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by Andrea Brandolini and Francesca Carta

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SOME REFLECTIONS ON THE SOCIAL WELFARE BASES OF THE MEASUREMENT OF GLOBAL INCOME INEQUALITY

by Andrea Brandolini* and Francesca Carta ♦

Abstract

This paper examines the social welfare bases of the measurement of income inequality among the inhabitants of the world. We develop a general family of global inequality indices which encompasses different concepts of global equity, from the cosmopolitan to the nationalist view. The analysis also provides an interpretation of the EU-wide inequality measures adopted in European statistics.

JEL Classification: D3, D63.

Keywords: global income inequality, global social welfare, European Union inequality.

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* Bank of Italy, Statistical Analysis Directorate.

♦ Bank of Italy, Structural Economic Analysis Directorate, Labour Market Division.

1. Introduction¹

Much has been written about the evolution in the distribution of income and wealth among the world inhabitants over the last decades. One reason is that “interest in global inequality reaches far beyond academia and has increased dramatically in recent years—among activists and NGOs, the news media, and national and international institutions and policymakers” (Anand and Segal 2015, 939–40). The headline message of a recent report by Oxfam (2016, 2) that “in 2015, just 62 individuals had the same wealth as 3.6 billion people – the bottom half of humanity” caught the attention of mass media worldwide. Policy makers increasingly agree on targets for poverty and inequality beyond the national borders: ending poverty in all its forms everywhere is the first of the new Sustainable Development Goals adopted by world leaders in September 2015 (UNDP 2015). In the European Union (EU), lifting at least 20 million people out of the risk of poverty or social exclusion by 2020 is one of the five headline targets of the Europe 2020 strategy (European Commission 2010). Despite this growing attention, the measurement of income inequality for the world as a whole, as well as for any other supranational entity such as the EU, raises issues that have been hitherto investigated only in part.

We have reached some good understanding of the problems arising for purely descriptive purposes. They mainly relate to the quality and cross-national comparability of the income or expenditure data, and to the methodological assumptions necessary to aggregate national information into a global distribution. Critical issues are whether to rely on income means from household surveys or national accounts, whether to adjust survey data for top incomes, or whether to use market exchange rates or purchasing power parities to compare incomes across countries. The practical importance of these choices for the measured level of inequality is significant, as discussed by Milanovic (2005) and Anand and Segal (2008, 2015) for the world and Brandolini (2007) for the EU. There is still considerable room for improving the quality of our measures, but we know fairly well what the problems are and how to deal with them.

¹ We thank an anonymous reviewer for helpful suggestions. We are deeply indebted to Tony Atkinson for inspiring discussions on these topics and valuable comments to an earlier draft of this paper; we owe to him the reference to Frankel (1942). The views expressed here are solely ours; in particular, they do not necessarily reflect those of the Bank of Italy. This paper is forthcoming in the *Journal of Globalization and Development*.

Our understanding is somewhat less firm when we turn to the normative bases of measurement. One aspect that has been scrutinised is the distinction between the absolute and relative dimensions of inequality, especially in the light of the size of income disparities at the world level. Recent research has shown that absolute (and intermediate) inequality indices may lead to conclusions on the evolution of the global income distribution rather different from those achieved on the basis of standard relative indices (Ravallion 2004; Svedberg 2004; Atkinson and Brandolini 2010; Bosmans, Decancq and Decoster 2014; Goda and García 2016). Less attention has been paid to a second, possibly more fundamental, aspect: the role of national borders. In all studies of the global income inequality their existence is simply neglected and all individuals enter the inequality index with identical weights. Implicitly, these analyses assume some kind of “cosmopolitan” social evaluation which treats all persons as world citizens, irrespective of their country of residence. However, the world inhabitants are not all part of the same political entity. Accounting for national differences in the evaluation may be worthy to reconcile the corresponding global inequality measure with redistributive mechanisms, which typically operate at the national level and are much more limited at the global level.

Indeed, to some the whole exercise of measuring global income inequality in the standard way is futile rightly because it implies abstracting from these differences in national contexts. As Bhagwati (2004, 67) writes:

But what sense does it make to put a household in Mongolia alongside a household in Chile, one in Bangladesh, another in the United States, and still another in Congo? These households do not belong to a “society” in which they compare themselves with the others, and so a measure that includes all of them is practically a meaningless construct.

