

Substituting, Differentiating, Discriminating! Migration and Cognitive Borders in Aging Societies

Francesco Maniglio¹

Abstract

Both Legislators and demographers have shown concerns about the aging of populations in the global North countries, and, for over two decades, have suggested encouraging migrations to make up for its effects. As a result, qualified and highly qualified migration have boomed, reflecting the global consolidation of migrant labor in technological, scientific and financial sectors. This substitution migration policy, however, is put into question from a knowledge-based economical and political perspective, since, by disregarding the relationship between labor productivity transformations and demographic crisis, it fails to see important processes whereby immigrants are differentially included. Moreover, we want to reject the philanthropic and optimistic views of globalization, as consolidated in formulations such as “brain gain” and “brain circulation”, which emphasize the generalized positive effects of qualified workers’ migration. Instead, we suggest delving into the cognitive injustice of international migration processes, which are part of a greater global social injustice pattern. Indeed, rather than reproducing the discourse of mobility, democracy and human rights, we assert that selective immigration policies effectively consolidate the reproduction of global social inequalities.

Keywords: *Aging societies; replacement migration; highly qualified migrations; cognitive borders; cognitive injustice*

Introduction

Demographic debate has focused on the changing life modes in the global North, notably due the aging of their populations. As populations grow less rapidly and get older, institutions, such as social welfare and retirement funds have entered into crisis. This is not an isolated concern. Overall, countries are much more indebted that they used to be, and most creditors of such debts are investment funds, which are more powerful than countries themselves. This is what we usually call the indebtedness and financialization of domestic economies. The result for most countries involves sluggish local economies, dramatically higher unemployment and irregular employment rates, and increasing rates of over-exploitation. Today, capital accumulation is based on technological upgrades, which even more than before, increase productivity and generate unemployment. That economies become financialized also means that funds are exponentially moved from institutions such as retirement funds to volatile assets, which eventually leaves citizens unprotected in their homelands, pushing them to seek a better future in richer countries. This is, in short, the process of workforce mobility.

Several issues are derived from this situation. On the one hand, inequality is not an abstract or generalized concept. As there is inequality between social classes, so there is inequality between generations, which means that a person’s lifespan will also be subject to inequalities. Demographic factors are thus cross-sectional, in that there are different interactions. If classical Marxian theory divided society into classes, we now try to fine-tune that concept,

¹ Francesco Maniglio, University of Brasilia, Brazil. E-mail: franmgl@gmail.com



including new class features. For instance, depending on the regions where people live and their conditions in general, we should also consider different life expectancy, family structure and lifestyles, and different levels of education. Moreover, it is not enough to state that immigration rates have risen, but we should also, in our characterization of immigration, account for high-skilled, skilled and unskilled immigrants. All these demographic factors bear on social inequality (Guerin, 2013). These are not new phenomena, though, but historical processes. During the '90s, in Herrnstein and Murray's classic *The Bell Curve: Intelligence and Class Structure in American Life* (1994), the authors use the term *dysgenic effect* to refer to the relatively high fecundity rates among the poorly educated. The *dysgenic effect*, thus, would have consequences on demography, education, and class structure, which, according to the authors, are related concepts. Mare (1997) criticizes such bio-cognitive views and focuses on the fact that social inequality is reproduced by structural relations. Somehow, Mare goes the opposite way as Herrnstein and Murray, putting the cause in the structures and not in populations' fecundity rates. We might well call his stance cross-sectional: he explores the effects of a differential fertility between black and white populations, and tries to understand how those figures should imply differences in the rate of academic achievements. Another source for understanding social inequality are the critical geography studies. In this case, geography is used as a tool to explain, for instance, how migration processes help generate a new form of global economy in which countries compete for highly-skilled workers. In this so-called knowledge-based economy critical geography studies analyze social spaces, their segmentation forms, and their complexity. Further, they analyze the reproduction of horizontal inequalities, between different identity and class positions (Stewart, 2016). Another example is the struggle for patents, which end up concentrated in some knowledge-based economies. Overall, this process of technological innovation is related to the substitution of certain labor functions and, in turn, this is directly related to unemployment, lower wages, and greater socioeconomic inequality (Korinek & Stiglitz, 2017). So we see that migration has become increasingly important all economically, politically, and socially, so much so that there is a consensus to consider the last two decades as the times of migration (Castles et al., 2013). International migration is an ever more strategic commodity, calling for significant policies and resources, to deal with the differentiation of workforce and the diversity of populations. As an outcome, corporations take on more power in defining policies and establishing a new organization of social classes. It is no wonder that international migration inequalities are derived from the differences between migration regimes, which enforce different criteria to incorporate immigrants (Mouhoud & Oudinet, 2010). Let us look at the example of Syrian refugees in OECD countries, which are known to have aging populations. There, qualified refugees were granted legal advantages, so that they be easily incorporated into the labor market, sustain economic welfare, and hold their status and moral consideration (Tigau, 2018).

