in computing and computer-aided research in the mid and late 1950s (Barnes 2008). In economics, however, the same years witnessed the emergence of whole new theories on the basis of results provided by computer-aided economic analyses in the previous years (Wolf and Enns 1971). Thus, economics seemed more "scientific" than other social sciences and able to give simple, clear suggestions for political decision-makers about what to do.[12] But the discipline was in fact not unitary. Instead, it was characterized by two competing approaches, which were different not only in their reasoning, but even in their fundamental assumptions: these were *neoclassical economics* on the one hand, and *Keynesian economics* on the other. The difference between the two approaches was also manifested in the way they interpreted spatial disparities, which, for them, was identical to spatial disparities of economic production and economic well-being.

6.6 The Stable Equilibrium Model of the Neoclassic: Strengths and Weaknesses

The view of neoclassical economics is that of a highly abstract world consisting of "independently minded individuals making decisions that can be completely rationalized in terms of aims and means, interacting with one another only by means of market competition, and all the while being limited only by the constraints provided by nature" (Boland 2004, p. 685). In this pure world, demand and supply are expected to establish a state of equilibrium in the long term. This means that "all individuals will be satisfied relative to what they can afford" (p. 686).[13]

[11] Krugman (2011) writes about this as the decision of mainstream economists "that devising abstract models is an essential part of being a *useful* profession" and that emphasis should be put on "to answer the question about *what to do*" (our emphases; p. 3). Here he specifically refers to John Maynard Keynes as an emblematic pioneer figure of this way of thinking, who, in King's (2004) words, considered economics "a policy science" and for whom "macroeconomics was worth doing only if it could be used to improve the operation of the economy" (p. 542). As Krugman (2011) underlines, this attitude became dominant in economics during the Great Depression, when politicians needed disciplines "to provide *useful* answers" (our emphasis) instead of emphasizing "the uniqueness of each individual case" (p. 3). This interpretation is also in accordance with international observations that economic and political crises usually result in an increasing prestige of and demand for factual knowledge (Meusburger 1998a, pp. 17–18).

[12] As Storper (2011) puts it about the use of mathematics and modeling in economy, "the clarity of these equations are probably a reason why most countries have some type of high-level Council of Economic Advisors, but few have a high-level Council of Geographical Advisors" (p. 14).

[13] An especially detailed model to describe how economic growth in the long run creates equlibrium was given by Solow (1956). His analysis actually became a major reference work in neoclassical economics.

Similarly, economic processes in space are also assumed to lead to spatial equilibrium after a sufficient amount of time.[14] This hypothesis is based on the concept that *ceteris paribus* (all other conditions being equal) spatial differences in the price of factors of production tend to diminish due to the spatial migration of factors of production (Harris 1957). Let us say, for instance, that there are two regions in a system, R_1 and R_2. If labor supply is higher in R_1 than in R_2, labor costs will also be lower in R_1 compared to R_2. Under such circumstances, for the same work (in terms of both quantity and quality) a higher wage is paid in R_2 than in R_1. This difference, however, results in a spatial migration of labor force from R_1 to R_2, where higher income can be realized. Thus, over the long term, the spatial migration of labor as a factor of production is expected to eliminate inequalities of labor cost in space (for the most detailed presentation of the concept see Borts and Stein 1964; also cf. Bathelt and Glückler 2012; Buttler et al. 1977; Schätzl 2003).[15] This approach suggests that equilibrium is to come automatically if there is no obstacle for the spatial migration of factors of production. Moreover, as Keirstead (1948) suggested, the relocation of production in space to areas with lower production costs is also a means in a free economy to promote spatial equalization. And even if factors of production are not perfectly mobile, but at least free commerce is guaranteed, the spatial mobility of goods and services will end up in a balance of prices of factors of production and in spatial equilibrium (Maier et al. 2006). In consequence, spatial disparity seems here a temporary phenomenon to which no special attention should be paid if spatial mobility or at least free commerce and an unlimited spatial flow of goods and services is guaranteed.

This reasoning has many advantages. First, the concept offers an abstract theoretical framework in which all spatial phenomena can be described with the language of mathematics. Thus, *seemingly*, even the background of spatial disparities can be revealed through some algebraic functions, which are relatively easy to work with, and which can also provide predictions for certain scenarios in the price of productive factors. Second, the idea of automatically diminishing spatial inequalities had a very important implicit political meaning in the Cold War context. Suggesting that an unlimited spatial mobility of factors of production could guarantee, and that it was the only condition to guarantee the enduring elimination of spatial disparities, a possible normative evaluation of the two competing economic systems was as follows. The free-market economy, the model propagated by the United States all over the world, could be presented as the economic order necessarily and unconditionally solving the problem of spatial disparities. But the Soviet-type socialist economy, which was irreconcilable with

[14] This statement is obviously not valid for most simple neoclassical models that totally ignore spatial issues (which are presented and critically evaluated by Buttler, Gerlach and Liepmann 1977; Meusburger 1998b).

[15] As Cheshire and Malecki (2004) underscores, this concept was a simple adaptation of Solow's (1956) growth model to a regional context, hypothesizing the existence of two regions and two economies instead of only one.

the idea of a free market, was implicitly claimed to end in failure in its attempt to diminish inequalities among countries and regions due to strong state control.

Still, the neoclassical concept of spatial disparities has many weaknesses, which are easy to be challenged. Some of these can be fixed through relatively minor corrections of the concept. For instance, the absolute mobilization of factors of production is rather a theoretical option than a real one, due to many factors. Even if administrative and social obstacles are not considered, there are many reasons why factors of production cannot be totally mobile. A very simple example is land, which is absolutely immobile. If land prices are much higher in Manhattan than in rural Iowa, spatial differences in the supply of land cannot be equalized through transporting some thousands of acres of land from the Prairie to New York. Without any doubt, however, if the migration of forces of production is constrained, trade can still balance regional disparities. In this case, each region specializes in a certain product, which it will produce in larger quantity, and not only for itself, but to cover the demand of other regions as well. Thus, for the neoclassical concept, if free mobility is challenged, free trade should still enable the elimination of spatial disparities. In this view, although the structure of production remains different in various regions, the sum value of production will be the same (cf. Bathelt and Glückler 2012; Maier et al. 2006).

At many other points, however, neoclassical reasoning regarding the development of spatial disparities proves very fragile. Due to its abstract nature, the concept is only valid under specific, and often unrealistic, circumstances. For instance, the whole argumentation is based on the assumption of constant returns to scale, thus, that the change of inputs results in a proportional change of outputs (Buttler et al. 1977). This hypothesis might work well in an abstract one-point economy, pulled out of its temporal and spatial dimensions. But under real circumstances, constant returns to scale almost never exist, maybe with a small stock of very special cases. Otherwise, to calculate with constant returns of scale means that one totally ignores, for example, the changing efficiency of production (respective to the value of product manufactured from inputs of a given value). This equals ignoring qualitative aspects, thus, the concept is unable to consider the temporal improvement of technology, or the spatial differences in the quality of technology used (cf. Bathelt and Glückler 2012).

The concept also hypothesizes diminishing marginal utility of factors of production, which is not necessarily the case under real circumstances (ibid.). Myrdal (1957), for instance, underlines that a certain amount of extra investment might lead to higher growth of industrial production in regions with higher initial value of output. This is because districts with industrial tradition, where not only infrastructure but feasible knowledge is also given, can utilize extra inputs more efficiently than districts lacking this background.

Furthermore, the neoclassical concept of spatial disparities is based on the assumption of perfect competition, which actually does not exist in reality. Furthermore, it is incompatible with the reality of an inherently heterogeneous geographical space, as was already underscored by Palander (1935). He pointed out that if one considers different places (e.g. villages, towns, cities) in a certain area as

different markets, the number of buyers and sellers would be too small and fall far behind the idea of infinite economic actors, a necessary prerequisite for perfect competition. If the whole area is instead regarded as one market, actually existing price differences of the same goods at various places might have two reasons. Either that the goods are not regarded everywhere as the same product, or, if they are, then price differences indicate that the value of the same product is not equal at different places. In fact, both possibilities indicate local market differences, which challenge the idea of homogeneous products as well (that characteristics of given goods do not vary over suppliers), another fundamental prerequisite for perfect competition.

These are, however, not the only factors to challenge the concept of perfect competition. Another serious problem emerges here with regard to the above cited remark of Myrdal about the role of knowledge since a major obstacle for perfect competition is the spatially uneven accessibility of knowledge. As Meusburger (1998a, b, 2008) points out, new knowledge is always linked to certain persons, social systems and loci when it emerges, thus, it is not "omnipresent". Furthermore, its spread from one person to another and between geographical areas is also limited for many reasons. First, knowledge that others do not have always gives one a certain advantage in economic, political, military etc. competition. Consequently, those possessing new knowledge are usually disinterested in sharing it with "outsiders" and rivals. For this reason, they consciously make serious attempts to keep knowledge exclusive. And even if they aim to mediate knowledge to others, this initiative can be challenged by many factors. The source of knowledge might prove unable to encode new knowledge in a way that it can be received and understood by others. Moreover, once knowledge is received, it is still questionable whether its content is really assessed, accepted and utilized (Meusburger 1998b, 2009). Besides, it is not only the grade (level) or amount of knowledge one has that counts, but rather if one has a certain piece of knowledge before his/her rivals. If a company owns the knowledge to introduce a brand new product or service only few months before its competitors, it can corner the market and make extremely high profit. This is especially so for high-quality technology-intensive products such as IT devices or sports cars. Similarly, receiving and utilizing new knowledge before rivals can give one a huge advantage on a stock exchange. For this reason neither the quantity and quality of knowledge one has nor the timing of this knowledge gained relative to others can be neglected in realistic analyses of social and economic phenomena. Yet, these aspects are overlooked by neoclassical theories.

These serious weaknesses together also pose a further challenge to the neoclassical concept. If constant returns of scale, diminishing marginal utility of factors of production and perfect competition lack, the very basic implicit assumption of the concept that factors of production are paid in proportion to their marginal products collapses (Buttler et al. 1977; Bathelt and Glückler 2012). Besides, as Boland (2004) puts it, there is virtually no room in the concept for social institutions such as churches and governments, and for authorities (or power relations). Thus, institutional barriers that also shape economic processes (e.g. through laws, norms, behavior patterns, and social systems) are excluded (Bathelt and Glückler 2012).

Finally, the idea of humanity itself is highly doubtable in the neoclassical approach as it assumes an absolutely "rational" agency of individuals (Rational Choice Theory—RCT) as well as that this rationality is aimed at the maximization of profits (cf. Bathelt and Glückler 2012; Boland 2004). For the claim of "rationality", it is extremely problematic in itself since "rationality" is not an absolute category. In other words, whether a certain act is "rational" can only be decided in light of the goals the acting agent set, the information they have, and the means they use (Meusburger 1999; cf. Edwards 1968; Arrow 1974). Irrespective of this issue, however, the concept still remains disputable. On the one hand, RCT implicitly suggests that individuals have no constraints in pursuing their goals. Instead, they are supposed to possess complete information and knowledge, to perpetually assess the changing conditions and to fit their steps to them, to have stable preferences, and to be uninfluenced by emotions while acting (Zey 2001). On the other hand, RCT in neoclassical models is always used with the premise that the goal acting agents pursue is economic in nature, namely the maximization of profit. But human notions, in fact, can be much more diverse. As Werlen (2008) presents, human action can also be aimed at adapting to social norms or at understanding things through efficient participation in communication.

In sum, the clarity of neoclassical concepts and the notion of providing simple, direct answers to the questions of decision-makers (on the output side of model-building) resulted in a very narrow and selective perception and interpretation of society and economic processes on the input side. Of course, most of the problems presented above do not specifically concern the neoclassical concept regarding spatial disparities, but the neoclassical approach itself. Hence, theoretical criticism of neoclassical economics had emerged well before the interest of Cold War researchers turned to spatial inequalities of production.

6.7 The Criticism of Neoclassical Economics and the Concepts of Spatial Polarization

The criticism of neoclassical economics can be traced back to as early as the turn of the nineteenth and twentieth centuries when Thorstein Veblen, the founder of evolutionary economics, pointed at the fundamentally unrealistic nature of neoclassical concepts (Boland 2004). Furthermore, in the light of the specific economic context created by the Great Depression, the works of John Maynard Keynes in the 1930s gave impetus to an alternative approach in economic thinking, usually called Keynesian economics. Although spatial disparities was not Keynes' focus, his ideas proved fundamental in this field of research as well. Especially influential was his thought that the economy might face crises that cannot be solved by the market itself through self-correcting mechanisms, but that should be handled through government intervention (King 2004). Although Keynes initially formulated this idea with regard to challenges of employment (cf. Keynes 1936), spatial economists

revealed its relevance soon as the Cold War boom in spatial disparity research began.

The idea that the market is incapable of balancing itself, even in terms of spatial inequalities, raised the attention of many researchers who claimed that spatial disparities were on the increase. Since their observations were diametrically opposed to the spatial convergence that neoclassical equilibrium models forecasted, they came to the point that these models were "of little use in illuminating ... the real world" (Keeble 1967, pp. 257–258). Hence, they made serious efforts to establish an alternative, non-neoclassical theoretical framework. These works had several common points, but they also had considerable differences, both of which should be analyzed in order to gain a relevant view of the contribution of this approach to spatial disparity research. For this reason, in the forthcoming sections we provide an in-depth analysis of the most influential concepts (Myrdal 1957; Hirschman 1966[1958]; Williamson 1965; Friedmann 1966)[16] coming from the presumption that economic growth in a free market does not lead automatically to spatial equalization without external intervention.

6.7.1 Gunnar Myrdal, the "Vicious Circle" of Polarization, and a Straight Geopolitical Path into the American Sphere of Influence for the "Underdeveloped" World

The first intellectual to give a coherent and in-depth non-neoclassical theoretical explanation of spatial disparities was the Swedish economist Gunnar Myrdal. In his much-cited (1957) book,[17] Myrdal's starting point was that "the facts of international economic inequalities in the present world ... fall into a definite and simple pattern" (p. 3). This pattern, which he revealed on the basis of then up-to-date publications of the United Nations (ibid.), and, presumably, on the experience he gained as the inaugural head of the UN Economic Commission in Europe between 1947 and 1957 (Barber 2008), was a remarkable increase in spatial disparities between countries of the world. In Myrdal's view, this tendency was basically an

[16] The selection is based on major textbooks in economic geography and spatial disparity research (Bathelt and Glückler 2012; Keeble 1967; Knox et al. 2003; Schätzl 2003), which tendentiously present these four concepts or at least three of them as the theories with fundamental importance during the 1950s and 1960s. In line with the selection method in these textbooks, we refer to major concepts about economic growth or "development" only briefly, while focusing on works that *directly* concentrate on spatial inequalities.

[17] In the same year, Myrdal's book was published in the United Kingdom and in the United States under different titles. (The UK edition was entitled *Economic Theory and Underdeveloped Regions*, while the US edition was released as *Rich Lands and Poor*.) For the text written by Myrdal, the two editions are identical. Yet, the US edition was published in the multidisciplinary scientific book series *World Perspectives*, and an explanation of the initiative by series editor Ruth Anshen was added to it (Anshen 1957). In our work, page numbers for quotations refer to the US edition.

outcome of a remarkable dichotomy. On the one hand, he identified "a few countries" that "are highly developed economically and have very high levels of average real income per head" (Myrdal 1957, p. 3), and where "all indices point steadily upward" (p. 4). On the other hand, he argued that "in the underdeveloped countries ... where incomes are so very much lower ... economic development usually proceeds more slowly" (pp. 4–5), moreover, "many of these countries have during recent decades even moved backward in average income" (p. 5). Thus, in consequence, "in recent decades the economic inequalities between developed and underdeveloped countries have been increasing" (p. 6).

As the main reason for this tendency Myrdal pointed out that market processes are, in contrast to neoclassical expectations, not always moving towards stable equilibrium, which he simply called an "unrealistic assumption" (p. 9), a "false analogy" (p. 13). For him, this was since efficient self-controlling mechanisms in economy are lacking. Thus, he denied the neoclassical point that "a change will regularly call forth a reaction in the system in the form of changes which on the whole go in the contrary direction to the first change" (ibid.). Rather he argued for what he called "circular causation". This means that "a change ... call[s] forth ... supporting changes, which move the system in the same direction as the first change but much further", thus, "a social process tends ... to gather speed at an accelerating rate" (ibid.). In consequence, already existing spatial disparities increase further, in form of a "vicious circle" (p. 11), shifting high-income countries to even higher levels of prosperity, while driving already poor countries even deeper into the trench of poverty. In other words, Myrdal drew a rather pessimistic picture concerning spatial disparities, where, just as it can be read in the Gospel of Matthew, "For unto every one that hath shall be given, and he shall have abundance: but from him that hath not shall be taken away even that which he hath" (quoted in p. 12). This reasoning predicted intensifying troubles in "underdeveloped" countries since the reasons for their "poorness" were considered as self-accelerating. It seemed likely that the words of Nurkse (1953, p. 4) might prove true: "a country is poor because it is poor", which might also suggest that a country will be poor in the future because it is poor now.

It is important to stress at this point that Myrdal's theory did not draw a world where everything pointed towards cumulative causation and, thus, towards spatial polarization. He actually argued for the mutual existence of polarizing or "backwash", and equalizing or "spread" effects. Interestingly, Myrdal referred to as "backwash" effects foremost to the factors that were considered in the neoclassical approach as engines of spatial convergence. This striking difference was due to Myrdal's firm conviction that the spatial migration of factors of production does not decrease, but rather increases polarization. In his eyes, the free migration of labor was always selective and attracted foremost a young and well-educated workforce, which led to aging and to the overweight of low-skilled labor force in the sending regions. For the free migration of capital, this ended up in Myrdal's eyes in "siphoning off the savings from the poorer regions to the richer" (p. 28) due to higher returns of capital in economic centers. And, he expected the free flow of goods and services (thus, free trade) to "confer ... competitive advantages on the

industries ... in the already established centers of expansion" so that "even the handicrafts and industries existing earlier in other regions are thwarted" (ibid.).