On the other hand, the enormous progress in mobility and communications makes the notion of a “world society” far less baffling than Bhagwati seems to think. This was precisely the point made over seventy years ago by Frankel (1942, 180) in his Presidential Address at the annual meeting of the Economic Society of South Africa:

... there exists a world economic solidarity which makes it imperative for national governments to abandon the idolatry of national sovereignty and universality if they

are to promote the economic well-being of their peoples. For more than a hundred years the steamship, the railway, the telegraph, the radio and all the other scientific developments of communication and transportation have created a world economic solidarity which is an inescapable reality and affects the lives of individuals in every community on the globe. It has radically altered the factors on which each one of us is dependent for his livelihood, his way of thought, his loyalties and his ideologies.

As observed by Milanovic (2005, 154), “globalization ... by itself contributes to the sharpening of the perception of inequality [on the world scale] ... by heightening people’s awareness of, on the one hand, differences in income and wealth, and, on the other, showing a fundamental human similarity between them”.

We may reasonably expect that other views on global equity lie between these two extremes. Indeed, intermediate concepts are proposed by the rich literature on international distributive justice developed by political philosophers. Our aim in this paper is to sketch a conceptual framework for the measurement of global income inequality that encompasses a wide range of views about what global equity is. To construct a generalised index of global income inequality suitable to take into account national borders we adopt a welfarist perspective, whereby inequality measures are interpreted in social welfare terms – although we acknowledge that this is only one way of looking at the problem. The standard way of measuring income inequality which ignores citizens’ nationality turns to be a special case of this generalised index.

The paper is organised as follows. In Section 2 we outline some alternative conceptions of global distributive justice. In Section 3 we discuss how dropping the symmetry assumption, typically adopted in the measurement of global income inequality, amounts to recognise that world inhabitants live in different national states. In Section 4 we propose a global social welfare function and derive the associated family of global inequality indices. In Section 5 we draw some conclusions.

2. A bird’s-eye view of alternative conceptions of global distributive justice

Reviewing the extensive literature on global distributive justice is beyond the scope of this short article. To motivate our subsequent analysis, in this section we draw from the insightful survey by Blake and Smith (2015) to sketch some of the main positions.

As much of the modern analysis of distributive justice, also the debate about its international dimension can be largely traced to Rawls (1971), although he originally devotes little space to the question of international justice. As known, Rawls (1971) sets two principles of justice: the principle of fair equality of opportunity, which requires social positions to be equally accessible to all for given talents and abilities, and the difference principle, which calls for a maximisation of the social and economic advantages associated to the worst among these positions. Thus, only two categories of economic inequalities are acceptable: those which can be attributed to people's personal responsibility, rather than to contingencies; and those which can benefit everyone, especially the worst-off, even if they do not stem from choices for which people can be held responsible. These principles are thought for the context of national states: a just international regime entails a fair mutual interaction among states, but assigns no role to distributive considerations. The key question is whether there is any distinctive feature that makes these Rawlsian distributive principles inappropriate for the global sphere. According to Rawls's later work (1993), individuals should live in ordered societies, represented by national states that provide basic needs. Ordered institutions agree on principles at global level but not on distributive issues. A duty of assistance towards non-ordered societies arises whenever global inequalities conflict with other human principles, do not guarantee a minimum level of material prosperity and physical security, or undermine institutions and the order of the society. However, very large income wealth disparities do not violate the principle of justice if everyone in the world lives in a well-ordered nation and is guaranteed some protection against deprivation.

Many commentators see a contradiction in this view: if income inequality above that permitted by the difference principle is unjust, the international inequalities between the rich and the poor should be reproached as those which occur within national borders. This is the position of cosmopolitans (e.g. Beitz 1979; Pogge 1989), who argue that Rawls's theory ought to be directly applied at the global level. As Pogge (1989, 247) remarks, "nationality is just one further deep contingency (like genetic endowment, race, gender and social class), one more potential basis of institutional inequalities that are inescapable and present from birth". It follows that the inequalities produced by the global institutional order could only be justified when they benefit the worst-off. Cosmopolitans maintain that the modern international institutions share all the features warranting that Rawlsian principles of justice should apply: they represent cooperative entities which allocate the advantages of trade and govern the specific interactions among international agents. In the cosmopolitan view, not

only the coercive state but also the global economic system gives rise to distributive obligations.