This is a clear example of how highly-qualified migrations are in no way free from conflict, as the common opinion has it. However, conflict is rather to be thought of as a continuum with different overlaps among the typical theoretical migration categories oftentimes used as a basis for policy making. In relation to this approach, Sirkeci (2009) argues that migration is a search for human security. However, conflict and human insecurity in high-skilled migration are systematically ignored by the UN and other international organizations, which, that notwithstanding, encourage this type of migration, called substitution migration, where younger immigrants renew the workforce of an aging society. They support their optimistic view on globalization, through concepts such as brain gain or circulation, which are based on



the fact that qualified workers' migration results in a sort of win-win, where the origin countries end up gaining when those qualified migrant workers return to their homelands. Such positive effects are largely questionable. In the meanwhile, what we have is a dubious differentiation and discrimination of human capital, which lies at the basis of the relationship between migrations, demographic crisis and work productivity. This is what Santos (2009) denounces as cognitive injustice, which is part of a larger global social injustice process. Going back to the optimistic view of international organizations, what we have is rather a hypocrite stance, which praises free mobility, democracy and human rights, while turning a blind eye on immigration selective policies which consolidate and reproduce social inequalities.

Knowledge-based economy and cognitive border policies

We have become used to thinking of borders in metaphorical terms. We may think of the borders between different disciplines. So, Mezzadra Neilson state that "borders, then, are essential to cognitive processes, because they (...) establish the scientific division of labor associated with the sectioning of knowledge into different disciplinary zones" (2013, p. 16). However, for human geography studies, cognitive borders are more of a literal concept; they establish areas where high-skilled human capital moves across. Highly skilled migration shows social stratification, which can be studied from a historical perspective, i.e., over the years, for a certain area or geographical unit, or from a socioeconomic one, i.e., considering their impact on the economy and general organization of societies. The impact of highly skilled migration on the labor markets varies widely, depending on the combination of the specific abilities of such migrants and the demands of knowledge-based markets or spaces (Ruhs, 2013). So, we can say that mobility, which is not only spatial, but also social, indicates how human capital is made available. As an outcome, we are witnessing intensive processes in which societies make a difference based on the accumulation of knowledge.

So far for how human capital moves. How about the production and of knowledge? Firstly, we shall discuss the internationalization of higher education, research and development systems. Next, we will refer to the dissemination of scientific venues and tech hubs, which closely interact with universities, corporations, and venture capital. In the third place, we will see how corporations from central countries acquire knowledge-commodities, such as invention patents, scientific products, or hi-tech prototypes through strategic investments, including venture capital, outsourcing, or cooperation agreements. This third item could also be defined as the accumulation, concentration of control of cognitive capital. Finally, we will deal with the exponential growth of highly qualified labor force in the peripheral countries.