Contrasted to these "backwash" effects, Myrdal admitted that "spread" effects likewise exist. For example, he pointed out that the growth in economic centers can stimulate similar processes in peripheral regions that produce raw materials for the centers. Furthermore, he emphasized that both growth in rich regions and the relative decline in poor regions have their limits, which also hinders polarization after a certain point. In economic centers, production and population might become "too concentrated" (p. 35), so public expenditures and private costs of production and living might radically increase. Due to the long lasting economic boom, wages and the costs of factors of production might reach such a high level that the region loses its competitiveness. And, "a country which ... has for some time enjoyed a quasi-monopolistic position may find that the spirit of enterprise and risk-taking has been damaged" (p. 36). Meanwhile, in "underdeveloped" regions a radical economic decline and the thus intensifying poverty might lead to increasing mortality rates, which also constitute an obstacle for "everlasting" recession. Yet, Myrdal's general point of view was that "in no circumstances ... do the spread effects establish the assumptions for an equilibrium analysis", so that "spread" effects are too weak to counterbalance "backwash" effects. Thus, even if "the two kinds of effects will balance each other" temporarily, "this balance is not a stable equilibrium, for any change in the forces will start a cumulative movement upward or downward" (p. 32).

Myrdal considered these tendencies as not only valid at an international level, but also for regional processes within countries. In his words: "The international inequalities are, of course, not dissimilar from the regional inequalities within a country." (p. 10). For this reason, he found spatial polarization necessary to take place among regions within a country as well, just as they occur between countries. And such a divergence of the regions was not only a problem in poor countries; as Myrdal put it: "even in a rapidly developing country, many regions will be lagging behind, stagnating or even becoming poorer" (p. 32). No wonder, that even in the United States or Sweden "a closer view reveals great disparities" (ibid.).

Still, Myrdal drew attention to an important difference between "rich" and "poor" countries respective to their inner spatial disparities. Based on data from the United Nations (1955) for Western Europe, he emphasized that "disparities of income between one region and another are much wider in the poorer countries than in the richer ones" (p. 33). Moreover, not only the level of regional disparities seemed different in various groups of countries, but even their temporal changes: "while the regional inequalities have been diminishing in the richer countries of Western Europe, the tendency has been the opposite in the poorer ones" (pp. 33–34). The phenomenon was interpreted from the viewpoint of "backwash" and "spread" effects as "backwash" effects are especially strong in "underdeveloped" countries, while "the higher the level of economic development that a country has already attained the stronger spread effects will usually be" (p. 34).

Myrdal traced back this dichotomy to the different roles played by the state in rich and poor countries. For him, "backwash" and "spread" effects brought into being by spontaneous economic processes were similarly strong in each country. In his eyes,

it was state policy making the difference. In Myrdal's view, "in many of the poorer countries the natural drift toward inequalities has been supported and magnified by built-in feudal and other inegalitarian institutions and power structures which aid the rich in exploiting the poor" (p. 40). Meanwhile, in "welfare states" in richer countries of Western Europe, the aims of state regional policy are thoroughly different: they are "directed toward greater regional equality" (pp. 39–40).[18] This was for Myrdal an outcome of political and psychological factors. For the political factor, Myrdal stressed that the most "developed" countries have democratic systems with national parliaments. In his views, under such circumstances "the poor are the many and even the relatively poor the great majority", so "in order to gain power political parties had to sponsor reforms in the interest of greater regional equality" (p. 45). Besides this political need for spatial equalization, Myrdal emphasized the psychological attitude of people towards (spatial) disparities and their reduction: "When people are better off and have greater security they feel freer to give up privileges and let down barriers which keep others out and are more prepared to carry the costs of common burdens." (p. 40).

To sum it up, Myrdal firmly denied the neoclassical concept about automatically diminishing spatial disparities, and developed a remarkably different theory based on the idea of circular causation. For him, economic processes at the international as well as regional level were shaped by parallel "backwash" and "spread" effects, from which "backwash" effects were usually much more powerful. Consequently, a "natural" tendency among countries as well as between regions within a country was polarization. In Myrdal's view, this inherent tendency could only be balanced by state policy, which in his opinion was pro-egalitarian in rich and rather anti-egalitarian in poor countries. Due to this, the level of regional disparities was significantly lower and decreasing in rich countries, as opposed to poor countries, where high regional disparities and divergence were typical.[19]

[18] In fact, it is logically problematic to speak about "greater equality" since equality refers in the mathematical sense to the specific condition when two values are absolutely equal. Thus, it might be better in comparative analyses to refer to inequality, which can indeed be "smaller" or "greater" (cf. Goldthorpe 2010).

[19] The role of the state as an actor to control spatial disparities is an important, yet frequently overlooked or misinterpreted point in Myrdal's concept. In secondary literature a typical criticism is that, supposing circular causation, spatial polarization should end up after a while in the extreme disintegration and collapse of both economy and society. Still, this has not happened yet, which is considered to contradict Myrdal's approach and to reveal its serious weaknesses (cf. Maier et al. 2006). This criticism overlooks, however, that Myrdal's claim about "backwash" effects to be tendentiously stronger than "spread" effects only referred to conditions where the agency of state was poor or lacked. For him, that "backwash" effects generally overpower "spread" effects was only true for inherent processes of economy. But state measures were expected to follow another scheme. They were believed to strengthen "backwash" effects and increase spatial disparities only in "underdeveloped" economies, but to improve "spread" effects and reduce inequalities as soon as an economy became "developed". Hence, Myrdal's concept barely hypothesized a radical disintegration of economy in the long run but rather the emergence of a national equalizing policy as soon as polarizing tendencies became dangerously strong. Given this, the argument that no economies have polarized themselves in doom until now does not prove the claimed weakness of Myrdal's idea.

Furthermore, Myrdal's argumentation was not only new in breaking with the neoclassical interpretation of spatial disparities. Another remarkable innovation was that he gave an epistemological explanation for the emergence of shortcomings in the neoclassic approach. Here he referred to two aspects, both being well ahead of their time: these were in today's words the geographical situatedness of knowledge production and the implicit political notion of scientific concepts. First, Myrdal emphasized that

> "all our economic speculation was for a long time almost exclusively cultivated in the social setting of the then most prosperous country, Great Britain. Thereafter, and until very recently, it was developed further by theorists who, almost without exception, were the nationals of those few countries which were rapidly progressing economically under conditions of expanding mutual trade and large movements of capital and labor. And in these countries all higher culture, including the rise of economic science, was concentrated at the centers of economic expansion. These facts have clearly been of importance in the selection of viewpoints and thereby also in setting the approaches for economic theory." (Myrdal 1957, p. 135)

This had decisive implications for the development of economic thought in general, and of concepts concerning spatial inequalities in particular. As can be seen, conditions under which the genesis of modern economic thought took place have created a remarkable, yet merely implicit, path-dependence. As Myrdal put it:

> "Even when we are not aware of our bondage we are all more or less under the influence of certain very general ideas or patterns of thought which we have inherited from long ago. At one time or another they were all solidified into definite doctrines. . . . Our tools of analysis have been molded within the tradition of these doctrines and predilections. We have had them pressed upon our work in the form of a certain approach to problems, a particular manner of looking at things. This determined broadly what questions we ask and how we ask them. It therefore inhibits our imagination and . . . this frustration of originality in turn affects our fact-finding research." (Myrdal 1957, pp. 132–133)[20]

For Myrdal, the spatial embeddedness of early ideas in modern economic thinking, and the path-dependence necessarily manifest in research practice, together led to an exclusive focus on issues that were relevant at the place where this tradition emerged. Meanwhile, economically important problems of other areas were neglected both in theoretical and in empirical work. Thus, "the problems peculiar to underdeveloped countries tended to fade out in a pale distant haze – until in recent years they were forcefully pressed upon the world by the political and spiritual revolt of the peoples living there" (p. 135).

Myrdal, however, not only argued that the negligence of challenges "underdeveloped" countries faced was the outcome of a sort of (to some extent natural) egoism in Western economic thought. In his view, the fact that the laissez-faire

[20] This idea can to a great extent be traced back to the much quoted words of Keynes, for whom "practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist" (Keynes 1936, p. 383). In fact, what Myrdal made in these sentences was the extension of the Keynesian remark from "practical men" to theoreticians in economics.

approach, the free trade doctrine, and the equilibrium concept overlooked problems of the "underdeveloped" world also served direct political goals of the "developed" countries. For Myrdal, the political content of these concepts was initially independent of the "underdeveloped" world, and rather mirrored a political struggle between various actors of economic and political life in Britain. In his words, "the laissez-faire bias was programmatic: to them the explanation why the 'natural order' of the harmony of individual interests did not materialize in full perfection was mainly the 'interferences' of the state and other collective bodies" (p. 141). In other words, the laissez-faire concept, which became virtually inseparably intertwined with the free trade doctrine, had been from the beginning a mind-set with definite political aims. Initially it was to justify the interests of capitalist producers and merchants against an "oppressor state" (p. 141) and its endeavors to control all spheres of life. Thus, the laissez-faire concept had carried "an inextricable antistate and antiorganization bias" (ibid.).

These economic concepts gained relevance for the relation between "developed" and "underdeveloped" countries only somewhat later, through universalistic assumptions of the Enlightenment. The idea that one can think about human beings "in general", as a homogenous mass having the same interests at a basic level, opened the way for a reasoning that "the concern of economic theory must be the interests . . . of human beings in general all over the globe" (p. 147). As Myrdal put it, the truth of such an approach is "in principle . . . evident and was seen to be evident" (ibid.). This emancipatory universalistic notion, however, had a specific political meaning as well. Hence, the assumption that "free trade would also be in the interest of all other countries as well as of Britain" could easily become "a general proposition" (p. 148). Consequently, the free trade doctrine, for instance, just as the laissez-faire concept and the equilibrium approach, could function "as a means of psychological rationalization" (p. 148) for interests of the British Empire. And there were in Britain many to utilize the remarkable force of this political means. For Myrdal, "when . . . they recommended free trade as a general policy, it was not on the ground that free trade would be for the good of the world but because it would be in the interest of their own country" (ibid.). Following this argumentation, the neoclassical concept of automatic (spatial) equalization in the long run could likewise be interpreted as an attempt to justify the laissez-faire economic policy of the "developed" countries and their notion to impose the same philosophy on the "underdeveloped" world.

In general, Myrdal contributed to the spatial disparity discourse at two major points. First, he rejected the neoclassical concept of automatic spatial equalization, which before had dominated non-Marxist approaches. Instead, he argued that market forces perpetually increased spatial disparities, due to which the intervention of the state would become unavoidable at a certain point to slow down ongoing geographical polarization and to make it controllable. Actually, to refute that equilibrium would be a natural state of the economy towards which spontaneous market processes drive the system was not a profoundly new idea in economics. Joseph Schumpeter (1911), although without a specific focus on spatial issues, had already interpreted economic growth as an unbalanced process, which gained

impetus again and again through the mass emergence of innovative entrepreneurs in a given branch. Several decades later, a somewhat similar concept was developed by François Perroux (1955), who hypothesized that the economy was always mobilized by the boom of given branches, which he called motor units (*unités motrices*).,[21, 22] Still, the concept of necessarily polarized growth had not found a way into the spatial disparity discourse before Myrdal's work. The Swedish economist's other great invention was that he put mainstream theoretical concepts of the day in economics in their epistemological and political contexts. With this, he could not only present the weaknesses the neoclassical concept of spatial equilibrium had, but also explained for which reasons, being political in nature to a large extent, such an unrealistic theory had existed and had been maintained for such a long time.

Myrdal's book, however, also had certain weaknesses and raised far-reaching questions. One disputable point was the empirical substantiation of the work. Since it was published for the first time, Myrdal's concept has become regarded as an important milestone along the road of understanding spatial disparities. With regard to this, it is often stressed that the concepts of polarization theory in general and Myrdal's claims in particular were based on inductive findings. Thus, they are often presented as "the outcomes of detailed empirical analyses, case studies or the researcher's appropriate experience", which "thus, to a certain extent, mirror real circumstances, among which they were obtained" (Maier et al. 2006, p. 78; also cf. Schätzl 2003). Without any doubt, such an interpretation might well suggest the higher validity and, thus, a sort of superiority of Myrdal's concept relative to the very abstract and deductive neoclassical theories about spatial inequalities. A similar but even much stronger *scientific* quality was claimed for the book by Anshen's introductory notes to *World Perspectives*, the series in which the US edition of Myrdal's volume was published. For her, "the purpose of *World Perspectives* is to help quicken 'the unshaken heart of well-rounded truth'"

[21] There is no sign in Myrdal's book that he would have been familiar with Perroux's concept, but he definitely was with the works of Schumpeter, whom he even referred to (p. 82).

[22] Myrdal also added that the concept of disequilibrium and self-accelerating polarization might only be new for neoclassical theoretical economists, not for "the practical men". In his words, "laymen, of course, never believed" in the law of stable equilibrium (p. 22) and "every successful businessman has the principle of the cumulative process as a built-in theory in his approach to practical problems; otherwise he would not be successful" (p. 21). In fact, these statements seem strong exaggerations through which Myrdal tried to underpin his views about the unrealistic nature of neoclassical concepts. In his latter endeavor, however, he also got involved in one-sided formulations. While writing about polarizing and balanced phases of economic growth, he tendentiously presented the first as dominant and the second as temporary and only occurring in specific cases. Through this, he emphasized the superiority of polarizing processes over balancing ones in countries without an "intervening state", which might seem similarly one-sided an approach as the neoclassical concept favoring equilibrium as the "natural state of economy" over polarization. In general, both approaches are questionable since both hypothesize that phases of equilibrium and disequilibrium similarly take place in economic growth, while none of them can give exact empirical substantiation for prioritizing either of these tendencies as dominant or "natural".

(original emphasis; Anshen 1957, p. xvi), and the series was an important step to strengthen "the authority of truth and human totality" (p. xiii).

These high words, infiltrated by a firm belief in the existence of universal truth and objective science, well indicate the scientific quality postulated for Myrdal's work from the date of its publication until recently. It remains tendentiously unconsidered, however, that the concept remarkably vivid in its philosophical argumentation contained very little information derived from empirical findings. For verifying data on strong polarization, which the author constituted as the main scheme of spatial tendencies, he simply named as reference "the latest publications of the United Nations and the Secretariats of the three regional Economic Commissions" (Myrdal 1957, p. 3.), specifying only one of them (United Nations 1955). Hence, it remains unclear which data were exactly used by Myrdal, for it is hardly possible to check his claim that "the facts of international economic inequalities in the present world . . . fall into a definite and simple pattern" (Myrdal 1957, p. 3).[23]

The problem of lacking empirical falsifiability emerged at other points as well. Especially the author's point that the general processes identified in his work were universally valid seemed rather a matter of belief than of empirical evidence. For instance, Myrdal himself also stressed that: "The special characteristics and circumstances of every country, every region and . . . every acting individual . . . will result in elaborate variations on the theme" (pp. 41–42). Still he firmly claimed that "they can, however, all be fitted into this general view of circular causation in a cumulative sequence" (p. 42). Yet, for this, he gave no comprehensive empirical substantiation. The same problem occurred again some pages later: "There would be many individual differences as between the several countries . . . but *I believe* that the main conclusion would nevertheless be that the broad patterns of historical sequence were fundamentally similar as well as the circular causal mechanisms of social, economic and political factors making the process cumulative." (our emphasis; p. 46). Since the book provided no "tangible" evidence for these statements, their empirical substantiation remained rather doubtful.

The only point in Myrdal's work to be based unquestionably on empirical data was his argumentation about larger and increasing spatial disparities in poorer and more moderate and rather decreasing disparities in richer countries in Western Europe. Here the resource he used is easy to identify and check (United Nations 1955). Yet, the ambiguities are still challenging. Without any doubt, the cited publication explicitly formulated that "regional income disparities are much wider in the poor countries of Europe than in the richer ones" (p. 138). Furthermore, a paragraph title clearly stressed what had become another main finding of Myrdal: "Growing Regional Disparities in the Poorest Countries of Europe" (p. 139).

[23] It is not impossible, of course, that as director of the UN Economic Commission in Europe Myrdal was aware of certain data that remained unpublished but seemed to substantiate his concept. But even if it were the case, which we actually do not know, Myrdal did not refer this, so thus most of his exact sources remain unidentifiable.

Similarly, Myrdal's claim of a convergent trend among regions in rich countries was also formulated in the same 1955 source—yet, not as evidence but rather as a suggestion: "It *would be tempting to argue* therefore that regional disparities are only a temporary phenomenon in the process of industrialization and *can be expected* to disappear with rising economic levels" (our emphases; p. 144). This hypothesis, however, was converted into a "fact" in Myrdal's essay without providing additional empirical information to underpin its validity.

Still, many challenges remained without reassuring solution. First, it is difficult to estimate to what extent this UN analysis of only 18 countries can be extrapolated in order to make statements with universal claims, just as Myrdal did. Second, it is remarkable that he overlooked an important suggestion of the UN publication, namely that "regional disparities ... can be expected to disappear with rising economic levels *even in the absence of particular regional policies*" (our emphasis; ibid.). This idea of automatic equalization certainly seems less compatible with Myrdal's concept since the latter hypothesized that market forces permanently fuelled spatial polarization, so thus the intervention of the state became necessary after a certain point. In fact, the sentence in the UN publication that Myrdal did not take into consideration was not firm evidence, but an expectation. Yet, much of what he used from the same UN publication to substantiate his concept was also nothing but expectation "tempting to argue". In other words, Myrdal adopted as "facts" a great deal of UN hypotheses seemingly substantiating his concept, while totally ignoring other suggestions not in accordance with his theory.