The role attributed to international institutions is central in the debate. Barry (1982) opposes the cosmopolitan position on the ground that the exchange of goods is not sufficient to generate a relationship among persons which is as morally compelling as that associated with belonging to the same nation: “trade, if freely undertaken, is (presumably) beneficial to the exchanging parties, but it is not ... the kind of relationship giving rise to duties of fair play” (1982, 233). Unlike trading partners, fellow citizens share political rights and are subject to the coercive power of a state which can enforce redistribution. The right institutionalists focus on the differences between the international and domestic domains by pointing at the dramatically different political structures: the former is anarchic, while the latter is coercive. According to Nagel (2005), the moral obligation to prevent people from starving and being murdered derives from universal humanitarianism, whereas justice needs the coercive power granted by nationally coordinated institutions. On the contrary, left institutionalists contend that the set of the international institutions is sufficiently robust to justify the application of Rawls’s principles of distributive justice, although on a cooperative rather than coercive basis. Right and left institutionalists agree on the crucial role of institutions in promoting egalitarian distributive obligations, but they disagree on which institutions activate these obligations. Whereas for right institutionalists domestic justice differs from global justice for the existence of a political authority with sovereign powers, many among left institutionalists stress the power of institutions such as the World Trade Organization.

Other views assign greater importance to persons than institutions. Some rely on the notion of nationality as a set of cultural values to question cosmopolitanism. Miller (2007, 2008) calls for caution in extending to the global level the principles of distributive justice that are appropriate within the nation. He identifies two alternative principles of global justice requiring, the first, the universal protection of basic human rights and, the second, a fair allocation of the costs and benefits of international cooperation. He makes clear that “neither principle calls for the levelling of global inequalities: both leave space for national communities to develop at different speeds and in different directions, provided they comply with the requirements of these two principles” (Miller 2008, 396). On the other hand, pure egalitarians argue that distributive duties arise among persons considered as human beings, irrespective of the institutional framework and the existence of shared institutions. Another

strand of research re-examines the role of institutions from a radically different perspective. Pogge (2010) holds that global institutions are imposed by wealthy nations on the poorer ones and hence bear substantial responsibility for underdevelopment and international poverty. As the poverty of underdeveloped nations is a violation of the rights of the poor, international inequalities must be redressed not because of humanitarian charity but because of distributive justice obligations.

This concise overview cannot do justice to the richness and sophistication of the philosophical debate on international distributive justice, but illustrates the main positions. In brief, cosmopolitans, pure egalitarians and left institutionalists differ in their underlying motivation but are likely to agree that the world inhabitants must be uniformly treated in the measurement of global income inequality. On the other hand, Rawlsians, right institutionalists and nationalists stress that national borders matter and cannot be ignored in setting the principles of international distributive justice. The latter positions imply that we may have to measure global income inequality differently from what is typically done in the economic literature. Before we turn to this question in the next section, a comment is in order. For the purposes of our analysis, people could be distinguished either by country of residence or by nationality. Theoretical analyses likely favour the latter concept, as political rights are attached to citizenship rather than residence, but empirical analyses typically refer to the former concept, since statistical sources tend to employ territorial frames that cover the residents of a nation instead of the citizens of that nation (who may be living abroad). Although this distinction is conceptually very important, especially in the presence of massive migration flows, we ignore it in the remaining of the paper and we use interchangeably terms such as citizenship, nationality and country of residence.

3. Symmetry and national borders

So far, all analyses of global income inequality implicitly postulate a single world evaluation function which is a symmetric function $W(y_1, \dots, y_N)$ of the real (i.e. purchasing power adjusted) incomes y_i of all N world inhabitants. Symmetry follows from the assumption that there are no other relevant differences between people apart from income. As suggested above, from a normative standpoint, this approach appears to be consistent with the views of cosmopolitans, pure egalitarians, and left institutionalists. On the other hand, even the advocates of alternative views of global distributive justice may be interested in

calculating a summary measure of inequality in the distribution of incomes across the world. Can we construct inequality indices that assign national borders a role?

A positive answer is implicitly offered by the practice followed in EU statistics to calculate EU-wide estimates as “population-weighted arithmetic averages of individual national figures” (Eurostat 2015; see for instance the tables in the statistical annex of European Commission 2016, 340). If we measure income inequality by the mean logarithmic deviation, which is exactly decomposable by population subgroups, this practice amounts to ignore the between-country component of inequality. Indeed, the mean logarithmic deviation for the EU as a whole is

$$(1) \quad L = -\frac{1}{N} \sum_{i=1}^N \log\left(\frac{y_i}{\mu}\right),$$

where N is the total EU population and μ is the EU mean income. The index L can be decomposed into the within-country component L^W and the between-country component L^B as follows:

$$(2) \quad L = L^W + L^B = \sum_{m=1}^M \left(\frac{N_m}{N}\right) L_m - \sum_{m=1}^M \left(\frac{N_m}{N}\right) \log\left(\frac{\mu_m}{\mu}\right),$$

where N_m , μ_m and L_m denote country m 's total population, mean income and mean logarithmic deviation, respectively. The EU practice takes the EU inequality to coincide with the first term L^W on the right-hand side of (2): it is simply the mean inequality observed in member countries, with bigger countries counting proportionally more than smaller countries. How much the average German is richer than the average Portuguese or the average Bulgarian, which is captured by the term L^B in (2), does not matter for the calculation of the level of income inequality in the EU (the same consideration applies to other inequality indices, although their decomposition may be messier than that of the mean logarithmic deviation). To some extent, this approach may be seen as consistent with the Rawlsian view: as EU member countries are well-ordered societies, with welfare states protecting against deprivation, there may be no moral obligation to introduce cross-national distributive considerations. This interpretation may be far-fetched, once we consider that the EU member countries are engaged in an integration process which has brought to the creation of influential supranational institutions, with some coercive power and a very limited redistributive function (mostly on a territorial basis). This, however, is not the relevant point here. What matters is that the EU practice drops the symmetry assumption and distinguishes individuals on the basis of their country of residence. The implication is that measured

inequality changes if someone moves from France to Greece retaining her income, although there is no change in the inequality measured for the EU as a whole: L^W varies but L does not.

The EU practice and the cosmopolitan approach based on a symmetric social evaluation function represent two polar cases in our attempt to construct a general family of global inequality indices.

4. Towards a global social welfare function

To construct a family of global inequality indices which encompasses different concepts of global equity, we adopt a welfarist approach. This allows us to exploit the mapping from the properties of inequality measures to the properties of social welfare functions, and vice versa, to recover the social values underlying measures of inequality (Atkinson 1970; Blackorby and Donaldson 1978).

Suppose that the world comprises M countries. In each country m , with $m = 1, \dots, M$, there are N_m citizens who receive income y_{mi} , with $i = 1, \dots, N_m$. The social evaluation does not consider income but some concave transformation $v(y)$ of income, which is identical across people and countries and measures the living standard allowed by the income level y . As suggested by Anand and Sen (2000, 100), the concave transformation may relate to “... the fact that the valued object ultimately is not income itself, but the things we are able to do with the help of income, and it also gives recognition to the further fact that there is likely to be some diminishing returns in that conversion”. Alternatively, the transformation $v(y)$ can be interpreted as an individual utility function, and a standard utilitarian social welfare function could obtain.

The social welfare function of country m treats equally the living standards of its own citizens. However, country m is not indifferent to the living standards of other countries’ inhabitants and its social welfare function attaches a weight a_{mj} to the welfare of country j ’s residents. Thus, the social evaluation of country m can be written as:

$$(3) \quad W^m = \frac{1}{E_m} \left[\sum_{i=1}^{N_m} v(y_{mi}) + \sum_{j=1, j \neq m}^M a_{mj} \sum_{i=1}^{N_j} v(y_{ji}) \right] = \frac{1}{E_m} \sum_{j=1}^M a_{mj} \sum_{i=1}^{N_j} v(y_{ji}).$$

The living standard of residents of country m is taken to be the unit of account ($a_{mm} = 1$), while the degree of altruism a_{mj} that country m exhibits to country j ’s population is supposed to be comprised between 0 and 1. Social welfare is expressed in per capita terms by dividing

the sum total by E_m . This variable represents the number of “person equivalents” for country m that enters into its valuation of social welfare, that is $E_m = \sum_{j=1}^M a_{mj} N_j$. If country m shows no altruism, $a_{mj} = 0$ for all $j \neq m$, and $E_m = N_m$; if the country treats all world inhabitants alike, $a_{mj} = 1$ for all j , and $E_m = N$.

Following Atkinson (1970), we may compute the equally distributed equivalent income y_m^e , which is the level of income that would give the same total welfare in country m as the one observed in reality if this income was earned by all in the relevant population. From (3), y_m^e is implicitly defined as:

$$(4) \quad v(y_m^e) = \frac{1}{E_m} \sum_{j=1}^M a_{mj} \sum_{i=1}^{N_j} v(y_{ji}).$$

In the standard evaluation of the social welfare in country m , the equally distributed equivalent income y_m^e would be compared with the country’s mean income μ_m . In the case of (3), we allow for the possibility of altruistic preferences. Thus, the proper reference income is not μ_m but the income per person equivalent \bar{y}_m , defined as

$$(5) \quad \bar{y}_m = \frac{1}{E_m} \sum_{j=1}^M a_{mj} N_j \mu_j.$$

Subscript m refers to the fact that each country m may have a specific set of preferences towards the inhabitants of other countries, as captured by the values attached to the a_{mj} ’s: thus, $\bar{y}_m = \mu_m$ if the country shows no altruism, and $\bar{y}_m = \mu$ if it treats all world inhabitants alike.