Geopolitically, nations' competitiveness depends largely on their research, development, and innovation (R&D&i) budget, as a percentage of the GDP. R&D&i allows countries to specialize in more intensive science and technology areas. Well, global North countries, such as US, Canada, France, and Japan invest 2-3% of their GDP. Emerging economies also sought to invest heavily in R&D&i; for instance, Korea, Malaysia, and China have doubled their investments as a proportion of the GDP over the last decade. Latin America is far from those figures. Between 2000 and 2010, only Brazil invested 1% of their GDP in R&D. Other countries in the region barely maintained marginal expenditures in the area (OIM, 2017). A useful way to observe the outcomes of such investments is the international division of patents. In 2012, US alone hoarded 28% of all the patents in the world. If we enlarge the picture, to include all OECD countries, that figure grows up to 90%. The concentration of patents is most clearly seen in the analysis of triadic patents. Triadic patents are those who

seek protection in three leading markets. US, the EU, and Japan virtually accumulate all of them, as each possesses around 30%, with Korea and China still in a subaltern position (National Science Board, 2016). In order for this dominion to be maintained, the participation of foreign inventors in US grew from 18% in 1963 to 52% in 2014. It is no wonder that a whole range of policies and provisions cater for the alluring of talents from the South, where individual skills and qualifications are usually underutilized, wages are lower, and there is a strong push to seek better life conditions and social mobility through migration.

Now let us go back to the brain gain or brain circulation theories, and we will see how naive and anachronistic they are. Let us say it once more: the export of highly qualified labor force from peripheral countries is no win-win-win process, but a plundering and preying way of dependence (Delgado Wise et al., 2016, p. 17).

One may argue that in India or Mexico, qualified migrants come back to work in corporations, academic institutions or tech hubs. Even in these cases, the capital is still related to US and UE. Somehow, these are enclaves of these nations. The existence of such enclave economies is but another way of regulating knowledge and technology transfer (Gallagher & Chudnovsky, 2009). Short of producing gains for their origin countries, these returning brains, as much as the migrants who move around diaspora networks, feed an ever-expanding academic capitalism (Slaughter & Rhoades, 2004). No matter where they live or work, they are eventually recruited by the interests of nations and corporations which even dictate restrictive regulations on innovation, research and technology transfer in order to keep these enclaves at bay.

Substituting / Using immigrants to make up for the aging of societies

Since the '80s, demographers in the global North have been observing that fertility rates were going down and populations were getting older in their countries. They call this process "second demographic transition". The first one occurred during the last century, when mortality rates were cut down; this one is mostly characterized by the total control over fertility (Lesthaeghe, 2014). Now, is this the whole picture? What about migration? In the global North, the workforce supply, i.e., the overall number of workers seeking job, has dramatically increased, mainly because of the incorporation of people from China and the former Soviet bloc. This, and the fact that the relation between demography and productivity was very different in the global North as in the rest of the world, are key issues that Piketty's book, *Capital in the Twenty-First Century*, failed to see, as pointed out not less than the World Bank and Morgan Stanley (Milanovic, 2014). Now, in line with Piketty's views, underestimating the importance of the demographic shock and unemployment problem, theoreticians of the "second transition" still suggest controlling migration flows, so that the supply of foreign workers makes up for the market work demands and the aging of populations. Meanwhile, central countries continue to appeal to the historical structures of the welfare state and the control of the global supply of workforce. As pointed out above, the UN Population Department praised such "substitution migration" which would mend the "generalized need" to balance the likely scarcity of workers and the aging of populations (Bernan et al., 2001, p. 5). Some demographers even calculated the volume of migration necessary to relieve such effects. Such simulations were based on a generalization that was the source of hot debate, though. Analysts use a ratio to measure the proportion of working people compared to the retired population, which they call the "potential support ratio". Even if small numbers of



immigrants were needed to prevent or avoid the population decline and maintain a fair number of working-age workers, demographers argue, attaining a reasonable potential support ratio seems to be an unattainable target for central countries, which are going to have increasingly more retired people (Craveiro et al., 2019). One such analyst, Bijak (2013), through her own simulation in 27 European countries, clearly showed how substitution migration is unsustainable as a long term demographic strategy. Only a change in social policies which increases the number of actually employed workers among those in the active age population (the participation rate), financial incentives to families to increase the birth rates, and a substantial reform to the retirement system could result in a truly changing scenario.