Besides the problem of lacking empirical substantiation and the arguable nature of daring extrapolations, Myrdal's reasoning raises an important theoretical question with strong political relevance. This is the dual categorization of countries and regions with "developed" or "rich" areas on the one side and "underdeveloped" or "poor" on the other side. The distinction of these "two classes of nations" (p. 72) suggests decisive dissimilarities in the path of economic growth and polarization they follow, while it similarly makes differences within these groups absolutely blurred. Such a dualistic approach, of course, might be useful since it *a priori* suggests a faster and even accelerating growth of the "rich" and a great and intensifying handicap of the "poor", which is in accordance with the concept of circular causation and self-accelerating processes. But this interpretation ignores that the countries of the world as well as the regions in most countries do not form two clearly separable groups, not even in terms of per capita production or income. Instead, countries and regions are spread over a broad spectrum with regard to the value of these indicators, and there is no remarkable gap separating two large groups from each other.

Although a strictly dualistic view is a remarkable oversimplification of reality in an analytical sense and a potential reason for misleading interpretations, it well reveals the strong political notions of Myrdal's work. To understand this, the concept should be put in its geopolitical context: a world in which superpowers struggled to make allies among newly established, post-colonial countries, which meanwhile were quite common in their negative attitude towards their former colonizers. In this perspective, the volume is a precisely thought-through work,

despite its theoretical and empirical challenges. The dualistic structure well represents a world where basically two types of countries can be found. The one type is constituted by countries newly becoming independent and looking for supporters (the "underdeveloped" world), while the second group is formed by those powers competing with each other in the Cold War, looking for potential allies and trying to stop the geopolitical expansion of the rival bloc (the "developed" world).[24] And Myrdal also stressed that this dual model should be taken very seriously since the difference between the two categories might possibly become a major source of international tensions: "The peoples in the underdeveloped countries are becoming increasingly aware of these huge international inequalities and the danger that they will continue to grow; and these peoples and their spokesmen show an inclination to put part of the blame for their poverty on ... the countries which are better off" (p. 7).

For the pieces on this "Grand Chessboard" (Brzezinski 1998), Myrdal's words were most sympathetic towards the "underdeveloped" or "poor" countries, which in his book mostly meant former colonies. For instance, he clearly presented the negative consequences of asymmetrical power relations between colonizers and those colonized. He called this "enforced bilateralism", which was "often idealized as 'close cultural and economic ties' to a mother country", but which "at the end ... normally mean a considerable economic disadvantage to the dependent country" (Myrdal 1957, p. 58). As he put it, colonizing powers were interested in "monopolizing so far as possible the dependent country for [their] own business interests" (ibid.), due to which production in the colonies was subordinated to the needs of the imperial center and they were "deprived of effective nationhood" (p. 59). Consequences for spatial disparities were also far-reaching. Since colonies "had no government of [their] own which could feel an urge to take constructive measures to promote the balanced growth of a national economy" (ibid.), they were "laid bare and defenseless to the play of market forces as redirected only by the interests of the foreign metropolitan power" (p. 60). Thus, colonialism resulted in "a strengthening of all the forces in the markets which anyhow were working toward internal and international inequalities" (ibid.). With these words, Myrdal clearly took sides in the debate over colonial heritage, namely in favor of the former colonies, otherwise in accordance with the brief manifesto he formulated in the Preface: "The value premises which determine my viewpoint are the desirability of political democracy and of equality of opportunity." (p. xix).

[24] The sharp distinction of "developed" and "underdeveloped" countries is especially interesting in light of the fact that Myrdal stressed in his work at many points how the contrast of believers and pagans, and later the concept of races as "theological justifications" (p. 115) were used historically to differentiate people and justify the subordination of one group to another (e.g. pp. 115–116). Actually, the latter idea was groundbreaking and invoked questions (such as the social construction of the "Other") becoming popular in mainstream social science only after Said's (1978) *Orientalism*. But while drawing attention to these issues, Myrdal virtually overlooked that his own rigid dualistic categorization could also serve a similar notion, namely the struggle of "developed" countries to entice the "underdeveloped" to themselves.

This firm refutation of colonialism, however, did not mean for Myrdal that former colonies should break all their ties with the whole of the "developed" world. First, he pointed out that colonial powers themselves, together with all serious problems and injustice inherent in their policy, also had positive contributions to the life of colonial peoples. Actually, "the colonial governments built roads, ports, railways, etc." (p. 56), they "established law and order" (ibid.), "conferred also higher education and training for administrative and professional responsibility on some" (p. 57), and colonialism in general "implied contacts with the ideas and ideals of the world and of the advanced countries" (ibid.). These achievements, "even when … these enterprises were motivated primarily by the colonial governments' own interests and those of their settlers and business groups, they represented important advances toward creating the conditions for general economic development" (p. 56). Moreover, in Myrdal's view "these generally beneficial activities of colonial governments and their business people took on a larger scope in the cases where the political domination was a more complete institutional arrangement and endured for a considerable time" (p. 57), and "the colonies probably had more development than if they had been left to themselves" (ibid.). Yet, these positive words did not justify colonial rule for Myrdal, and not only for moral reasons. He also saw colonial powers failing in stimulating stable economic improvement in their colonies: "during the time of dependence … positive accomplishments showed a persistent tendency not to result in much economic development" (ibid.), foremost because of the lack of independent local governments, which would have been interested in stronger and more balanced economic growth.

Thus, what Myrdal actually did here was firmly deny the colonial model, but also emphasized that the one-sided self-isolation of "underdeveloped" countries from the "developed" world could also have negative implications for the former group. In Myrdal's words, although new, independent governments got a "great asset" through their independence, "this new asset … will not be remunerative unless put to use in an intelligent and firm manner" (p. 62). And, since newly independent countries "have not inherited the traditions of rationality and the rule of law which were so important in the earlier history of the now-developed countries" (p. 100), the only advantage "they have is our [the developed countries'] accumulated scientific and technical knowledge" (ibid.). For this reason, Myrdal considered them to have "reasons for learning from all the world" (p. 68). Implicit geopolitical consequences were logical: former colonies had the right to freedom, and they could take advantage of it, but only if they utilized from the knowledge accessible in "developed" countries as much as they reasonably could. This suggested an international framework in which there was no place left for colonial empires, but where new links between "developed" and newly independent "underdeveloped" countries were important to be created.

Myrdal, however, understood "learning from all the world" quite selectively. He was no advocate of copying everything that "poor" countries saw in the "developed" world, because some ideas might be incompatible with "underdeveloped" contexts: "Neither our techniques of politics, administration and social reforms nor

our techniques in production and distribution can with advantage be simply taken over. These techniques have been developed to suit the very different conditions of the advanced countries and are inappropriate to the needs of the underdeveloped countries." (pp. 100–101). For this reason, "the underdeveloped countries ... should not accept this theory uncritically but remold it to fit their problems and their interests" (p. 101). Furthermore, Myrdal took an important step at this point. While arguing that the "poor" countries should decide *themselves* what they adapted and utilized from the pile of ideologies in the "developed" world, he still gave quite direct suggestions. And with this, he definitely entered the domain of political propaganda.

Myrdal had already made rather explicit that "underdeveloped" countries should develop new international ties. Now he also named ideologies the former colonies should reject:

> "I would wish [the former colonies] to have the courage to throw away large structures of meaningless, irrelevant and sometimes blatantly inadequate doctrines and theoretical approaches and to start their thinking afresh from a study of their own needs and problems. This would then make them far beyond the realm of both outmoded Western liberal economics and Marxism." (Myrdal 1957, p. 104.

For liberal economics, rejection was an outcome of Myrdal's highly critical attitude towards neoclassical concepts, which he considered as unrealistic and serving partial political interests (this argumentation was already presented in this section of our essay). Marxism likewise did not fit the bill for Myrdal because it only criticized classical economics without saying what to do instead. In Myrdal's words, "Marx never worked out a system of organized economic policies to be carried out after the revolution: the notion of 'economic planning', now recognized as the true shibboleth of socialism, did not play any important role in his thinking" (p. 142).

Of course, Marxism itself is not to be equaled to the Soviet-type political and economic system. This was also recognized by Myrdal, who stressed at another place that "underdeveloped" countries should not only avoid Marxism, but the Soviet model as well. He used here the argument that the Soviet way of "development" did not principally differ from the capitalist road in an economic sense, but did not provide the (democratic) political conditions necessary for the balanced emergence of "poor" countries. As he put it:

> "The underdeveloped country might ... recall that the one-century delayed industrial revolution which has been taking place in the Soviet Union under very different political and institutional conditions closely followed, in this one respect, the pattern of earlier capitalist development, in that the levels of real income and consumption of the working masses were kept exceedingly low to allow for sustained rapid capital formation. *There is no other road to economic development* than a forceful rise in the share of the national income which is withheld from consumption and devoted to investment." (our emphasis; Myrdal 1957, p. 84)

This reasoning was actually the Western counterpart of what Stalin had written about the same issue in the early 1950s (see Sect. 5.4). For Stalin, both robust economic growth and spatially balanced "development" (thus, the reduction of

spatial inequalities) were only possible in a communist economic system. His main point was that the Soviet-type economic model could offer solutions to complex problems in capitalism, which the latter could not cure but perpetually reproduced. Myrdal's argumentation, instead, aimed to demystify the Soviet alternative and to show that it was also not free from the challenges occurring in capitalist economies. Furthermore, since the dictatorship in the USSR disabled political negotiations between interest groups, which were common in Western democratic countries, Myrdal argued that communism was predestined to fail in sustaining long-term growth parallel to spatial convergence.

In other words, in the Myrdalian view, "underdeveloped" countries could benefit much from learning from the "developed" world, both in terms of economic growth and spatial equalization. However, former colonial powers of Western Europe with their doctrines of classical economics as well as the Soviet Union with its communist ideology were exiled by Myrdal from the domain of feasible ideals to follow. Hence, only one geopolitical option remained, which the author made explicit in two very propagandistic paragraphs:

> "For many reasons anticolonialism and a sympathy for the poorer nations are very much stronger in the United States of America than anywhere else in richer countries, either in Western Europe or in the "white" British dominions. In Europe and still more in the underdeveloped parts of the world I have observed that ordinary people and also politicians have no real appreciation of how important this trait in American culture is and, more particularly, how severely in practice it limits the ability of the United States government to support the old colonial powers in Western Europe who are its political allies.
>
> The average American citizen is apt to suspect the motives of those powers in their dealings with political dependencies or former dependencies. Were it not for all the complicated tactical interests involved in carrying on a cold war by means of a great number of very diverse and often fragile alliances, the United States would even more often, and more bluntly, come out on the side of the poorer countries. In particular it would back the liberation movements in the countries which are still political dependencies." (Myrdal 1957, p. 78)

This rather idealized picture grasped the main geopolitical notion of the book. For "underdeveloped" countries, Myrdal presented the "developed" world as including many countries and various systems which did not, could not, and actually would not solve the problems of "poor" countries. The only remarkable exception was the United States and its people, who appeared in the volume as an unquestionable friend of the former colonies, who was able to help, and who did not do that in its own hidden interest but due to its sober appreciation for those newly liberated peoples. By this, Myrdal drew up in his book a geopolitical map profoundly similar to that which was adopted and presented to the world in Truman's 1949 inaugural address and in US Cold War strategies.

Furthermore, Myrdal did this without providing direct empirical information on the US and USSR systems. For Soviet reality, he was aware that it was a basically different context due to central state planning, the public ownership of the means of production, and state monopoly of international economic relations (p. xix). For this reason, Myrdal already made clear in the preface that he "restrict[ed] [his] range of vision to the non-Soviet world" (p. xx). But in fact, he gave up this restriction as

soon as the aim was to give geopolitical orientation to the "underdeveloped" countries, where it was necessary not to remain silent on the Soviet issue. The outcome was a hybrid argumentation, sometimes excluding the USSR from the focus due to a lack of empirical data, but sometimes still including it despite limited information in order to depict it on the geopolitical world map as an alternative to reject. This mixture of lacking empirical information and theoretical beliefs with political overtones is exemplified by Myrdal's argumentation: "I *believe* that the principle of circular and cumulative causation would have its application in the Soviet world, too, in explaining development trends as well as in determining policy. And *I would personally be greatly interested* in pursuing my study into the realm of Soviet economy." (our emphases; p. xix). Another typical example for political statements without empirical substantiation was Myrdal's already quoted words "there is no other road to economic development", which is actually impossible either to confirm or to deny, but it was an obvious plea for the US-type capitalist system. And a further example to such "wishful thinking" was Myrdal's underlying hypothesis for "poor" countries, namely that all of them "crave economic development as well as national independence" (p. 7). Here empirical evidence would have been required to prove that the "underdeveloped" world really "craved" economic development, so that this claim in concert with the economy-oriented geopolitical thinking both in the United States and in the Soviet Union was not simply imposed on the "poor" countries.

Similarly, the highly-worded paragraphs about the United States did not reveal those "many reasons" for which American people and politicians were claimed to be extremely receptive to problems of the "underdeveloped" world. Without any doubt, Myrdal named two reasons, yet not "many". The first was "anticolonial feelings, and more generally, feelings of sympathy for the underdog", which were in his view "strongly based in the inherited ethos of Western civilization" (p. 77). The second reason was that the United States, unlike most European countries, had to fight for its freedom, for which it highly appreciated the freedom of other peoples. These aspects, however, do not seem as convincing as Myrdal suggested. The "sympathy for the underdog", if indeed a part of "the inherited ethos of Western civilization", had to be as strong in Europe as in the USA.[25] The appreciation of freedom and the fight for it was also not absolutely unique to the United States. To fight against foreign occupation or for the unification of a country that foreign interests hindered was a strong and vivid experience in many European countries as well, from Belgium and the Netherlands through Germany and Italy to Greece, even if Myrdal did not devote a single word to these cases.

To sum it up, Myrdal's concept was a highly innovative theoretical contribution to the spatial disparity discourse. The firm rejection of the doctrine of stable

[25] Of course it is itself questionable what "Western civilization" exactly refers to, and even if such a category can be defined, whether it is substantiated to implicitly suggest the "sympathy for the underdog" to be a characteristic feature of "Western civilization", thus, more explicit there than in "other civilizations". This issue, however, does not belong to the main focus of our essay.

equilibrium, the introduction of the concept of circular causation and of the parallel existence of "backwash" and "spread" effects brought fresh ideas into the analysis of spatial disparities. Furthermore, putting the neoclassical economic approach in its epistemological and political context was a groundbreaking act by which Myrdal was far ahead of his time, even if these points of his book gained virtually no attention from his successors. But in the meantime the ability of Myrdal's highly vivid ideas to bring researchers to an empirically more substantiated understanding of spatial disparities is questionable. This is because of the lack of empirical evidence, and some doubtful theoretical and methodological oversimplifications (such as the global extrapolation of Western European statistics and the strictly dualistic interpretation of the world along the axes of "developed" and "underdeveloped"). Yet, Myrdal provided a strong geopolitical guide for the intellectuals in "poor" countries, which gave them clear suggestions whom to deny and whom to ally. With this, the book undoubtedly became a crucial work in the eyes of those shaping global politics, and one providing considerable scientific ammunition for US decision-makers. Thus, Myrdal's volume began a long scientific career, where the serious gaps in its empirical substantiation and falsifiability were tendentiously overlooked, while nobody pointed at the strongly propagandistic nature of its argument. In other words, Myrdal's work is a remarkable example how Cold War politics influenced the spatial disparity discourse, which actively contributed to the justification of geopolitical struggles, while it paid much less attention to empirical and theoretical issues without which an "unbiased" understanding of social processes is hardly possible.

6.7.2 Hirschman's Technocratic Polarization Model with Political Overtones

Without any doubt, Myrdal's 1957 book with its rejection of the stable equilibrium concept and its idea that geographical inequalities are permanently being shaped by contrary forces opened a new phase in spatial disparity research. He was, however, not the only theoretician to move this direction. In the same years, the German-born American economist Hirschman (1966[1958]) published a theory having much in common with that of Myrdal.[26] In fact, the circumstances under which Hirschman wrote his book were also somewhat similar. Just as Myrdal worked for many years as an economic analyst for the UN Economic Commission in Europe, Hirschman also spent 4 years in Colombia as an official economic advisor and private consultant (Hirschman 1966[1958], p. vi). During these years he realized two important phenomena, which Myrdal also faced before writing his book. First, Hirschman

[26] Although Hirschman's much-referred-to book was published in 1958, his main ideas concerning the controversial forces that shape spatial disparities had already been released a year before (Hirschman 1957), the same year as Myrdal's volume was released.

observed that "in the geographical sense, growth is necessarily unbalanced" (p. 184) since "economic progress does not appear everywhere at the same time and ... once it has appeared powerful forces make for a spatial concentration of economic growth around the initial starting point" (p. 183). Second, he found these tendencies profoundly incompatible with the then dominant neoclassical theories, which he found useless in explaining tendencies in the real world. As he put it, "existing theories had seemed to me to be particularly unhelpful to the decision-maker in underdeveloped countries" (p. v).

Due to these observations, Hirschman, "heartily disagree[ing] with the 'balanced growth' doctrine" (p. 50), began working on an alternative theoretical explanation, which, as already mentioned, showed remarkable similarities to that of Myrdal at many points. Just as Myrdal, Hirschman also claimed the existence of two basic sets of economic effects, which were contrary to each other, and shaped spatial disparities dynamically. Hirschman named these "polarization" effects and "trickling-down" effects. Actually, these categories "correspond[ed] exactly" (Hirschman's own words; p. 187) to Myrdal's "backwash" and "spread" effects. Similarly to Myrdal, Hirschman also underscored that a possible outcome of free trade was that "growing areas" induced strong competition due to which in "backward areas" even existing production went bankrupt.[27] Moreover, he claimed free migration to have similar "unfavorable" outcomes under certain circumstances, since "instead of absorbing the disguised unemployed, Northern progress may denude the South of its key technicians and managers as well as of the more enterprising young men" (p. 188). And, if the lack of tariff walls and borders benefited "growing areas", "what little capital the South generates is also likely to migrate northward" (p. 189). Hirschman even suggested that "the loss to the South due to the departure of these men may be higher than the gain to the North" (p. 188), so that "polarization" effects might not only increase spatial disparities but also reduce the overall level of economic production in the given system. Still, again in accord with Myrdal's claims, he argued that the spatial migration of factors of production might also have some positive implications for the "backward" regions. He saw this possible if mobility improved investments in the "poor" regions, or if "the North ... absorb[ed] some of the disguised unemployed of the South and thereby raise[d] the marginal productivity of labor and per capita consumption levels in the South" (p. 188).