Because of the concavity of the function $v(y)$, the equally distributed equivalent income y_m^e is lower than \bar{y}_m , and we can define the inequality index I_m for country m as the proportionate loss of social welfare due to the unequal distribution of income:

$$(6) \quad I_m = 1 - \frac{y_m^e}{\bar{y}_m}.$$

Note that with altruistic preferences, the inequality level, as measured by the proportionate social welfare loss, is not confined to those residents within the national borders. Country m ’s inhabitants also care for the rest of the world inhabitants, to an extent which is determined by the a_{mj} ’s. With full altruism, the index I_m coincides with the cosmopolitan global inequality index I_g which treats all world citizens equally and is consistent with the social evaluation

$W^g = \frac{1}{N} \sum_{m=1}^M \sum_{i=1}^{N_j} v(y_{mi})$ that could be adopted by a global authority. On the other hand, if there is no altruism, expression (6) yields the standard single-country inequality index suggested by Atkinson (1970).

The global social welfare function can be derived by aggregating all countries' welfare evaluations. Rather than aggregating the social welfare functions W^m 's, we aggregate the equally distributed equivalent incomes y_m^e 's, which represent countries' level of social welfare as measured in the income space. Hence, we define the global social welfare function as:

$$(7) \quad W = \frac{1}{N} \sum_{m=1}^M b_m y_m^e,$$

where b_m , with $b_m > 0$, is the weight attached to the welfare evaluation of country m ; b_m is strictly positive in order to account for all countries in the global social welfare function. These weights reflect those assigned by a “global social observer” to each country in the global count of well-being. By using (6), we can re-write (7) as:

$$(8) \quad W = \frac{1}{N} \sum_{m=1}^M b_m \bar{y}_m (1 - I_m) = \frac{1}{N} \sum_{m=1}^M b_m \bar{y}_m - \frac{1}{N} \sum_{m=1}^M b_m \bar{y}_m I_m = W_0 - \frac{1}{N} \sum_{m=1}^M b_m \bar{y}_m I_m.$$

The term W_0 measures the global level of social welfare if there are no welfare losses due to the unequal distribution of income, where the word “unequal” must be understood as being determined by national preferences. We can then define the global inequality index I as:

$$(9) \quad I = \frac{W_0 - W}{W_0} = \left(\frac{\sum_{m=1}^M b_m \bar{y}_m I_m}{\sum_{m=1}^M b_m \bar{y}_m} \right) / \left(\frac{\sum_{m=1}^M b_m \bar{y}_m}{\sum_{m=1}^M b_m \bar{y}_m} \right) = \sum_{m=1}^M w_m I_m,$$

with $w_m = b_m \bar{y}_m / \sum_{m=1}^M b_m \bar{y}_m$.

The global social welfare function (8) leads to the family of inequality indices (9) that encompasses the two polar cases discussed earlier. If all countries are fully altruistic, we obtain the cosmopolitan index $I = I_g = I_m$ for all m . Note that in this case the values of the weights b_m 's do not affect the level of measured inequality: as all governments take the whole world population into account, a shift of the global social observer's weights from one country to another has no impact on the measurement.

The weighting scheme of the global social observer matters when countries are not fully altruistic. The weights b_m can be conceived as a generic function f of country's population, its mean income and level of inequality, such that $b_m = f(N_m, \mu_m, I_m)$. For