Now, if we switch the focus from population estimates to historical social processes, we will see how current substitution migration in low fertility rate countries is short of being a generalized process. Much though it is true that, in many EU countries, the increase in gross immigration rates has been a key demographic factor over the last few decades, the point is that countries have enforced “different substitution regimes” (Wilson et al., 2013), based on immigrants’ differential insertion into domestic labor markets. A recent comparison of OECD countries showed that many immigration policies shared the same target, namely, hierarchically differentiating human capital to offset the declining fertility rates in the labor market (Aksoy & Zoega, 2020). Usually immigrants, either in regular or irregular situations, are perceived as an interesting demographic factor, which would raise the competition in national labor markets. The relationship between the migratory policy, economic recovery and neoliberalism can be synthesized in the idea of the “migration usefulness” (Amante & Rodrigues, 2021, p. 8). Migration usefulness is shown as the ground for such policies as allure overseas investors, who either look for a safe-haven, or for a better place to deploy their lifestyle unencumbered. A recent study of such policies in Portugal focuses on the increasing number of Chinese Golden Visa holders, alongside investors from other locations, such as the Middle East, Russia and Turkey, who fall into the category of safe-haven investor seekers. (Amante & Rodrigues, 2021). The differentiation between irregular immigrants or refugees, on the one hand, and economic immigrants, on the other hand, encourages a discrimination process against international immigrants. We prefer to say that this process is differentiated rather than dichotomical. Indeed, when low-qualified immigrants are in their majority employed in cleaning or domestic service jobs, as is the case in Portugal and many other countries, changes affect not only those immigrants but the labor market as a whole. Preferences both of employers and employees are shaped according to this situation, and racialized hierarchies are reinforced, which, in turn, impacts on further substitution immigration processes and broader labor integration (Pereira, 2013, p. 1154). So, as exploitation and poor work conditions increase for immigrant workers, discrimination based on qualification also increase. Because, while this is the case for the poorly qualified, high skilled immigrants are the most coveted substitutes to make up for the labor work scarcity and to boost increasing productivity in aging societies.

Differentiating / Selective recruitment and international mobility

To supply the growing qualified labor demand in the global North, the recruitment areas broadened, leading to an international competence market. The quotas for highly skilled foreign workers and international mobility programs increased, resulting in an open competence not only between immigrants, but also between nations, corporations and

universities, through selective migration policies, lures, and retention policies for human capital. Liberal approaches based on migrants' aspirations and capabilities, in which human mobility is defined as people's ability to choose where to live and stay (de Haas, 2021), consistently ignore these differentiation and selection policies. They neglect, for instance, the fact that the geographical mobility of young Europeans takes place within educationally and professionally structured institutional realms, which are open to certain sectors on an inter-generational basis, and which provide unequal preconditions for migration. A recent study highlights that in the labor market, mobilities are actively used as instruments to promote the transition to adulthood and employment, but inequalities between educational environments reproduce the disparities that already exist in terms of access to these positions (Schlimbach et al., 2019, p. 26). A recent special issue of *Migration Letters* (Hercog & Sandoz, 2018) proposes to widen the focus and look beyond immigration authorities, to include actors that are in one way or another involved in the process of selecting, supporting or employing highly skilled workers, and who, for that very reason, also contribute to their definition. These certainly include universities, which are an active and strategic stakeholder in the circulation of human capital. The higher education market dramatically grew globally. Just to have an idea, the number of students enrolling out of their homeland countries were 2% in 1950, 3.8 in 1990, and 5.6% in 2015 (OECD, 2017a). Nominally, 5.3 million international students were reported in 2019 (UN, 2020). US was the main destination among OECD countries, with roughly one third of such students. In 2016 the Institute of International Education assessed the short term impact of these students for the US economy in 35 billion dollars. As expected, central countries occupy the top positions in this higher education global market. They not only offer a range of levels, but also boast better academic quality, international renown, a convenient credit system, which allows students to customize their studies, and the sheer fact that teaching is done in one of the dominant languages, particularly English. University recruitment strategies result in further immigration selective policies, but, moreover, states support their universities recruitment strategies by establishing immigration lures for prospective students. Decades ago, US, Canada, Europe, and Australia established selective immigration systems to compete in this international market. Actually, the struggle for international students is led by Germany, Australia, Canada, US, France, and the UK, which, in all receive more than 50% of all foreign students globally (OECD, 2017c). The EU, as it is, apart from immigration selective policies, enforced a series of measures towards the fast validation of academic degrees, to support the competitiveness of its higher education centers, and created a supranational space for innovation, science, and technology. Nevertheless, despite such efforts, the EU keeps losing doctors to the hands of US: About 60% of European doctors remain in the US. In the fields of Sciences and Engineering, respectively 64%, 53%, and 62% of the doctors graduated in the US come from the UK, France, and Germany, and remain in the US labor market (National Science Board, 2016).