For the outcome of "polarization" and "trickle-down" effects, a further similarity of the two concepts was that Hirschman, just as Myrdal did, found spatial divergence an "inevitable concomitant and condition of growth itself" (p. 184), at least in the initial phase: "an economy, to lift itself to higher income levels, must and will first develop within itself one or several regional centers of economic strength" (p. 183).

[27] Besides "growing" and "backward" regions, Hirschman frequently called in his book these categories "the North" and "the South". This profoundly fit the then conventional terminology to identify the level and dynamics of economic growth with global geographical regions, which is otherwise an oversimplifying and scientifically doubtful, and politically contested approach.

In this argumentation, unlike Myrdal, Hirschman directly referred to Perroux's growth pole concept, and to Boudeville's (1957) work, where the term "growth pole" had already been defined in spatial perspective. Hirschman's views were also similar to those of Myrdal in rejecting that market forces would automatically strengthen "trickle-down" effects and promote spatial convergence in later phases of economic growth. Instead, as he put it, "three possibilities arise" in the long term, at least theoretically (p. 189). For Hirschman, one of these seemed rather compatible with the stable equilibrium doctrine since it hypothesized "the rise in Southern prices", which "would fairly soon prove effective in raising production" (ibid.). Thus, the "South" would catch up, and spatial disparities would decrease. But as Hirschman put it ironically, he saw this version as likely only "in the best of worlds" (ibid.), barely under real circumstances. In his view, the second theoretical option was "the slowing down of Northern progress resulting from rising labor and material costs" (ibid.). Still, Hirschman found this alternative unlikely again "as the North is not entirely dependent on the South" (ibid.), so that the increasing costs of materials from the "backward" regions could be balanced by seeking new sources, and rising labor costs by recruiting additional cheap labor from other poor regions. The latter tendency was actually what Hirschman found the most possible, and which in his eyes efficiently blocked any significant spatial convergence after the enduring phase of divergence. In consequence, if market forces were left alone, "the South could be left in a far worse backwater than before" (ibid.).

To sum it up, Hirschman gave the highest chance under the dominance of market forces to an economic growth process beginning with strong divergence in space, which was later unlikely to convert into convergence automatically. For a reversal in the dynamics of spatial disparities, similarly to Myrdal, Hirschman found the equalizing steps of the state necessary. But for chances that such an intervention occurred, he was obviously more optimistic than Myrdal. Without any doubt, the Swedish economist likewise emphasized that market forces increased spatial disparities, and that polarization could only be reversed by the state. He did not make explicit anywhere, however, that the state would necessarily realize this responsibility and intervene. Instead, Myrdal rather suggested that growing spatial inequalities fuelled increasing political tensions both between and within countries, and that a democratic state was *likely* (but not determined) to intervene as soon as these tensions became politically dangerous. In other words, state intervention to initiate convergence was for Myrdal a possible and politically beneficial decision, but not an unavoidable economic or historical necessity.[28]

Hirschman had a different opinion: "It is our contention that nonmarket forces are not necessarily less 'automatic' than market forces." (p. 63). He was quite certain that state intervention necessarily would come, especially for two reasons. First, since "all governments regardless of their democratic character desire and need support from all sections of the country" (p. 190), which is a decisive political

[28] Myrdal also overlooked that dictatorial regimes might find it as much necessary to reduce spatial inequalities as democratic systems do.

aspect. Second, Hirschman also named a psychological motivation, namely that the notion to reduce disparities itself only emerges after disparity has become an experienced reality. In this sense, "it is the experience of unbalanced growth in the past that produces, at an advanced stage of economic development, the possibility of balanced growth" (p. 93). Considering these two factors as given in countries with significant spatial inequalities, Hirschman was quite optimistic about equalizing efforts from the side of the state. As he put it, "if the market forces that express themselves through the trickling-down and polarization effects result in a temporary victory of the latter, deliberate economic policy will come into play to correct the situation" (p. 190). In this issue, he clearly distanced himself from Myrdal's "excessively dismal" analysis (p. 187), where "his preoccupation with the mechanism of cumulative causation hides from him the emergence of the strong forces making for a turning point" (ibid.). In fact, Hirschman's only fear was rather that the government may not choose "the most efficient method of inducing growth in the South" (pp. 194–195), thus, that the pace of spatial equalization might fall behind what real conditions enabled. He considered the root of this problem in the government's notion to benefit as many regions as possible for political support, which can lead to the low-efficiency method of dispersing funds "among a large number of small projects scattered widely over the national territory" (p. 190). But this was in his eyes merely a peculiar issue, so one not to challenge the main tendency that the state intervenes at a certain point to reduce spatial disparities.

Hirschman's concept also differed from Myrdal's theory in a fundamental issue. As has already been presented, Myrdal argued that "The international inequalities are, of course, not dissimilar from the regional inequalities within a country." (Myrdal 1957, p. 10). At this point Hirschman found certain corrections necessary. For him, the implication of "polarization" and "trickling-down" effects was not the same at international and interregional levels. Instead, he claimed that "the polarization (backwash) effects are much weaker between nations than between regions within the same country" (Hirschman 1966[1958], p. 187). In his view, both "polarization" and "trickling-down" effects were much stronger *within* than *between* countries since regions are not sovereign political units within a country, while countries are sovereign units within the international community. Consequently, on the one hand regions are much more exposed to the outflow of factors of production than sovereign countries defended in this sense by their borders. Similarly, "backward" regions can hardly protect their local industry against more competitive products of "growing" regions, while "backward" countries have certain means of protection through taxes and tariffs on foreign trade. The latter is to great extent enabled by that countries have their own currency and a sovereign monetary policy, while the same lack in the case of regions.[29]

For these reasons, "poor" regions are much less competitive in their national markets than "poor" countries can be in the world market. In Hirschman's words,

[29] This argument might be challenged nowadays by the European Monetary Union, but in the 1950s Hirschman's argumentation was absolutely valid.

"countries compete in international markets on the basis of *comparative* advantage, regions within a country on the basis of *absolute* advantage" (our emphasis; p. 196). However, on the other hand, trickling-down was also considered as stronger within countries than between them. As Hirschman stressed, "developed" regions can easily invest in "backward" regions, while the same is much more difficult between countries. Hence, regional specialization can easily deepen between regions, but much less between countries. Moreover, "poor" regions might receive significant support from the national government, which becomes politically interested in reducing spatial inequalities once they have reached a certain level. But, for countries, "international solidarity of this kind is . . . still in its infancy" (p. 198).

Considering these differences, Hirschman emphasized that possible efforts to reduce spatial disparities shall follow different principles at different geographical levels. For stimulating growth in "poor" regions, he argued that the national government should maintain already given interregional "trickling-down" effects while limiting "polarization" effects. The latter might be achieved through providing for "backward" regions some "equivalents of sovereignty" (e.g. "national income tax deductions . . . and some autonomy in bank credit policy") (p. 199). At an international level, however, the "transmission of growth" (p. 200) might be better achieved if "polarization" effects remained as weak as they are, while similarly weak "trickling-down" effects were strengthened. In Hirschman's view, this could be guaranteed if an increasing sovereignty of "backward" countries (e.g. in controlling the flows of factors of production or in tariff and monetary policy) was accompanied by a closer integration into the world economy (in sense of attracting foreign investment and exporting local products).

As one can see, the concepts of Myrdal and Hirschman were common in most of the decisive theoretical issues. They both rejected the stable equilibrium concept. They interpreted spatial disparities as an outcome of the play of "backwash" or "polarization" and "spread" or "trickling-down" effects, where market forces were claimed to strengthen polarization rather than equalization. For this reason, both researchers found that a stable decrease in spatial inequalities was only possible if the state intervened. Myrdal and Hirschman were, however, not equally convinced about the unavoidability of this intervention, which was a main difference between their approaches. Furthermore, Myrdal interpreted polarization and equalization in a profoundly similar way in international and interregional contexts, while Hirschman pointed at serious peculiarities between the two geographical levels.

Besides these theoretical aspects, two other considerations are crucial from our point of view. The first goes to the empirical substantiation of Hirschman's concept, while the second concerns the (even implicit) political notions of the theory, if there were so. For the first issue, the successors' belief in a firm empirical substantiation of polarization theories (cf. Maier et al. 2006; Schätzl 2003) seems to be challenged by what Hirschman himself wrote in his book. His words in the Preface spoke volumes in this sense: "I have clearly left myself open to the twin charges of *overgeneralization* and *underdocumentation*. . . . I am very conscious that many of my statements must be considered *hypotheses* which remain to be tested." (our emphases; p. v). A clear consequence of these important shortcomings is that the

book in general and its explanatory part about spatial disparities in particular rather constitute a set of vivid enunciations than a falsifiable concept derived from empirical facts. Thus, the text is full of formulations such as "we may take it for granted" (p. 183), "what appears to happen" (p. 185), "seems to be" (ibid.), "[they] are likely to" (p. 190), "they might be better off" (p. 195), "the points made in the first part of this section lead us to think" (p. 208), etc. Sometimes, the author radiates much more self-confidence despite similarly lacking empirical substantiation while writing that "there can be *little doubt*" (p. 183), "we could *always* show" (p. 184), "it *obviously* sets in motion certain forces" (p. 187), "public investment *clearly* plays here an 'induced' role" (all italics are our emphases; p. 193).

Of course, neither a somewhat cautious nor a very definite formulation of thoughts should automatically be considered as problematic. It goes without saying that if empirical findings seem weak, it can be a fully legitimate task of the author to express his or her uncertainty. Solid results of painstaking empirical analyses or prudent philosophical argumentations can, however, reasonably motivate researchers to be firm in their words. This is by no means a problem to be criticized. The problem is rather that the quoted words of Hirschman, whether they mirror certainty or uncertainty, tendentiously remained on their own, and they were not followed by tangible and falsifiable facts. Hence, Hirschman's reasoning merely had an "it is so because it is so" attitude, which actually made his concept merely speculative. In fact, we do not think that speculations cannot be useful. Neither do we think that a theory cannot be based reasonably "on a limited number of observations" (p. v), even on the analysis of only one country. But it is highly questionable to present a *hypothesis* as substantiated theory, to confuse personal impressions and wishful thinking with empirical evidence. And, if the hypothesis about one country is underpinned by facts, its extrapolation to the whole world (as it actually happened in the book) is yet highly questionable. Even if the author thought that "at this stage the paucity of testable hypotheses has become an even more serious bottleneck in studying economic development than the shortage of data" (pp. v–vi) and that "hypotheses beget data" (p. vi), his 1958 book was still a set of hypotheses which had not managed to "beget data", not even since its publication. We should underscore once again that releasing speculative ideas is not *per se* negative but can be very useful through fertilizing scientific debates. Such an act is by no means deniable, it is rather to be supported. Yet, it is definitely misleading to write about the outcomes of wishful thinking as if they were "obvious", "clear" facts, about which "there [could] be little doubt", as Hirschman did. Such a proceeding ends up in that hypotheses are presented as "facts", so that they easily become accepted thanks to their suggested scientific image.

In terms of political overtones, Hirschman's work was in general rather technocratic compared to that of Myrdal. This was due to the "occasional use of technical language" (p. vii), and because Hirschman rarely made statements with direct political relevance. Still, his concept had considerable political implications. The idea that economic growth necessarily increases spatial disparities in an initial phase before efficient attempts of equalization take place had an obvious political

meaning for many countries in Central and South America. The claim that spatial polarization is unavoidable in an early phase of economic growth could reassure and give ammunition to decision-makers in these countries. In the light of Hirschman's words, even if US-propagated development projects in these countries increased and not decreased inequalities in the short and medium term, local politicians could argue that this was neither a sign of conceptual errors nor the shortcomings of realization, just a "necessary" concomitant of growth. This was an important argument given that many such projects actually raised social (Fishlow 1972) as well as spatial disparities in these countries (Haddad et al. 1999). Meanwhile, Hirschman's argumentation also implied that a socialist transformation of economy, a main fear of the US administration for "backward" countries, would not be a good option. First, if economic growth is claimed to result in polarization necessarily in the initial phase, one can suppose that this would also unavoidably happen in a socialist system. Thus, a socialist turn might also not provide an instant cure for the problem of spatial divergence.[30] Second, Hirschman's concept also suggested that just because spatial inequalities were on the increase, no governments should be afraid of an escalation of the problem. In this view, after a while even in capitalist systems various state interventions became possible, which could efficiently reverse spatial polarization. This reasoning implied that polarization in the short and medium term was only a necessary prerequisite for long-term spatial equilibrium, and consequently presented the maintenance of capitalism as a rational and desirable political decision in order to achieve long-term spatial equilibrium.

A further claim of Hirschman with firm geopolitical relevance was that a deepening international integration in terms of economy and politics would much benefit the "backward" countries. As he put it, the "development [of backward countries] could of course be greatly accelerated", if "the community of nations disposed of a political mechanism similar to the one that within a nation makes eventually for a redistribution of public investment funds in favor of the South" (p. 200). Hirschman also made explicit how he thought it a pity that there was a lack of such a system while writing that "international solidarity of this kind is *unfortunately* still in its infancy" (our emphasis; p. 198). These ideas were profoundly in concert with firm geopolitical attempts of the United States to create a framework

[30] In his work Hirschman made few remarks about socialist systems, but these basically suggested that socialism was "not better" than capitalism. First, it was claimed because certain issues (such as sectoral imbalances) were expected to emerge there similarly as in capitalism (p. 64). Second, some specific features of Soviet economic administration had at least as many negative as positive aspects compared to those in Western countries. Here Hirschman referred to the centralization of decision-making about investments. In his view, this could on the one hand facilitate "the production of entirely new articles not meant as substitutes for any one existing good", while, on the other hand, could make society strongly "biased against innovations whose introduction might cause losses to existing operators" (p. 61). Nonetheless, Hirschman did not give a general overview of how socialism could cope with spatial disparities.

for international cooperation in a post-colonial world along American principles and interests. Here, US administrations expected especially from the United Nations, the World Bank, and the International Monetary Fund to lay down the foundations of a new, democratic, and capitalistic world order in accordance with American geopolitical objectives (cf. Sect. 6.2). And Hirschman's lines about the desirability of a more integrated world market and stronger international solidarity pointed in this direction.

Besides these, Hirschman's otherwise rather technocratic book gave strong and explicit political support to the United States in its steps to reduce spatial disparities both between and within countries. For him, even if these efforts were not independent from geopolitical interests, they should not be criticized for this but they should definitely be continued. This was justified by Hirschman through the argument that international integration was basically not an outcome of American interests in the Cold War. Instead he claimed that the complicated international situation did not speed up but rather slowed down the processes that could open the way to international as well as interregional equalization. For this reason, Hirschman clearly urged the continuation of US efforts, irrespective of the criticism they attracted. In other words, Hirschman strongly argued for being proud of these decisive attempts instead of apologizing for them. As he put it:

> "For the time being, these efforts are largely the incidental results of a struggle for power. Yet it is obvious that they would be intensified rather than abandoned if this struggle were to cease tomorrow. *It seems a pity*, therefore, that we in the United States insist so loudly that the *bold and pioneering* steps we are taking to help the underdeveloped countries are dictated by military necessity or are 'straightforward business transactions'. Must we thus pave with apologies the road to what can be one of *mankind's highest achievements*?" (our emphases; Hirschman 1966[1958], p. 201.

In general, Hirschman's main concept about the emergence and temporal dynamics of spatial disparities, and about the possible means of equalization, was similar to those of Myrdal. In the analytical part, a significant difference was that Hirschman gave an explanation of how polarizing and equalizing effects functioned differently at international and interregional levels. This minor difference, however, did not concern the main issues of the two concepts. Similarities were in fact much more obvious. Both works were generally based on assumptions and hypotheses, thus, their main findings lacked profound empirical substantiation, so thus they were fundamentally unfalsifiable. Nonetheless, both concepts contained many political suggestions. In Hirschman's book these were usually implicit, but sometimes just as explicit as in Myrdal's essay. Both authors took a stance supporting capitalism as economic system as well as US attempts to handle spatial polarization at international as well as intra-national levels. And, in the meantime, these works both sought to implicitly demystify the Soviet alternative and claimed it provided no better solution to the short and medium term problem of spatial polarization than capitalistic democracies could do.

6.7.3 Williamson's Inverted U Model: Empirical Background and Political Implications

The concepts of Myrdal and Hirschman, which rejected the neoclassical doctrine of stable equilibrium, soon gained considerable popularity in the spatial disparity discourse. Their views about the contrary forces of polarization and equalization as factors shaping spatial inequalities exerted much influence on corresponding analyses. Over the next few years all those who wanted to provide a more sophisticated and empirically more substantiated explanation of spatial inequalities relied on these concepts. Here the achievements of the American economist Jeffrey Williamson were especially important since he tried to put the whole theoretical framework on a massive empirical foundation.

In his influential work, Williamson (1965) tried to answer "what *a priori* notions might we have about the behavior of regional income differentials as national development proceeds" (emphasis in original; p. 4). Thus, Williamson's main notion was similar to that of Myrdal and Hirschman, namely to identify the factors that shape spatial disparities and to reveal the temporal dynamics of the process. For theoretical background, Williamson both referred to neoclassical theories hypothesizing an automatic reduction of spatial inequalities and to the opposing concepts of Myrdal and Hirschman. Following the latter two authors, Williamson also presented why the spatial migration of factors of production as well as central government policy could both increase and decrease spatial inequalities under specific circumstances.[31] Through these controversial suggestions he presented that "the problem [of spatial inequalities] is hardly that simple" (p. 5), which obviously called for an empirically more detailed analysis of the issue. At this point, Williamson referred to the innovative thoughts of the Russian American economist Simon Kuznets (1955, 1963a) as well, who had already drawn a lot of attention to the temporal dynamics of *social* disparities.