simplicity, we consider the function f being homogeneous of degree 1 with respect to country's population, or $b_m = N_m f(\mu_m, I_m)$. Then, it might be reasonable to assume that the global social observer attaches a higher weight to poorer countries (f decreasing in μ_m) and to countries with a higher level of inequality, on the ground that it may lead to social conflicts (f decreasing in I_m). To have an idea of how the weighting scheme affects the global welfare function and the related measure of global income inequality, consider the limit case in which no country is altruistic and hence $\bar{y}_m = \mu_m$. By setting $b_m = N_m$, the weight w_m would represent country m 's share in the total world income. By setting $b_m = N_m / \mu_m$, the weight would represent instead country m 's share in the total world population, $w_m = N_m / N$, and we would obtain the population-weighted index used in EU statistics. The difference between these two weighting systems can be understood by inserting them back into (7). The global welfare functions become $W = \sum_{m=1}^M \left(\frac{N_m}{N} \right) y_m^e$ and $W = \sum_{m=1}^M \left(\frac{N_m}{N} \right) \left(\frac{y_m^e}{\mu_m} \right)$, respectively. In the first case, the global evaluation focuses on the absolute levels of national social welfare. In the second case, which corresponds to the EU practice, it takes the ratio of this level to mean income, which amounts to say that it is equity more than absolute welfare to matter in the evaluation. With a more general $b_m = N_m f(\mu_m, I_m)$, we could weight differently equity and absolute welfare in the global inequality evaluation.

Our framework is general enough to account for more complex patterns than the two polar cases discussed so far. In particular, the matrix $\mathbf{A} = [a_{mj}]$ could be calibrated on the basis of the official and unofficial bilateral transfers for international aids, possibly normalised by the amount of resources devoted to domestic redistribution. Alternatively, it could represent a matrix of spatial distances among countries, as suggested by Bourguignon (2015a): the farther away the country j is, the smaller the weight attributed to the living standards of its inhabitants by country m social evaluator.

5. Conclusions

In this note we have discussed the social welfare bases of the measurement of income inequality among the world inhabitants. Despite the great interest in the evolution of global inequality by researchers, policy-makers, mass media, and the general public, the normative foundations of the measurement have received relatively little attention. We have developed a

general family of global inequality indices which encompasses different concepts of global equity, from the cosmopolitan to the nationalist view. Three final comments are in order.

First, we need to clarify our use of the expression global “social observer” rather than the more familiar “social planner”. This choice reflects the fact that we want to account also for the case where redistribution operates exclusively within national borders, which is inconsistent with a global social planner that naturally redistributes also across countries (unless it is constrained not to do so). With a global social planner the weights b_m might be seen as reflecting the process through which an agreement between countries is reached on the optimal distribution of resources, analogously to what happens between partners in the household collective model conceptualised by Chiappori (1992). In this type of models, departing from the specific way through which partners bargain over consumption and leisure allocations, it is assumed that any decision process leads to Pareto-efficient solutions, while partners maintain their specific welfare evaluations. This framework, which can be directly applied to the interactions between countries in our setting, is left for future research.

Second, our measure of global inequality does not generally satisfy *for the world as a whole* the Pigou-Dalton principle of transfers (e.g. Atkinson and Brandolini 2015). According to this Principle, a mean-preserving transfer of income from a richer person to an (otherwise identical) poorer person should decrease measured income inequality. This indeed happens if we adopt the cosmopolitan perspective that treats all world citizens equally. It does not necessarily happen, however, for alternative perspectives. To see this point, consider the case where there is no altruism and the weights are the country shares in the total world population, as in EU statistics. If a rich person in a poor country transfers one dollar to a foreign person who is poor in her own country but is herself richer than the donor, the global social observer would record that measured inequality falls in both countries as well as at the global level. The point is that the two persons involved in the transfer are not “otherwise identical”, as they live in two different countries. Once we abandon cosmopolitanism, we need to reconsider how national borders limit the application of the principle of transfers. In a sense, this observation parallels the discussion on the “local” nature of this principle in Esteban and Ray’s (1994, 826–9) article on polarisation. Indeed, research on polarisation offers an alternative way to approach the questions raised in this note. As defined by Duclos, Esteban and Ray (2004, 1737), polarisation is related to “the alienation that individuals and groups feel from one another, *but such alienation is fuelled by notions of within-group identity*”; in our framework groups are countries.

Lastly, a more comprehensive approach that considers also nationalist views besides the more common cosmopolitan view may have important implications for our reading of recent developments. There is a broad consensus that inequality has been falling on a global scale thanks to the drop in cross-national income gaps, in spite of a rise of inequality within most nations. As remarked, by Bourguignon (2015b, 38):

Today, the first trend is much stronger than the second and total inequality is on the decline. It is not unreasonable to worry that this current trend has its limits and that the rise in inequality within countries, or at least in a significant subset of countries, could progressively weaken the fall in global inequality. ... A process of “internalizing” global inequality within national communities may thus take place; inequality between Americans and Chinese would be partly replaced by more inequality between the rich and the poor in America and China.

The social observer would be much more worried about current trends in the distribution of income among world inhabitants by adopting a nationalist rather than a cosmopolitan view.

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