The EU efforts to attain a leading role in the higher education market gave place to the Bologna Process and the creation of the European Higher Education Area (EHEA) in 1999. The EHEA allowed European central countries to concentrate the innovation, research and development production. This global competitive strategy but intensified the inter-regional competition and dependence. Current times are characterized by the mobility of doctors from European Southern regions, which lose their native knowledge-capital, to the European central countries, and from Europe in general to the US. The big loser in this share of talents is Greece, which has been losing brains to the UK (31%), the US (28%), and, to a lesser extent,



Germany. Indeed, 73% of the Greek immigrants have a University degree, and 51% have a doctor's degree. Italy also loses qualified human capital, mostly to US (34%), the UK (26%), and France (11%) (Wende, 2015). The boom of doctoral international enrollments in OECD countries is driven primarily by US, which are the leading host for doctorate international students. Many leading international doctorate R&D programs appeal to many international students, who look up to the strategic position of these institutions, with the hope of a differential inclusion in the labor market. Australia also takes part of this struggle for the retention of highly skilled human capital, with a participation in the global higher education market "growing from 1 to 9% between 1990 and 2003". In 2014, 18% university students came from overseas (Marginson, 2007). Asian students are the ones who migrate the most, seeking a better professional qualification with international standards. They account for 53% of foreign students enrolled globally. Asian migration flows mostly into three countries: US (44%), Australia (16%), and the UK (15%). China and India were the two greatest suppliers of international students to US in the first decade of this century. About 47% Chinese students and 55% Indian students who arrived between 2000 and 2004 became permanent residents by 2014, i.e., 10 years after the extension of their first student's visa. Lo, Li and Yu (2017) also focus on the high retention rates for Chinese and Indian students, who work as substitution labor force in the US. This entails a long-term "brain-waste" impact for the origin societies.

Discriminating / Cognitive and global social injustice

Encouraging international migrations to solve the problem of aging societies may be thought of as a classical "liberal paradox" (Hall, 2017). It is one of those aporias of public policies, discourse, and practices: to claim the need for immigration, and then to reject immigrants. Countries solved this by increasing their migration selection practices, and their flow management/control policies. In their competition for specialized immigrants, they include lures, point systems and professional immigration agents or organizations, which are key in the struggle for transnational work markets (Harvey & Groutsis, 2017). Selective immigration is valued in the host markets, which establish controlled migration flows and reduce the "non-qualified" immigration. The "priority workers" term has been coined by the global North countries in order to separate those wanted immigrants (highly qualified workers). This is the case of Canada, Australia, Japan, and the EU, which have implemented selective migration policies particularly since the '90s to meet the domestic labor market demands. But, most especially, it is the case of US, where international students take the highest share of all the temporary visas issued. In Europe, this is exemplified by the Blue Card initiative (Directive 2009/50/CE), which, in general terms, corresponds to the American Green Card as a safe-conduct to favor the entrance and permanence of qualified and highly qualified immigrants.

Currently, the international labor market includes 164 million migrant workers, which represents 59.2% of all international migrants, and 70.1% of the working age migrants. Migrants usually defined as *qualified* or *highly qualified* account for 30% of the total, with 5.3 million international students (UN, 2020). Therefore, there is no doubt that the main substitution migration process in the global North states is based on the continuous differentiation between highly qualified/qualified/non-qualified migrants. Understanding inequalities is key to get a grasp of the consequences of this process. For the South, the brain waste and the formation of scientific diasporas entail risks for development. In the Latin American context, we should bring back the ideas of cognitive or academic dependence (Beigel, 2011; Maniglio, 2019). The countries of origin depend not only of the technology