Although uninterested in spatial inequalities, Kuznets had many findings that seemed to have much relevance for the analysis of spatial disparities as well. Right in his 1955 work, Kuznets developed a concept that had remarkable similarities

[31] We should stress here that some authors refer to Williamson's concept as a neoclassical one (King and Clark 1978) or at least as a theory following neoclassical logic (Fan and Casetti 1994). This is due to the underlying hypothesis that the usual tendency at a certain point during the process of economic growth is that convergence begins. In our view, however, this interpretation is misleading. In fact, Williamson claimed in his concept that convergence did *not* come necessarily and automatically under free-market circumstances. Instead, he considered state intervention as a major prerequisite for spatial equalization. Without any doubt, Williamson otherwise believed that this interventionist policy always came when a certain level of economic "development" was achieved. In this sense, a new phase of convergence after a period of divergence was the "normal" tendency in his eyes, but not a tendency that automatically emerged. Hence, Williamson was in our view not an advocate of the neoclassical concept of "equalization by free market", rather a follower of Hirschman, who was convinced about the unavoidability of an equalizing state policy in "developed" countries.

with those published by Myrdal and Hirschman some years later. As Kuznets (1955) underscored, disparities of family incomes significantly decreased in the early decades of the twentieth century in the United States, in the United Kingdom, and in Germany (namely Prussia and Saxony) as well.[32] This tendency emerged in times of rapidly increasing average family incomes. Such a phenomenon was obviously intriguing since it seemed to be in perfect accord with the neoclassical concept of automatic equalization. In general, Kuznets traced back these processes to the later phases of industrialization. For him, the expansion of industry at the cost of agriculture drove a high number of employees from agriculture to industry, and basically eliminated sectorial dualism. In his eyes, this shift raised the average level of income and reduced its social inequalities as those leaving the primary sector behind to enter the secondary sector witnessed a significant increase in their incomes and got much closer in this respect to those already working in industry.

Kuznets was, however, also convinced that industrialization did certainly not have the same implications in its first phase as later on. Instead, he claimed that the emergence of the first industrial districts, the higher productivity and incomes they could provide their employees compared to those in rural areas, increased income disparities while also raising the average level of income. Kuznets supposed that this first phase might have begun in the United Kingdom at the end of the eighteenth century, and during the nineteenth century in the United States and in Germany. In general, he described the main temporal tendency as "a long swing in the inequality characterizing the secular income structure: widening in the early phases of economic growth when the transition from the pre-industrial to the industrial civilization was most rapid; becoming stabilized for a while; and then narrowing in the later phases" (p. 18). Kuznets also found that in low-income countries income inequalities were smaller than in those with average income, which he saw as a further evidence to support his concept. Similar findings were released in Kuznets' (1963a) later work, which was based on a larger amount of statistical data for more countries than the 1955 analysis.

These analytical results soon attracted the attention of those interested in spatial issues for a simple reason. Kuznets' concept about rising income disparities in the first phase of economic growth and decreasing inequalities in the later phase suggested a remarkably similar pattern for social disparities as what Hirschman claimed for spatial inequalities. Furthermore, Kuznets' idea was also similar to those of Myrdal and Hirschman since he traced back the dynamics of inequalities to controversial forces, some of which increased while others decreased disparities. The analogy between this concept and "backwash" and "spread" effects or "polarization" and "trickling-down" effects was obvious.

It is no wonder that Williamson basically adopted the logic of Kuznets while he conducted an empirical analysis of spatial disparities to see whether there was any regularity in its temporal dynamics. His main aim was to focus on the link between

[32] This statement was based on social quintiles' changing share of total income.

economic performance in a country and economic disparities between its regions. Williamson came out from the Hirschmanian assumption that economic interdependence was much stronger between regions in the same country than between countries (p. 5). Thus, he was convinced that the regularities were easier to be identified at a sub-national level. At this point, Williamson's hypothesis obviously mirrored the strong influence of Kuznets' work:

> "The initial hypothesis of this study is … that the early stages of national development generate increasingly large North-South income differentials.[33] Somewhere during the course of development, some or all of the disequilibrating tendencies diminish, causing a reversal in the pattern of regional inequality. Instead of divergence in interregional levels of development, convergence becomes the rule, with the backward regions closing the development gap between themselves and the already industrialized areas. *The expected result is that a statistic describing regional inequality will trace out an inverted 'U' over the national growth path*" (our emphasis; Williamson 1965, pp. 9–10)

To underpin his presumption, Williamson first carried out a cross-section analysis of data sets from 24 countries, including the classification of countries in seven income groups (following Kuznets 1962), and the analysis of the level of regional income inequalities. The latter was calculated as the weighted standard deviation of the regions according to their income value. The temporal focus was put on the post-war period, with all statistics referring to dates within the time interval of 1949–1960. In order to reveal the link between the two phenomena, Williamson depicted in a cross tabulation all 16 countries about which he had data for at least 2 years (Fig. 6.1). The results seemed to indicate rising regional inequalities in low-income countries, followed by stagnating disparities in middle-income countries, and by decreasing disparities (thus, spatial convergence) in high-income countries. In the light of these findings, Williamson considered his hypothesis as substantiated by empirical information: "it does appear that the pattern of regional inequality is in the form of an inverted 'U', reaching a peak in the middle income class" (p. 15). Furthermore, he judged "the relationship between level of development and degree of regional inequality … to be quite significant" (p. 14). To give an even more exact proof to this, he determined the Spearman rank correlation coefficient between the regional disparity levels he calculated for each country and the then available estimates for national per capita incomes provided by Chenery (1960). Here, he also took into consideration the countries for which regional data sets were accessible only for 1 year (thus, which had to be ignored in the cross tabulation) insofar their national income levels were depicted in Chenery's list. The calculation on the basis of these 19 countries gave +0.721 as the result, which was in Williamson's eyes a further proof of the validity of his concept.[34] He even added

[33] Just as Hirschman, Williamson also used this term "interchangeably with regional income differentials" (Williamson 1965, p. 3).

[34] In an interesting way, Williamson did not explain whether he calculated income ranks for the analysis in ascending or descending order. However, as he regarded the positive value of the coefficient to be in concert with his inverted "U" hypothesis, it seems certain that he followed the different orders while creating ranks for income and for regional disparities.

Income class	V_w rising	V_w stable	V_w falling
I		Australia United Kingdom	Canada United States Sweden
II		France	Finland West Germany Netherlands Norway
III			
IV		Italy	Spain Brazil
V	Japan Yugoslavia		
VI			
VII	India		

Fig. 6.1 Williamson's cross tabulation with 16 countries according to their income class (in descending order from I to VII) and temporal change of regional income disparities (V_w) during the postwar period. Adapted from Williamson, Jeffrey G. (1965). Regional Inequality and the Process of National Development: A Description of the Patterns. *Economic Development and Cultural Change, 13 (4/II)*, 3–84, © 1965 The University of Chicago. Reproduced by permission of The University of Chicago Press

that "there is a significant amount of information for the currently underdeveloped nations which this study has not employed (either due to its unreliability or due to its non-quantitative nature)" (p. 17), but appear to be in accordance with the findings of the cross-section analysis.

Williamson also tried to test his hypothesis on datasets for lower level administrative units. For 46 out of the 50 US states he carried out a logically similar calculation to that presented in Fig. 6.1, but here he concentrated on county-level disparities within states in 1950 and 1960. His finding was that only 9 of the 46 states witnessed an increase (and the vast majority a decrease) in spatial inequalities while "all of the U.S. states [were] above the middle income range" (p. 20). This seemed again to substantiate the concept since US statistics indicated declining spatial inequalities in high-income territorial units (the US states). Moreover, Williamson stressed that there was a statistically significant inverse correlation between per capita income of the states and their inner (interregional) disparities (for detailed results see ibid., pp. 19–22).

And, for him, this fact also suggested that the inverted "U" concept could be extrapolated. As states do not have the same sovereignty over counties as the country (the federal government) has over the states, Williamson claimed "inter-county income differentials ... more likely to be attributable to 'natural' forces rather than governmental policy" (p. 18). For this reason, the feasibility of the original hypothesis at the sub-national level implied the existence of "natural" forces that tend to polarize in the early phase of economic growth and to equalize in later periods, and not only at the national level.

In fact, the statistical apparatus utilized by Williamson enabled further observations as well. Besides the cross section analysis, the author also carried out a series of longitudinal research projects based on a time series of spatial disparity values for ten countries. Here the author focused simply on the temporal dynamics of spatial inequalities, not on their connection with the given countries' economic growth. Another difference to the cross-section analysis was the limited amount of information, due to which the temporal investigation had to focus on less geographical entities. Yet, Williamson summarized the results as "with the exception of Germany and perhaps Canada, what slim historical evidence we do have seems to be at least consistent with the results of our cross-section analysis" (p. 31). Furthermore, in the United States, where data sets were available for a remarkably long time interval from 1840 to 1961, in his interpretation the results "trace[d] out a 'classic' pattern of regional inequality" (p. 23).

In the light of all these results, Williamson's main conclusion in concert with his hypothesis was that "rising regional income disparities and increasing North-South dualism is typical of early development stages, while regional convergence and a disappearance of severe North-South problems is typical of the more mature stages of national growth and development" (p. 44). The author also made attempts to reveal the factors fuelling these tendencies, and argued that both the regionally altering levels of labor participation and the sectoral distribution of workforce were likely to play an important role here. In general, however, he rather focused on "describing the patterns", and left reasons to be revealed by his successors. As he put it: "a number of interesting related questions . . . are left unanswered in this study. The most pressing question is . . . why does this pattern of regional inequality persist?" (p. 45). But even if this otherwise highly important question remained open, Williamson's article was a fundamental contribution to the non-neoclassical approach in spatial disparity research due to the huge amount of empirical information it was based on.

Of course, the strong empirical profile of the work gave it a firm scientific image. While the books of Myrdal and Hirschman contained many arguments whose empirical evidence could hardly be checked, Williamson's analysis was based on statistical data and, thus, was falsifiable. Furthermore, it provided a model-like description of how spatial inequalities changed with economic growth that was easy to interpret and present, even graphically (Fig. 6.2).[35] With this, Williamson achieved in terms of scientific image a previously unprecedented level in non-neoclassical research of spatial disparities. Without any doubt, the concept of Myrdal and Hirschman also claimed to identify some clearly interpretable general factors driving spatial polarization and equalization. But Williamson went much further since he introduced mathematical modeling in the approach of polarization

[35] Although Williamson himself did not release any illustrations in his article, his successors visualized his "inverted U", which, thus, found its way to broad strata in academia (even if such representations could distort the initial concept to some extent since the ways various authors depicted Williamson's "inverted U" were not profoundly similar. Cf. Gyuris 2011).

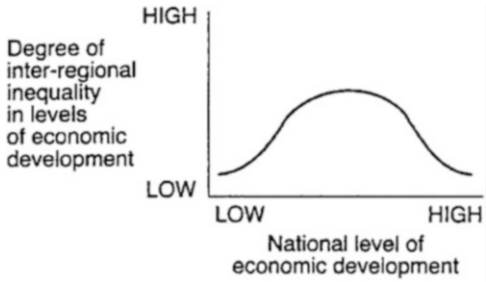

Fig. 6.2 A graphical representation of Williamson's inverted "U" concept. Adapted from Knox et al. (2003), p. 240. Reproduced by permission of Taylor & Francis Books UK

theory, something having been typical before only in the neoclassic. This innovation together with the great deal of empirical data Williamson mobilized unquestionably raised the concept's scientific convincing power, which proved rather long-lasting in the eyes of many. For instance, almost 4 decades after it was published, Cheshire and Malecki (2004) still emphasized in their detailed overview of the history of growth research that Williamson "provided *quite persuasive evidence*" that "the incidence of regional disparities ... was a function of the level of economic development" (our emphasis; p. 251).

Still, it is worth having a closer look at the "inverted U" concept and its empirical substantiation, especially as many authors have not been as enthusiastic about it as Cheshire and Malecki. Knox et al. (2003), for example, had the opinion that Williamson's "idea of divergence followed by convergence in regional disparities does not meet with strong support" (p. 240). In his detailed critical evaluation of Williamson's work, Krebs (1982) simply categorized the "inverted U" concept as belonging to the group of empirical comparisons that are "virtually worthless" (p. 79). Furthermore, Williamson himself also openly pointed at some weaknesses in his calculations. He saw the main shortcomings as follows (Williamson 1965, pp. 10–11): first, regional units are not "given by nature" but are the outcome of the process of regionalization, thus, they might not constitute an optimal and comparable framework for international analyses. By this, Williamson referred to what later was named the modifiable areal unit problem (*maup*). This is linked to the fact that a certain area can be divided up in regions in remarkably different ways, and the number of possible regionalizations for a given area is actually infinite. For different ways of regionalization, however, statistical analyses can provide radically different results (Johnston 2009b; Openshaw and Taylor 1979), which is a serious challenge in comparative research.

Second, Williamson pointed out that he used nominal income data since regional deflators, thus, regional price indices were not accessible. Yet, he added that in Finland, the only country where he found sufficient regional deflators, results barely changed if regional deflators were considered. Moreover, Williamson suggested that "the divergence between regional price levels is likely to diminish as the nation develops" (Williamson 1965, p. 10). Hence, he suggested that this second point did not constitute a considerable problem. Third, Williamson emphasized that it was

problematic to compare income indicators of agricultural and industrialized regions since in agricultural areas natural products played a significant role in families' well-being, but they were not recorded in income statistics. Fourth, Williamson stressed that "the income accounting concept . . . varies considerably from country to country" (p. 11). In the given case, "Puerto Rican regional development levels are measured by median income per family, Norwegian by assessed income per capita, Canadian by personal income per capita, German by net national product per capita, and so on" (ibid.).

Of course, each of these remarks is intriguing in itself, even if such problems could be handled to some extent. For maup, an opportunity to cope with this challenge is to work with the same regional distribution for the whole time horizon in longitudinal (historical) analyses. Furthermore, one can investigate tendencies at different geographical levels in the same country. This is an efficient method to obtain a more detailed and substantiated understanding of spatial inequalities. The possible bias of regional income analysis without regional price indices can be significantly reduced if one considers other indicators as well, e.g. those reflecting production and consumption. This method can also help much to reveal more precisely the differences between agricultural and non-agricultural regions. Finally, methodological differences in how income statistics are calculated can also be tolerated to some extent, even if an arbitrary comparison of extensively incompatible indicators is doubtful. Thus, the problems identified by Williamson can be solved to some extent in various ways. However, he failed to do this in his work. A typical example is that, as Krebs (1982) underscores, how insensitive Williamson's empirical analysis was for the modifiable areal unit problem. In fact, in his international cross-section analysis the number of regional units taken into consideration per country varied from 6 to 76. In other words, the degree of areal aggregation of the data sets was extremely different in the countries observed. These problematic issues obviously made Williamson's findings very questionable, which he himself also realized. As he put it in the light of these shortcomings: "*It can only be hoped* that none of these limitations is serious enough to negate the striking patterns discovered in the data." (our emphasis; p. 11). In fact, this sentence in itself could be enough to challenge the concept's empirical substantiation.

However, several further aspects of Williamson's "inverted U" shaped model that the author did not point out also raise questions. Among these, one can find issues of measurement. As Krebs (1982) emphasizes, the seven income groups of Kuznets, which Williamson used in his calculations, are very crude and not sufficient for a sophisticated analysis. Furthermore, although the cross tabulation based on this categorization (Fig. 6.1) might seem convincing, the link claimed by Williamson between economic growth and spatial inequalities proves weak in statistical sense since "the inequality index [varies] more within the groups than it differs among the groups" (p. 72). Yet, although Krebs' remark is theoretically legitimate, in the actual case it does not basically influence the validity of Williamson's findings. This can be proved if one uses the historical per capita

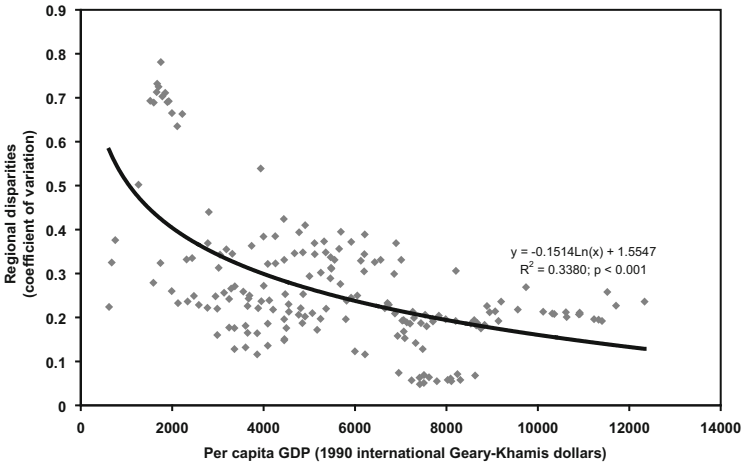

Fig. 6.3 The connection of per capita GDP and regional disparities in the 16 countries analyzed by Williamson (including all years that the author took into consideration in his 1965 article). Design by author based on data of Williamson (1965, pp. 25–26; p. 47) (regional disparities) and Maddison (2010) (per capita GDP)

GDP statistics of Maddison (2010) instead of Kuznets' data.[36] If we attribute the former to the regional disparity values calculated by Williamson, and depict the data on a scatterplot, the pattern seems to trace out the descending right side of the inverted U (Fig. 6.3). Moreover, this stochastic connection is significant, even if not completely deterministic, as its R^2 value of 0.3368 indicates.

Krebs, referring to Therkildsen (1978), also stresses that the coefficient of variation as statistical indicator might be problematic "for mathematical reasons" (p. 72). In fact, the coefficient of variation[37] is based on the average squared

[36] In fact, Maddison's historical statistics are also highly dubious at several points, even if they are frequently cited in journals with high reputation. This challenge, however, basically refers to comprehensive long term historical statistics (e.g. before the twentieth century), which are usually based on fictive estimations. To the contrary, more recent data about "the better documented economies of Europe and North America" (Clark 2009, p. 1156) are basically reliable, and at least 14 of the 16 countries analyzed by Williamson belong to this category. For this reason, we consider Maddison's statistics as useful in the given case for the given countries and the given time period. (A detailed review of ambiguities and reliable pieces of information in Maddison's statistics is given by Clark 2009).

[37] Weighted coefficient of variation:

$\sigma = \sqrt{\dfrac{\sum_{i=1}^{n} f_i (x_i - \overline{x})^2}{\sum_{i=1}^{n} f_i}}$, where x_i is the value of indicator x in unit i, $\overline{x}$ is the weighted average of indicator x over the data set, and f_i stands for the weight of unit i.

deviation, thus, its value is disproportionately influenced by extreme values (Osberg 2001). This is indeed a feature barely typical for other popular inequality indicators such as the Gini index,[38] Theil's regional inequality index,[39] or the Hoover concentration index[40] (cf. Huang and Leung 2009; Rogers and Sweeney 1998). Still, the remark by Krebs and some other authors (e.g. Osberg 2001; Plane and Mulligan 1996) suggesting the coefficient of variation to be doubtful for objective scientific ("mathematical") reasons is also ambiguous.

In fact, what one can make as an objective statement is that the coefficient of variation puts greater emphasis on values extremely deviating from the mean. But whether extreme values or rather those lying close to the mean are more important from the aspect of spatial disparities is actually an *analytical* as well as a *normative* question, but not an objective one to decide in the universal sense, irrespective of the actual research objective. As both Huang and Leung (2009) and Rogers and Sweeney (1998) present, to focus on extreme values as well as to concentrate on the deviation of values close to the mean can be useful analytically. It depends rather on the research question and the statistical population actually analyzed which indicator can give a more exact and interpretable insight into the phenomenon observed. Furthermore, while dealing with spatial inequality as a *problem*, it can be a relevant normative decision *prior* to statistical analysis to focus either on the deviation of extreme cases or on those of units of observation closer to the mean. For instance, let us imagine two countries, both with regions that have very similar values of a certain indicator (e.g. per capita income), and with a dominating metropolitan region with values lying high above those of the periphery. These two countries could be two former colonies on the coastline of Africa, or two highly centralized small countries in Europe or in Asia. In this case study, the coefficient of variation and the Gini index would reveal different aspects of spatial inequalities in the country. The coefficient of variation would rather stress the primacy of the center, thus, the level of center-periphery dichotomy in both countries. The Gini index would merely give an imprint of differences *between* those regions in the periphery,

[38] Weighted Gini index:

$G = \frac{1}{2\overline{x}} \sum_{i=1}^{n} \sum_{j=1}^{n} \frac{f_i f_j}{\left(\sum_{i=1}^{n} f_i \right)^2} |x_i - x_j|$, where x_i and x_j are values of indicator x in units i and j, $\overline{x}$ is the weighted average of indicator x over the data set, and f_i and f_j stand for the weight of unit i and j.

[39] Theil's inequality index:

$T = \frac{1}{n} \sum_{i=1}^{n} \frac{y_i}{\overline{y}} \log\left(\frac{y_i}{\overline{y}} \right)$, where y_i stands for the share of unit i of the sum of variable y over the data set, $\overline{y}$ represents the average share of each unit from the sum of variable y, and n stands for the number of units.

[40] Hoover concentration index:

$H = \frac{\sum_{i=1}^{n} |y_i - z_i|}{2}$, where y_i and z_i stand for the share of unit i of the sum of variables y and z.

while less emphasis would be given to the outstanding position of the metropolitan core. As can be seen, both approaches can be relevant, even if their presumable results might be significantly different. But to select one of these two approaches is, as described, an analytical and normative question, not one to be answered in a universal and profoundly neutral way. For both the coefficient of variation and the Gini index have been popular and relevant means in the spatial disparity research (Huang and Leung 2009). Thus, the argument that the coefficient of variation would be methodologically *a priori* "worse" than other indicators of inequality seems problematic, and the critiques of Williamson's concept based on this suggestion are also less convincing.

Some crucial conceptual points of Williamson's model are, however, questionable. First, even if the author did not try to deduce universal claims from statistics of a few units, his sampling of sixteen countries was still less representative for the whole world, especially as 13 among them definitely belonged to the so-called "developed nations". Thus, to interpret these results as if they would mirror a pattern of universal relevance, even in the "underdeveloped" world, might be highly misleading (Gilbert and Goodman 1976). A second point is that a main part of Williamson's work was the international cross-section analysis, where the author analyzed in various countries the connection between the national level of economic growth and its regional disparities. That was where he judged "the relationship between level of development and degree of regional inequality . . . to be quite significant" (Williamson 1965, p. 14), which he considered as a major proof of the validity of his concept. Such an interpretation of the data suffered, however, from an implicit presumption, namely that the results provided by a *cross-sectional* analysis of a set of countries for one point in time were logically compatible with the findings of a *longitudinal* research within a given country. This was a highly questionable point in Williamson's concept, which was already "inherited" from Kuznets, whose late critics formulated the problem as follows: "The available cross-sectional scatter might perfectly fit an increasing 45° line while each country is silently moving along a 45° *decreasing* one." (original emphasis; Gagliani 1987, p. 323). Dots representing countries might seem to draw out a specific pattern in a *cross-sectional* scatter plot, which can also suggest a kind of regularity. But this does not mean that a *longitudinal analysis* must give a similar pattern, and even if it does, there is no proof that the two morphologically similar patterns are *logically* compatible. Thus, to consider cross-section and longitudinal analyses as compatible is "reduce[ing] history to a simple time-dimension" (Krebs 1982, p. 78; based on Hinderink and Sterkenburg 1978). It implies that "underdeveloped countries as latecomers . . . follow the same path of development as the highly industrialized economies" and that "the underlying factors have to be the same" (ibid.).

This teleological approach to economic growth was a main feature of developmentalism (cf. Sect. 6.4), which presumed that all countries followed basically the same path of economic growth. In this view, the economic differences between countries were simply regarded as outcomes of a time delay "less developed" countries had relative to the "more developed" ones (Fig. 6.4). A highly sophisticated and much-cited explanation of this idea was presented in the works of

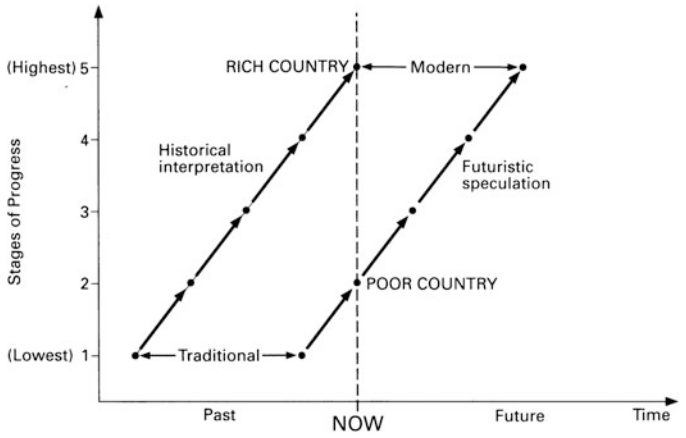

Fig. 6.4 The teleological concept of "progress" in the developmentalist approach. Adapted from Taylor (1993), p. 10. Reproduced by permission of Taylor & Francis Books UK

the US economist Walt Whitman Rostow, who interpreted economic growth as embracing five consecutive phases. In his words, these phases were "traditional society", "preconditions for take-off", "take-off", the "drive to maturity" and the "age of high mass-consumption" (Rostow 1960, pp. 4–16). According to this concept, each country had to go through each phase to reach a high level of "development". Moreover, the order of the phases could not be changed, and none of the phases could be skipped (Gonçalves 2005). In this approach, the process of "national development" was interpreted as climbing up a ladder, where one had to pass each step one by one to finally get to the top. These were actually the main ideas permeating the whole idea of developmentalism.

These suggestions also seemed to have clear consequences for economic planning. Since the concept rejected that alternative ways of growth could exist, "underdeveloped" countries were considered to have only one chance to catch up with the "developed" ones. That was to go through at an accelerated pace the steps the "developed" countries had already taken. This argumentation had a politically important consequence. "Underdeveloped" countries were suggested to follow preferably the "most developed" country, which had the best knowledge and experience on the whole process: the United States (and neither Western Europe nor the Soviet Union).[41]

[41] That the implications of Rostow's concept gave strong support to US geopolitical notions was by no means accidental. This is not only indicated by the obviously anti-Soviet subtitle of the book (*A Non-Communist Manifesto*), but was also made explicit by the author himself, serving as deputy and "regular" national security advisor for the Kennedy and Johnson administrations. As he put it: "We must demonstrate that the underdeveloped nations – now the main focus of Communist hopes – can move successfully through the preconditions into a well established take-off within the orbit of the democratic world, resisting the blandishments and temptations of Communism. This is, I believe, the most important single item of the Western agenda." (Rostow 1960, p. 134).

In fact, Williamson's concept emerged in a scientific and political context strongly permeated by developmentalist thinking. It is no accident that he also wrote in his essay about "early" and "mature" "stages of national development". And it is no wonder that he considered international cross-section and national longitudinal analyses mutually compatible, which by then had become a "well-established practice" in economic research (Moran 2005, p. 225).

Of course, we should not forget that Williamson not only carried out a cross-sectional analysis, but also made attempts to conduct longitudinal analyses for countries where time-series were accessible. Among the 16 countries, it was in ten cases that he had regional data for more than one point in time that embraced at least 2 decades. Here he actually preferred temporal research to longitudinal, analyzing rather the temporal changes of spatial inequalities and not their connection with the level of economic production. His finding was that at least eight of ten countries seemed "to be at least consistent with the results of [the] cross-section analysis", thus, with the inverted U concept (Williamson 1965, p. 31). These results were, however, definitely not as convincing as it might be suggested by Williamson's lines. As we have already pointed out, to consider a temporal analysis as logically equal to a longitudinal evaluation of economic growth is in itself doubtful. This does not mean, of course, that the analysis of temporal dynamics in spatial disparities would be irrelevant. It can be a useful means to reveal, for example, how certain political changes affect the level of spatial inequalities over time. But if one assumes a link between economic growth (or "national development") and regional disparities, the former cannot be replaced in the analysis by a simple time-dimension. This analogy would give the false implication that the pace of economic growth is stable in time, which is obviously not the case.

In the light of this, it is worth analyzing again the ten plus six countries selected by Williamson. The focus is now on the level of regional inequalities these countries had at certain levels of economic production (instead of in certain years). To the calculations we have used the historical statistics of Maddison (2010). Among the eight countries Williamson claimed to fit his concept, we have depicted the United States in a separate scatter-plot to avoid the graph becoming unmanageable. In the light of our results, the inverted U hypothesis seems to be underpinned only by a limited number of units of observation. As Fig. 6.5 shows, it is only three countries that more or less trace out some characteristic sections of an inverted U. Such a pattern appears relatively clearly only in the case of Brazil. Dots for Norway seem to represent the descending right slope of the curve, and for Sweden the "final" section of the ascending section as well as the descending side can be seen well.

Besides, the curve of the United Kingdom tends "to be at least consistent" with Williamson's hypothesis, although the moderate slope indicated by only four dots does not seem very convincing. For France and Italy, the curves run rather accidentally than along a bell-shaped pattern. For the Netherlands, its curve is difficult to be interpreted within the Williamsonian framework since the country did not show permanent economic growth during the whole period. In fact, the deep economic decline caused by the destruction associated with World War II and the left-hand

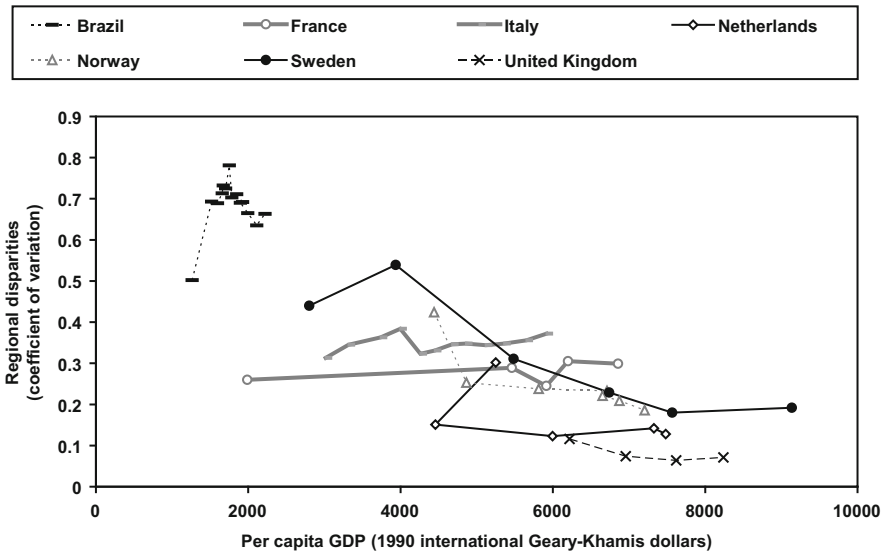

Fig. 6.5 Connection of per capita GDP and regional disparities in seven of the eight countries considered by Williamson as "at least consistent" with his concept. Design by author based on data from Williamson (1965, pp. 25–26) (regional disparities) and Maddison (2010) (per capita GDP)

direction movement of the curve in the graph is in itself incompatible with the developmentalist concept and its presumption of mutual interchangeability of time and economic growth on the horizontal axis. Concerning the United States, although one cannot see here a "clearly visible" inverted U pattern, the assumption that regional inequalities are higher at a medium level of economic output or "national development" than in phases of low and high output basically seems valid here (Fig. 6.6). To sum it up, from the eight countries considered by Williamson to underpin his concept only four (Brazil, Norway, Sweden and the United States) seem to do so indeed, with a fifth country being "at least consistent" (or, rather, not clearly inconsistent) with the hypothesis.

We have also carried out the same analysis for the countries that were regarded by Williamson to challenge the inverted U concept or to be represented by too few data points for relevant statistical evaluation (Fig. 6.7). At this point, our findings are in concert with those of Williamson. In this statistical population countries either do not trace out any significant path due to the small number of statistical records or their paths do not clearly fit a bell-shaped curve, nor any sections of it.

As one can see, Williamson's concept can be challenged at many points theoretically as well as empirically. Thus, although it was clearly aimed at an empirically-focused description of the regularities of spatial inequalities, in the light of our results its actual explanatory power does not seem to be significantly higher than that of the purely philosophical (and often highly speculative) concepts of Myrdal and Hirschman. Without doubt, Williamson's work was unique in a certain sense: since it was based on empirical statistics, it was falsifiable. But this is in itself hardly

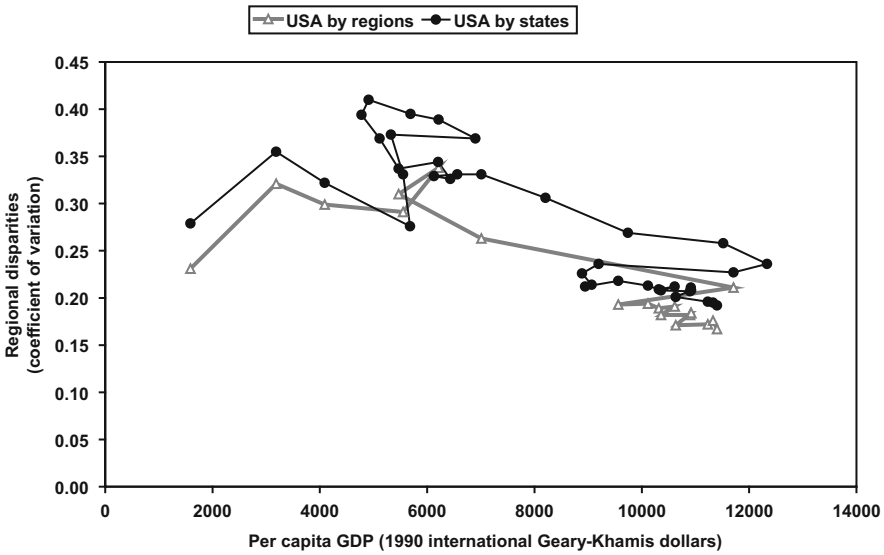

Fig. 6.6 Connection of per capita GDP and regional disparities in the United States, the eighth country considered by Williamson as "at least consistent" with his concept. Design by author based on data from Williamson (1965, p. 25) (regional disparities) and Maddison (2010) (per capita GDP) [Williamson used in his analysis a nine-region system defined by the Bureau of Census, namely New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, and Pacific (Williamson 1965, p. 13). A detailed map of the way states were attributed to each region can be found in US Census Bureau (n.d.)]

a great merit of the concept since it was not only theoretically falsifiable but it can indeed be falsified at several points. Actually, in our view it should not be the point to fully discredit Williamson's theory. In its context it was an innovative attempt to provide a better understanding of spatial disparities, e.g. through involving a great deal of empirical statistics in theory-making. What we rather aim to emphasize is that the credit it received from mainstream economist experts on spatial disparities (cf. Friedmann 1975) was one-sided and it was accompanied by overlooking some of its serious shortcomings.