transfer by central countries, but, in certain cases, as pointed out above, become enclaves for foreign capital, which embodies another form of dependence. As asymmetrical flows continue to exist, international academic mobility and labor force segmentation yield a sub-utilization of human capital skills. Qualified migration has been reported in the UE since 2000 from the Mediterranean and East countries towards the northern and central regions and other OECD industrialized countries. The post-2008 crisis scenario but increased this trend, calling attention from the media and public opinion. There is concern, because brain drain aggravates polarization and affects the integration in the European Research Area (ERA), where a lack of skilled workers significantly coexists with large numbers of long unemployed qualified people because of the sector competitiveness (Dimian et al., 2018). These effects become even more evident in the current pandemic, for instance, with the lack of personnel in certain healthcare services in the East European countries (UN, 2020). At regulatory level it is important to note that “the political impact of COVID is likely to follow the patterns of earlier crises. The tightening of immigration regulations, visa and admission regimes after the 9/11 New York and 7/7 London bombing are now part of the ‘normal’. The restrictions imposed to tackle the pandemic are, therefore, likely to stay with us and become part of the ‘new normal’” (Sirkeci & Cohen, 2020, pp. 6–7).

Global social injustice is born and reproduced under the protection of a legal apparatus and the patina of human rights, as well as the brain gain and brain circulation discourses. “There is no alternative” said Franco Frattini, the European commissar for the space Justice, Freedom and Safety in the European Parliament, as he championed the other side of the Blue Card program: full vigilance of the outer European boundaries to detect immigrants, and enforcement of the “Smart Borders” program, which includes biometric identification of every person coming in and out of the EU. This boundary control is an ubiquitous machine which divides wanted from unwanted people, as points out Huub Dijkstra, in *The Migration Machine* (2011). The migration machine is actually a database fed with biometric data, which encourages the discriminating, racializing effects of the population and boundary management policies enforced by European regimes (Amelung et al., 2020). Even though their official discourse is clean of any ethnic or racial explicit mentions, certain biometric system infrastructures, such as SIS, Frontex, VIS, Eurodac and Prüm effectively discriminate racialized migrant groups (M’charek et al., 2014). Actually, the continuous profusion of laws, and standardizing restrictive policies betray an ambiguous political will, which “paradoxically” fails to yield the expected results, as they are centered in an unattainable differentiation of human capital. The outcome is the fostering and reproduction of irregular migration, the increase of the legal and fake document markets, and a disproportionate increase in human right violations, which is quite the opposite of their purported goal (Ortega Velázquez, 2014). A recent study focused on illegality as a pre- and post-condition for claiming asylum in the EU and for staying into the system. An example of this is the increasingly unequal burden of asylum granting among member states, with frontline states illicitly stimulating asylum seekers to move north and lodge their claims in less burdened states (Lewkowicz, 2021).

The battle for global social justice should be a struggle for global cognitive justice (Santos, 2009, p. 40). To begin with, we should admit that certain mainstream hypotheses, such as that of substitution migration or that of migration diasporas fail to consider the above concerns, and are sheer supports for certain institutional monist cultures. This is what happens with OECD, when they suggest a usually positive two-sided relation between migration and development. With that hypothesis, it is just natural that they barely suggest a more consistent



political agenda to better integrate immigrants in the development strategies, such as international coordination and cooperation mechanisms (OECD, 2017b). Let alone the World Bank slogan, which depicts an ideal world with knowledge citizens freely flowing around (World Bank, 2005), just to blow the horn of the global work market liberalization. Currently, as opposed to the view suggested by these the monist cultures, it is necessary to put the focus on the multiplication of cognitive borders and to denounce the enforcement of migration selective policies. Otherwise, we would fall in the dichotomy refugee/irregular immigrant vs economic immigrant, which is reproduced by public opinion and that is a key element for social discrimination, taken on by xenophobe and racist political movements. However, much though this is indeed a common social perception, opinion polls on international migration also show concern about the increasing political and social polarization in our societies, where the majority prevalence of highly skilled immigrants corresponds to a growing anti-immigrant feeling and public resistance to demographic policies that may encourage immigration (Malhotra & Newman, 2017). Persisting in this differentiation of immigrants would entail a very serious political and social risk, for we would be feeding and reproducing social discrimination and global social injustice.

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