Nonetheless, it is clear that Williamson's concept had great scientific credit in its time (especially due to its mathematical-statistical apparatus). Meanwhile, it could also seem attractive for decision-makers since, similarly to other concepts about spatial inequalities, it had direct political relevance in the Cold War. First, Williamson's article suggested that spatial polarization could not be avoided in an earlier period of growth. Second, it forecasted a quasi-automatic occurrence of spatial convergence as soon as a certain level of "development" was achieved, thus that the problem would disappear in the long term. This interpretation, just as was explained in Sect. 6.7.2, implicitly suggested that in capitalism spatial inequalities unavoidably increased in the first phase of economic growth, but they necessarily

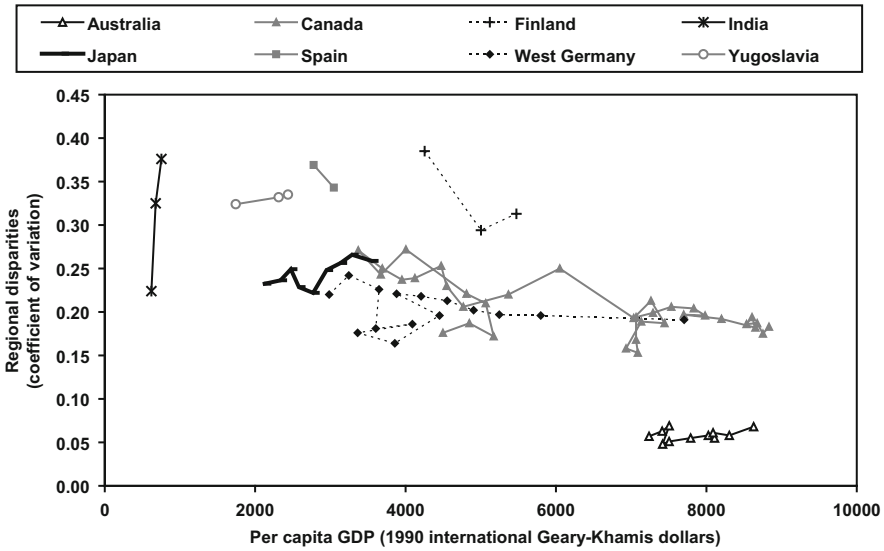

Fig. 6.7 Connection of per capita GDP and regional disparities in the countries analyzed by Williamson but considered as not "at least consistent" with his concept. Design by author based on data from Williamson (1965, pp. 25–26) (regional disparities) and Maddison (2010) (per capita GDP)

decreased later. Thus, the concept implied spatial polarization to be just a temporary problem.

Furthermore, Williamson had a very controversial attitude to spatial disparities in communist countries. On the one hand, he excluded these countries from his analyses due to a lack of statistics. The only exception was Yugoslavia, which followed a very specific economic path among communist countries, and which actually did not belong to the Soviet Bloc. Anyway, Williamson had the necessary regional statistics for Yugoslavia only for 3 years, which was far less than required for a substantiated analysis. Thus, he had actually no reliable data about communist countries, and argued that "any comparative study involving the East European or Soviet economies would involve questionable indirect evidence and conjecture" (Williamson 1965, p. 31).

Still, Williamson easily overcame his fears of conjecturing. At this point he referred to Dziewonski (1962), who in Williamson's interpretation suggested that in Poland "the goals of reducing regional dualism have been subordinated to national development goals, and that increasing regional divergence has been the case in the postwar period of early industrialization" (Williamson 1965, p. 31). From a strange mixture of this information and personal beliefs Williamson came to the point that "*it seems highly unlikely* that the Communist nations have sacrificed rapid national growth for the 'secondary' Marxian goals of (1) introducing industrialization throughout the country in order to achieve the necessary conditions for socialism

on a nationwide scale and (2) achieving idealistic equalitarianism implied by the socialist society" (our emphasis; ibid.).

This otherwise remarkable argumentation remained, however, without tangible substantiation. For Dziewonski (1962), he really explained that "a large number of industrial plants, originally destined for location in under-developed parts of the country, was finally moved to the largest regional urban centers, generally to already well-industrialized districts" (p. 45). He also really underscored that the development policy of the country in the 1950s and 1960s "somewhat missed its very ambitious aims" (ibid.). But he did not argue that all steps would have accelerated polarization. Instead, he stressed that the problem was rather that the policy of spatial equalization *had not been as massive* as it could have been (so thus it decreased disparities not as rapidly as had been possible) and *not* that it had increased disparities. Actually, Dziewonski was explicit in saying that this policy had "diminished the differences in development levels between various regions" (ibid.). Of course, one should not forget that these issues were extremely sensitive for communist leaders, thus, researchers in countries in the Soviet Bloc (such as Dziewonski) could only refer to concerning problems in an indirect and very cautious way. But it is a fact that Dziewonski's article rather suggested a process of spatial convergence, although not at the desirable pace, instead of the stable divergence suggested by Williamson in his interpretation. Thus, Williamson could not provide empirical evidence from Poland to what he "seemed highly unlikely".[42]

Besides Poland, Williamson also paid attention to the Soviet Union. His efforts to interpret spatial disparities in that context, however, opened the way again for speculations. Williamson first expressed his uncertainty about the issue with an interrogative sentence: "has [the Soviet Union] undergone any tendency towards convergence in regional development levels and reduction in regional dualism?" (p. 31). On the one hand, he found it "a likely supposition" that the country "did not undergo as sharp a movement in regional divergence as, say, Brazil" (ibid). On the other hand, however, he was rather firm in assuming that such a divergence must have taken place and it must have been significant, even if not reaching a Brazilian level: "*we do know* that the seven Year Plan in 1959 included in it significant regional goals, and also the 1956 movement toward decentralization itself *may imply* a serious attempt to reduce regional inequalities generated by the fabulous growth of three decades" (our emphasis; p. 31). In other words, Williamson derived the suggestion (or even claim) of spatial polarization in the Soviet Union from tendencies of administrative decentralization in the mid- and late-1950s. He did not imply (maybe did not even think) that Khrushchev's attempts at decentralization were barely aimed at spatial equalization but were mainly aimed at raising

[42] This does not indicate unambiguously that spatial polarization might have taken place in Poland that time. What we would like to present is that Williamson obviously did not have the data necessary for such a conclusion, and the information he actually possessed seemed rather to challenge than to substantiate his suggestion for communist countries. Yet, he was not afraid of making conjectures, and presenting them as if they would have been in concert with his whatever indirect information.

economic efficiency by giving more responsibility to lower administrative levels in finding potential solutions to the challenges they faced.

As a final example, Williamson referred to Yugoslavia. Here he simply wrote that "in spite of official pronouncements and alleged effort, Yugoslavia underwent increasing regional divergence between 1956 and 1960" (ibid.). However, comments on the dubious significance of a 4-year long period for the general long-term pattern of spatial disparities were absolutely missing.

To sum it up, Williamson's article was an innovative work, and one which utilized a remarkable statistical apparatus. It was mainly for this reason that it gained great popularity and credit in spatial disparity research. Still, the concept suffered from numerous conceptual as well as methodological and empirical shortcomings, and in many questions ended up in speculations instead of empirically substantiated interpretations. But with all its ambiguities, the concept with its implicit political overtones fit well American geopolitical notions of the era.

6.7.4 Friedmann's Concept About Spatial Disparities: A Technocratic Textbook Permeated by American Ideology

The works of Myrdal and Hirschman opened a new chapter in spatial disparity research since they provided a non-neoclassical theoretical framework for the field of interest. Through this, they also offered some tools for predicting future tendencies as well as for making practical suggestions for politicians and planners on how to reduce spatial disparities. Yet, since these works were dominated by theoretical ideas (with strong geopolitical relevance), the attention they paid to opportunities of *prediction* and *planning* was relatively limited. This weakness brought into being on the one hand the concept of Williamson, who attempted to provide an empirically substantiated and didactic model of the dynamics of spatial disparities. His inverted U hypothesis was actually the first non-neoclassical contribution to the theory of spatial disparity research with the image of having a strong predictive power. On the other hand, after the otherwise groundbreaking thoughts of Myrdal and Hirschman, a detailed practical handbook of "how to eliminate spatial disparities" was still missing. This gap in research practice was filled soon after Williamson by American planner John Friedmann (1966).

Friedmann, PhD in Planning, Economics, and Geography, a former advisor of regional planning in Brazil and in Venezuela, was basically aimed at providing a book "for students and practitioners in the field of economic development" (Friedmann 1966, p. vii). Nonetheless, from our point of view the crucial importance of his work went back less to its practical suggestions and its implication for "economic development". Instead, our interest mainly goes to the remarkable contribution it made to the theory of spatial inequalities, the major issue of our essay. In fact, Friedmann gave a brief overview of then accessible theories of spatial

inequalities, although he barely relied on them and merely favored his own experience from South America while forming his views. Just as Myrdal and Hirschman, Friedmann also based his theoretical argumentation on two thoughts. The first was the firm political relevance of spatial disparities due to their potential to induce political tensions. As Friedmann put it, "growing regional inequalities will give rise to political pressures intended to reverse the traditional flow of resources to the center and to help raise per capita incomes on the periphery to a level of approximate equality with the rest of the nation" (p. 13). This was considered as giving a strong justification of spatial disparity research.

The second crucial point was neoclassic inability to explain the dynamics of spatial disparities. Friedmann called this "a major difficulty with the equilibrium model", which "historical evidence does not support" (p. 14). It was for him an "indisputable fact" that "regional convergence will not automatically occur in the course of a nation's development history" (ibid.). For this reason, he considered economic growth as unavoidably leading to polarization first, and he strongly argued for state planning to reverse the process at a certain point. Thus, Friedmann belonged to those who claimed that spatial equalization was impossible without state intervention. But, similarly to Hirschman and Williamson, who also believed the free market raised disparities, Friedmann was also optimistic on whether this state intervention took place. This was clearly highlighted by his graphical illustration about the "typical sequence" (p. 35) of "spatial organization" during the process of economic growth (Fig. 6.8). Here he presented the early emergence of a strong center within the country and accompanying spatial polarization as well as the development of sub-centers and a reversal in polarizing trends in later phases as if they were necessary processes, which were always "so".

Later on, Friedmann also referred to these ideas as "general principles", which "can be successfully applied to a historical situation" (p. 124). Furthermore, he even argued that "there is a logic underlying the evolution of a space economy that, but for the high risk of failure, may not be violated" (ibid.). With this he implied his model to present a "law-like" and, consequently, the only possible way spatial disparities could follow in the long term. This also suggested that state intervention necessarily took place at a certain point and that spatial disparities would radically diminish in the long run. And, to put an end to the readers' possible fears for enduring polarization, in the second part of the book Friedmann presented in detail the regional policy of Venezuela as "a system of national planning that quickly gained a high reputation throughout the continent" by inducing regional equalization (p. 123). Thus, while he claimed the existence of "a logic underlying the evolution of a space economy" and that the state was necessary to intervene at a given point, he also provided a case study to convince people that such a state intervention was *indeed* possible, even in "underdeveloped" contexts.

For the work's scientific basis, it definitely belonged to the group that Maier et al. (2006) calls "the outcomes of detailed empirical analyses, case studies or the researcher's appropriate experience", which "thus, to a certain extent, mirror real circumstances, among which they were obtained" (p. 78). Friedmann pointed out as early as in the preface that he had worked as advisor on regional planning both in

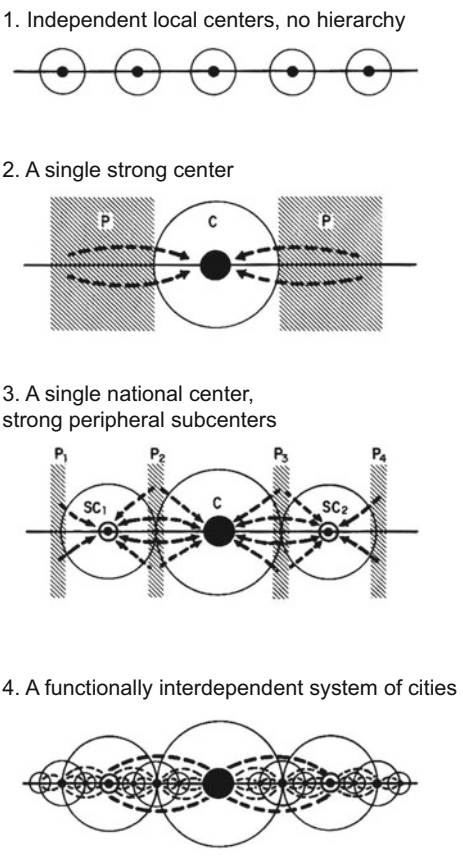

Fig. 6.8 Friedmann's schematized concept about the consecutive "sequence of stages in spatial organization". Adapted from Friedmann, John, *Regional Development Policy: A Case Study of Venezuela*, Figure 2.1, p. 36, © [1966] Massachusetts Institute of Technology, by permission of The MIT Press

Brazil and in Venezuela. In the latter he had been involved in planning the new city of Santo Tomé de Guayana, recently called Ciudad Guayana (Friedmann 1966, p. vii). This fact undoubtedly radiated the impression that the book gave an insider's view, which was not only to emphasize that the author's suggestions for planners and policy-makers were substantiated. Such background information also increased the virtual validity of Friedmann's theoretical findings since these seemed to throw new, empirically substantiated light on the nature of spatial disparities. This image of reliability was also supported by Friedmann's "manifesto" at the end of the book, where he advised regional planners "to assess the total situation with a *keen, objective* eye" (our emphasis; p. 256). These words in an indirect way implied that he himself also followed this principle while conducting his research in Venezuela and summarizing his findings in the book. Besides, Friedmann not only referred to his personal experience, but also suggested the special scientific quality of the project he participated in. As he stressed, the urban development program was actually led by the Joint Center for Urban Studies of MIT and Harvard (p. vii), which were leading "centers of calculation" (Latour 1987) in the Western world and citadels of American Cold War strategic research (cf. Barnes 2008).

Friedmann did not forget about making the link between this project and his work explicit: as he put it, the 1966 study was "the result" of the field work he conducted in Venezuela under the aegis of these institutions (Friedmann 1966, p. vii).

This information, however, no longer seems that convincing if one gains insight into the work the planners of the Joint Center actually did in the South American country. Here we should refer to another member of the team, urban sociologist Lisa Peattie, who along with her husband were the only ones to address a lot of attention to the controversies and unplanned negative consequences of the highly modernist Ciudad Guayana project. In her book (Peattie 1968) she revealed that she and her husband were the only ones to spend two and a half years on the spot, while all other team members worked more than 500 km away, in the capital city Caracas. Thus, for Friedmann, his "local knowledge" came from colleagues he collaborated with in the capital city. Of course, he might also have had access there to a lot of information inaccessible abroad. Still, this story shows that the insider's image should not be exaggerated if one speaks about Friedmann's book. And this is very important from our view since Friedmann explicitly avoided quantitative analyses. In his words: "I must apologize to those who would like to see more quantitative analysis in a study of this type. Unfortunately, many kinds of data were simply not available or were so unreliable that little would have been gained by using them. . . . the use of detailed statistics would have given the reader an impression of specious accuracy" (Friedmann 1966, p. viii). Thus, the claimed convincing power of the book was openly based on the local knowledge of Friedmann (and on the reader's belief in this), obviously challenged by Peattie's (1968) lines.

Of course even if one disregards these limitations, the extent to which tendencies in a single country can be extrapolated internationally is a question that remains unanswered. This problem already emerged with regard to Williamson's article, which made universal claims on the basis of statistics for a relatively small sample of "developed" countries. Friedmann's book, however, had an even narrower focus: he concentrated on a single case, Venezuela. This might be a disadvantage on the one hand since ideas derived from observations in many countries are usually more likely to be adaptable for further cases. On the other we believe, however, that the investigation of a single case can also help us understand certain relations and gain knowledge that might be relevant in other cases as well. For the latter reason, it is important to analyze Friedmann's basic argument, even if it is based on the peculiar case of Venezuela.

The most important point for us is why state regional policy to reduce spatial inequalities would, as Friedmann implied, be necessary to emerge at a certain level of economic growth. In fact, the concept became especially fragile at this point. While summarizing the reasons for an efficient regional policy in Venezuela, the author stressed the crucial importance of the following factors:

> "Venezuela . . . offers conditions that greatly facilitate the carrying out of a national policy for regional development. The country can boast of an experienced and effective national planning agency (CORDIPLAN). Recognition of the need for a regional policy is widespread. The general level of professional competence is high. And the current government of Venezuela may be regarded as progressive in its political stance and firmly established in power for the period it was elected to serve." (Friedmann 1966, p. 243.

Considering the optimism permeating Friedmann's concept with respect to the unavoidability of state intervention to reduce spatial inequalities, the questions arise as to (1) how the above presented beneficial conditions emerged in Venezuela, and (2) why they should necessarily emerge in other contexts. For the first question Friedmann gave a concise answer, throwing light on the importance of political factors. He pointed out that in 1958 the Democratic Action Party (DAP) "with overwhelming public support" (p. 152) put an end to the formerly reigning "brutal dictatorship" (ibid.). Thus, the "conservative coalition" based on the mutual collaboration of the army, the landlords, and some prominent figures of commerce and financial life, mostly settled in and benefitting the capital city Caracas, lost its power. A necessary prerequisite for this was, however, that the DAP "legitimize [d] its leadership through winning a popular national election" (p. 154). And this was the point to exert decisive influence on spatial disparities in Venezuela. In Friedmann's words, as the DAP "was certain of its *de facto* control of cities ... it was the development of provincial resources rather than further accumulation of wealth and power in Caracas that constituted its chief promise" (original emphasis; ibid.). In other words, the reduction of spatial disparities and the decrease in the capital city's primacy were outcomes of a political transformation, where the new regime aimed to get the support of peripheral regions, which the former conservative dictatorship had neglected. This story gives a deep insight into political mechanisms leading to shifts in the national governments' spatial focuses in "economic development".

Yet, this case study also reveals clearly that state intervention in Venezuela to reduce spatial inequalities was an accidental rather than an unavoidable event. In fact, suggesting that state policies to diminish polarization were necessary to come into being and that their emergence in Venezuela was likewise inevitable implies that underlying mechanisms were also unavoidable. This suggests first that the democratic regime, once in power in the South American country, did not have any other choice but to give up the one-sided support of the capital city. And second, since the change in regional policy had been absolutely unlikely without the political transformation, the inevitability of a turn in regional policy also suggests that the democratic change and the fall of the dictatorship were also necessary. These presumptions are, however, not to be substantiated as mechanistically as Friedmann interpreted the dynamics of spatial inequalities. In the light of historical evidence one could claim at most that every system ends sometime to open way for the next one. But it cannot be grounded that either in a certain phase of history or at a certain level of "economic development" such a (democratic) turn would be inevitable. Not even was it so in South and Central America. Although Venezuela made the democratic turn in 1958, some countries witnessed new, authoritarian regimes to emerge after this date (cf. Fidel Castro's takeover in Cuba, the 1964 military coup d'état in Brazil and Pinochet's 1973 military coup in Chile). Moreover, Friedmann himself attributed the democratization of Venezuela and the authoritarian rule in Brazil to the same phases of "economic development" (cf. p. 7). Thus, to suggest a more or less definite link between a certain level of "economic development" and democratization seems rather to contradict than to be

in line with historical and empirical evidence. But then the implicit logic of Friedmann's concept collapses.

To sum it up, although Friedmann's technocratic work made contributions to the theoretical research of spatial disparities, these in fact lacked firm empirical substantiation. This is even so if the author implied the opposite in many of his remarks. But the essay's scientific image, even if poorly underpinned, could well be used to mediate propagandistic knowledge to the readers. Just as in the case of Hirschman and Williamson, Friedmann's concept suggested that spatial disparities inevitably increased in an early phase of "economic development". This threw new light on spatial polarization: although Friedmann explicitly judged this process "harmful" (p. 99), in "less developed" countries he did not consider it a proof of economic failure but a negative concomitant of something very good: growth. Moreover, his model suggested that spatial disparities decreased after a while thanks to state intervention. Here he presented the latter as inevitable due to the claimed logic of "regional development", and through the example of Venezuela, he also implied indirectly that the prerequisite for spatial equalization was a democratic turn. These lines suggested that although the reduction of spatial inequalities was inevitable to come at a certain point in economic growth, this process only followed the establishment of a democratic system, which was more sensitive to problems of the whole society. This clearly implied that the challenge of spatial inequalities might be better and more quickly handled if authoritarian means are rejected, which also seemed a forceful argument for the American and against the Soviet model. Thus, Friedmann's concept was in accordance with US geopolitical motivations, which it implicitly supported under the aegis of objective science, but in fact with serious empirical and theoretical shortcomings.

6.8 Neoclassical Reactions to Polarization Theory: Arguing Politically to Sell the Product

As can be seen, the widespread criticism of neoclassical ideas in spatial disparity analysis by many researchers resulted in the emergence of a brand new conceptual framework, which opened up new vistas in the interpretation of spatial inequalities. The non-neoclassical theoretical approach seemed more compatible with empirical findings in a world to witness rising polarization. And it had further advantages as well. During the late 1950s and early 1960s this approach developed a theoretical argumentation that was seemingly based on reliable empirical data, while it also provided a rather simple, model-like interpretation of disparities. Hence, those refuting the neoclassical doctrine of stable equilibrium created many theoretical mosaics in the next few years that tended to outline a scientifically substantiated explanation of spatial divergence and convergence, which was also in line with US geopolitical interests. For these reasons, the new approach pushed the old neoclassical views into the periphery of the domain of spatial disparity research. Yet, the

neoclassical approach did not collapse: rather, it tried to gather new momentum and to underpin its claim to be a relevant mindset for explaining the dynamics of spatial inequalities.

This endeavor gained impetus first due to empirical findings that did not obviously undermine the neoclassical concept but even seemed to substantiate it to some extent. Especially important here was the work of Easterlin (1958) published only 1 year after the groundbreaking work of Myrdal and in the same year when Hirschman released his theory. Easterlin analyzed the long-term temporal changes in personal income inequalities for nine geographical regions of the United States.[43] In general, Easterlin's results indicated a "general tendency towards convergence" for the period between 1880 and 1950 (Easterlin 1958, p. 324). Yet, he also stressed two issues which for him made it impossible to argue one-sidedly for the validity of the neoclassical stable equilibrium concept. First, Easterlin emphasized that the convergence he presented was "so slow and so limited" (pp. 325–326), although within the selected time interval there "was a situation [in the United States] in which the conditions necessary for the operation of [factors of spatial equalization] were just about ideal" (p. 326). In his words:

> "There were practically no artificial barriers to the movement of goods; there were no exclusion acts and immigration quotas to restrict the flow of persons. Rather there was as close an approximation to the conditions of free trade and free mobility *as is likely to be realized in the real world*. And yet after a period of seventy years, substantial differences among regions in the level of income per worker still remained. Why didn't progress go much further?" (our emphasis; p. 325.

Although Easterlin did not manage to give a comprehensive answer to the question he raised about reasons, his findings indicated that the automatic equilibrium through migration of factors of production was not as simple a process in reality as it was in abstract neoclassical models.

As a second point, Easterlin underscored that the slow but stable process of convergence in the United States was no more than a single case. Thus, he emphasized that any results of his analysis could not be automatically extrapolated to other countries. In his words, to decide whether spatial convergence was a general trend in all countries "we must examine the historical experience of other nations" (p. 325). Consequently, he argued that in the light of statistical data from only one country "it is by no means certain that convergence of regional income levels is an inevitable outcome of the process of development" (ibid.).

In general, the relevance of Easterlin's results for the neoclassical approach to spatial disparities was somewhat ambiguous. The non-neoclassical Friedmann, for instance, in his 1966 work referred to Easterlin's analysis rather as evidence *against* the stable equilibrium doctrine. In his view, Easterlin's findings proved that free market forces could cause only a slow convergence even in the United States and that forces working for convergence were not determined to get stronger in the

[43] These were the same regions as those taken into consideration by Williamson (1965) (see Sect. 6.7.3).

course of economic growth. Based on these, in the light of Easterlin's results Friedmann came to a conclusion even more definite than that of Easterlin. Easterlin only emphasized that spatial convergence was uncertain to take place inevitably at a certain level of economic "development". Friedmann went much further while simply stating that "income convergence is not in any sense a necessary result of the development process" (Friedmann 1966, p. 17) if direct state equalization measures were missing. This sort of interpretation was, however, not without alternatives. Even Williamson (1965) tended to put emphasis merely on the fact that that Easterlin's results "trace[d] out a 'classic' pattern of regional inequality" (p. 23), a term he used as identical with the neoclassical presumption of spatial convergence accompanying economic growth.

The uncertainties in the interpretation of Easterlin's findings indicate that the neoclassical approach was, despite the concepts of Myrdal and Hirschman, still not obviously disqualified by empirical evidence. And the neoclassic actually made attempts to defend the relevance of its interpretation of spatial inequalities. This motivation brought into being the neoclassical work of US economists George Borts and Jerome Stein in 1964. Their task to justify the relevance of the neoclassical approach was not easy to be accomplished 7 years after Myrdal's work had been released. Still, they firmly argued against that free market economic growth would end up in increasing disparities. To substantiate this claim, the authors rejected the universal relevance of Myrdal's concept and referred to the geographically specific nature of the areas he had analyzed. As Borts and Stein (1964) put it: "Myrdal's argument is not general. It does not accord with the U.S. experience." (p. 7). The case of the United States became here decisive since Myrdal had concentrated on international trends and, for regional inequalities within a given country, on Europe. This selection was presented by Borts and Stein as a basic obstacle for understanding spatial inequalities in a free market. In their words: "Myrdal bases his conclusions concerning the effects of free capital movements upon the experiences of the developed and the underdeveloped countries" (p. 4). For them, this comparative analytical framework did not meet the requirements for "a free-market ... characterized by free trade and free movements of productive services under conditions of full employment" (ibid.). In the view of Borts and Stein, the United States would be a much more feasible, or rather the only adequate, example:

> "We believe that the experiences of the component states of the United States of America are more relevant for a test of a theory of growth in a free-market area than are the experiences of countries with *varying degrees of political instability* and *different restrictions upon private enterprise*. By studying the U.S. experience, we are holding the political factors relatively constant and we can focus our attention upon the market forces." (our emphases; Borts and Stein 1964, p. 4)

And "the land of opportunity", which was selected here by Borts and Stein as the geographical subject of their research, did not let the authors down. As they pointed out, citing the results of Easterlin (1958): "There has been a strong tendency for the convergence of per capita incomes among states within the United States. The evidence, therefore, is not compatible with Myrdal's theory of interregional differences in growth rates among open economies." (ibid.). With reference to

the neoclassical doctrine of stable equilibrium, they also added that "the U.S. interregional . . . growth pattern seems to be tending toward an intertemporal competitive equilibrium" (p. 214).

Thus, Borts and Stein came to a point different to that of Myrdal. Yet, they did not refute that in the countries observed by Myrdal spatial inequalities might change in accordance with his suggestions. Instead, they stressed that these countries constituted no adequate examples of a free economy. Based on this argument, Borts and Stein could pose the United States and its states as the only free market area, thus, the only subject of analysis to bring us further to the understanding of how spatial inequalities were shaped by spontaneous forces in a free market during the process of economic growth. And the United States proved feasible to illustrate the neoclassical assumption that inherent forces of the market *did indeed* promote spatial convergence if all hindrances were removed.

The argumentation of Borts and Stein had an obvious political suggestion since in the "headwind" of polarization theories it seemed to substantiate the neoclassical view, fully in line with US geopolitical interests, that arranging a free market was the only lasting solution to the challenge of spatial disparities. And the concept could also take advantage of its strong scientific image to "sell itself". As has already been presented, the non-neoclassical concepts of spatial disparities in the 1950s and 1960s often suffered from the lack of a "tangible" substantiation. Williamson was actually the only exception to handle this problem in a sense that he utilized a remarkable statistical apparatus in his 1965 article (although the analysis of these data as well as the interpretation of results had serious shortcomings as was shown in Sect. 6.7.3).[44] Borts and Stein, however, could rely on various means that had for a long time provided to neoclassical economics the image of an "objective" and "hard" science. Their work included not simply a huge number of tables with statistical data, but also a great deal of sophisticated equations and coordinate systems with curves, representing how certain regularities functioned in an abstract algebraic world (Fig. 6.9).

The importance of such mathematical esthetic or "beauty" should not be underestimated given the post-war scientific context strongly dominated by natural and engineering sciences. In an era whose *zeitgeist* was dominated by a strong belief in the omnipotence of science, many had similar impressions to those of Paul Dirac, Nobel laureate in physics, who expressed his views in 1963 as follows: "It seems to be one of the fundamental features of nature that fundamental physical laws are described in terms of a *mathematical theory of great beauty and power*, needing quite a high standard of mathematics for one to understand it". Dirac also stressed that in order to understand the world "it is more important to have beauty in one's equations than to have them fit experiment" (our emphasis; Dirac 1963). This

[44] In fact, Singer (1961) also made an attempt to formulate Myrdal's model of cumulative causation mathematically. Singer's work, however, could only come to terms with some simple ideas of Myrdal, while it barely had anything to say to those many ideas that Myrdal derived from the main presumption of cumulative causation.

To prove that

$$w_y^* = 0 \tag{13}$$

recall the definition of the wage differential:

$$w_x = \gamma w_y$$

$$\gamma = \bar{\gamma}$$

From these we may write

$$w_x^* = \gamma^* + w_y^*$$

$$\gamma^* = 0$$

In addition, $w_x^* = 0$. Consequently, $w_y^* = 0$.

To prove that

$$K_x^* = L_x^* \tag{14}$$

write the capital market equilibrium condition, $\bar{r}\bar{P}_k = \bar{P}_x f_k$. Recall that $f_k^* = 0$. We may write $f_k^* = u_x Q_x^*$, where $Q_x \equiv L_x/K_x$, and u is the elasticity of the marginal productivity of capital. Since $Q_x^* = 0$, $L_x^* - K_x^* = 0$.

To prove that

$$K_y^* = L_y^* \qquad P_y^* = 0 \qquad Q_y^* = 0 \tag{15}$$

write the labor and capital equilibrium conditions for the domestic sector:

$$\bar{r}\bar{P}_k = P_y h_k$$

$$w_y = P_y h_L$$

Introducing percentage changes, we have

$$0 = P_y^* + h_k^* = P_y^* + u_y Q_y^*$$

where u_y is the elasticity of the marginal productivity of domestic sector capital. In addition,

$$0 = P_y^* + h_L^* = P_y^* + v_y Q_y^*$$

where v_y is the elasticity of the marginal productivity of domestic sector labor. In view of the fact that $u_y \neq v_y$, only zero values of P_y^* and Q_y^* will satisfy the above equations. Since $Q_y^* = 0$, $K_y^* = L_y^*$.

Fig. 6.9 The esthetic of mathematics in neoclassical concepts about spatial inequalities. A section from the proof by Borts and Stein (1964) about the equilibrium growth of economy. Reproduced by kind permission of George H. Borts. All rights reserved by the authors of the work

approach gained strong positions in social sciences as well, despite that an analogy between *physical* laws and *social* processes was far from obvious. And for spatial disparity research, the neoclassical approach had a considerable advantage over concepts of polarization theory in its ability of utilizing sophisticated mathematical apparatus.

No wonder that the book by Borts and Stein made a great hit with many economists, just as the Oxford neoclassical economist Wilfred Beckerman's review indicated. He contrasted the "*agreed and tested* comprehensive model" (our emphasis) of Borts and Stein to "almost all contributions" to the issue of spatial inequalities, which he judged "theoretically self-contained and isolated" (Beckerman 1965, p. 822). In Beckerman's eyes, the convincing power of the book was mainly based on the fact that it was "accompanied at every stage by

statistical tests of the assumptions adopted and hypotheses postulated" (our emphasis; ibid.). Thus, he called it "a very professional piece of work" to give "great satisfaction to those economists who believe that the job of most, though not all, economists should consist of the *continuous statistical verification of hypotheses* about the way things actually work" (our emphasis; ibid.). Furthermore, this scientific image seemed "resistant" to critiques that it was based on the statistics of an only country, the United States. Since Borts and Stein presented the USA as the ultimate example of a free market economy, they gave a theoretical substantiation as to why the regularities of spatial inequalities observed there could be (and only those could be) accepted universally for free market economy without being proved in other countries.

Yet, in the 1960s the neoclassical approach did not manage to get back to a leading position in spatial disparity research. However attractive the concept of Borts and Stein was to neoclassical eyes, it could not explain the dynamics of spatial inequalities in other countries, and its suggestions did not met the everyday experience of those living in less "developed" areas. For this reason, the theories implying spatial polarization followed by convergence in a later phase dominated the spatial disparity discourse from the late fifties on.

6.9 Spatial Disparity Research in Capitalist Countries During the Cold War: An Epistemological Conclusion

After the end of the social survey movements and the concepts of the Chicago School of Sociology, the analysis of spatial disparities had not attracted great attention in the Western world. Although the issue had been problematized in the Marxist approach as early as before World War I, and it had played an important role in the criticism of capitalism, the capitalist world seemed to neglect the question. This situation only changed with the emergence of Cold War, but then at a remarkable pace.

In the new geopolitical context created by World War II, the emerging Western Bloc had to enter the spatial disparity discourse for various reasons. First, although spatial inequality was not a new phenomenon, the collapse of the colonial empires brought into being many new independent political entities that experienced these disparities as harmful. This was similarly true for the divide between these countries and the "rich" ones, and for inequalities the "poor" countries faced within their boundaries. In fact, both forms of spatial disparities seemed possible to breed unrest and undermine political stability. Thus, the Western Bloc also had firm geopolitical interests in handling the danger posed by them. Moreover, the Soviet Union, trying to establish a transcontinental sphere of influence, utilized the issue of spatial inequalities as a main argument against capitalism in the global rivalry for former colonies. And since the superpowers could barely express their claimed superiority over one another in direct military actions, alternative "battlefields"

gained much in importance. This was especially true in the field of science and culture, and not exclusively with regard to the space race and other spheres of engineering. For both the United States and the Soviet Union it became crucial to radiate the image of a competent power, which was able due to its social, economic and political systems to help other countries in solving their problems better than anybody else could. From this the superpowers expected that the intelligentsia of countries in the geopolitical vacuum would stand on their side. Thus, the spatial disparity discourse soon became a battlefield between the two blocs.

Due to this, even in the Western Bloc spatial disparity research was not only about describing and explaining inequalities in space. Its point was much more than to improve our understanding of the world and to contribute to humankind's common scientific knowledge. Spatial disparity research also gained an important role in expressing the ability of one's "own" system to cope with spatial polarization, now regarded as a problem both in capitalist and communist countries. This objective could be best served in two ways. First, from the view of geopolitical interests, theories were especially useful if they revealed why the "friendly" system was possible, or even determined to solve the problem of spatial disparities, and why the "enemy" system lacked this ability. In other words, a crucial point was to create and radiate a positive image about the self, which could give a firm orientation to the potential reader. This was a process of making the identity of the self ("those who solve spatial disparities") and presenting it to others in order to convince them to adopt the same identity and the same political and economic system. Second, to raise the efficiency of this identity-creating process, theories had to have a strong convincing power. And this was the point for science to enter the field of geopolitical struggles. In fact, the legitimate authority of science was a forceful means to justify the claims and interests of "us" and de-legitimize the claims and interests of "them", the enemy. For this reason, geopolitically feasible concepts about spatial inequalities could best be created by scientists, and in a way that their scientific quality could become clear. It was a direct outcome of this consideration that both neoclassical and non-neoclassical works were written in a way to radiate scientific substantiation.

Still, there was an important difference between neoclassical and non-neoclassical approaches. Although both were strong in radiating scientific image, neoclassical concepts proved obviously weaker in coming to terms with the rapid polarization many "underdeveloped" countries witnessed in those years. Thus, even if the political suggestion of the neoclassical stable equilibrium doctrine was in accordance with political interests of the Western bloc, non-neoclassical concepts seemed much more capable of convincingly presenting US-manufactured orientation knowledge to the former colonies. In the light of this it seems no wonder that polarization theories underwent a rapid boom in the 1950s and 1960s, and that they obviously gained the leading position in the spatial disparity discourse before the neoclassical approach.