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The Beauty of Ivy: When Inequality Meets Equality

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The Beauty of Ivy: When Inequality Meets Equality

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I. INTRODUCTION

We live in the age of inequality. Thomas Piketty's (2014) *Capital in the 21st Century* leveraged attention to societal inequality. While Piketty's solution to narrow inequality ends at direct tax and wealth transfer recommendations, his book also raises important, yet hardly captured, questions about access to opportunities and social mobility to ease the negative externalities of inequality.

While pre-2008/09 World Financial Crisis there was a neo-liberal consensus of inequality being a driver of economic prosperity, Piketty's (2014) *Capital in the 21st Century* raised attention for equality in the post-2008/09 World Financial Crisis bailout finance sectors (Puaschunder, 2012b). A fairer distribution of wealth but also wage equality have become the top priorities on the economic agenda of U.S. presidential candidates

(Clinton, 2015). While the pendulum swung from inequality to equality focus, the combination of equality and inequality within a societal network has hardly been touched on. Inequality and equality representing agents existing next to each other, however, is a real-world relevant observation of diversified human capital portfolios featuring the advantages of exclusivity alongside merit-based access opportunities that drive ambition. Inequality and equality represented in one societal network lead to positive externalities –such as hope of advancement and extraordinary ambition – and may therefore be the economically more favorable and thus dominant societal composition. Within the societal network compound, explicit and implicit wealth transfer opportunities and positive image spill-over effects may arise between the luxuries of crystallized family heritage value and fluid intelligence of current out performers who are mobilized to extraordinary performance as for currently feeling pressure to change their social status.

The following article outlines Thomas Piketty's call for equality in the 21st century in the aftermath of the 2008/09 World Financial Crisis Economy (Chapter 2). Piketty's results are presented as a pendulum swing in opposition to neo-liberal inequality dominance of orthodox and conservative pre-2008/09 Financial Crisis economics. The paper then presents a novel model of equality and inequality agents concurrently represented in one societal network as an economically efficient solution (Chapter 3) by the case of Ivy League Schools (Chapter 3.1) and differing environmental conditions of societally stratified living compositions (Chapter 3.2). The importance of social interaction (Chapter 3.3) for intertemporal opportunities within societal networks (Chapter 3.4) but also meritocracy (Chapter 3.5) determining access to social mobility hubs (Chapter 3.6) for efficient inequality-equality transfers is underlined. The preliminary theoretical results are discussed and avenues for future research given (Chapter 4).

II. INEQUALITY

Globalization, political changes and societal trends, but in particular the current world economy, have leveraged the societal demand for attention to inequality in society (Piketty, 2014). Our time has been referred to as the "Age of Responsibility" in US president Barack Obama's 2009 inauguration speech (Washington Post,

January 21, 2009).¹ In the eye of the many negative consequences of the 2008/09 world financial downturn, the subsequent governmental bailouts climaxed the call for responsibility in financial markets (Milberg, 2013). The announcement of the recapitalization of the banking system in October 2008 created a demand for societal equality in a newly defined economic order. In the wake of bottom-up advocacy for fair market practices and equal wage remuneration, most vividly outlined in the Occupy movement, governmental efforts targeted at breeding equality within society and create opportunities to work hard and prosper for all (Clinton, 2015).

In the wake of readjustment of the finance sector to imbue fairness and equality in the societal order, Thomas Piketty (2014) most recently presented intercultural studies on wealth concentration and distribution over the past 250 years. Thomas Piketty's (2014) *Capital in the 21st Century* captures the contemporary trend of a rising super-rich elite having unequal access to power and holding unequal proportions of resources within society. Subsequently the top 1 percent was blamed to have unequally favorable access to tax benefits and financial markets (Clinton, 2015; Volscho & Kelly, 2012). In line with comparative work on inequality in other developed countries, Piketty built a statistical series on the evolution of inequalities in the Western world. Wealth inequality is captured to have risen over the past thirty years in the Western World, which is described as having experienced increasing levels of inequalities. The rate of capital return in developed countries is shown persistently greater than the rate of economic growth, which is prospected to cause wealth inequality to increase in the future. Unequal wealth distribution raises problems of inequality as a negative feature of capitalism, which should be alleviated through state intervention, foremost proposed through direct wealth transfers of progressive global tax on wealth (Piketty, Saez & Stantcheva, 2011). Piketty's work on economic inequalities also extends to education arguing disparities among different schools (Piketty & Valdenaire, 2006), wages, pensions and taxation schemes (Bozio & Piketty, 2008; Landais, Piketty & Saez, 2011).

Looking back in the history of political economy, the 2008/09 World Financial Crisis and Thomas Piketty's important work appear to have triggered a pendulum swing from neo-liberal thoughts on inequality as driver of economic productivity (Brenner, 2002; Greenspan, 2007). Until the 2008/09 World Financial Crisis, income inequality and wealth disparity were seen as a positive incentives to advance and prosper within society counter arguing communist and socialist political ideas. Only by the prospect of improving one's situation in

comparison to others, people were believed to be motivated to strive for improvement and engage in economic worship (Marx, 1867/2008). Overall, there was the neo-liberal consensus that inequality was a vital driver of economic activity and socio-economic advancement if being complemented with social welfare for those who are naturally excluded from economic competition due to disability. Only different life starting positions and societal advancement prospects were believed to push economic excellence.

While the two camps, equality and inequality advocates, have their clear merits, within contemporary economic systems, however, neither pure equality nor pure inequality exists. In order to change democratic nations, policy makers must also be in charge that can understand how to connect the two worlds of inequality and equality living next to each other. Politicians may only be able to touch on a wide variety of constituents if they can set out an economic agenda that transfers wealth between those two poles of the socio-economic spectrum both ways. An accurate understanding of socio-economic market behavior in the interaction of economic markets and real-world economic outcomes of equality and inequality represented concurrently is therefore needed. Capturing the real-world phenomenon of unequal exclusivity and equality of merit-based democracy but also understanding the mutual beneficial transfer opportunities between the islands of the rich in an ocean of striving eyeing for entering will help policy makers getting a wide range of a few exclusive, yet importantly affluent and a mass of democratically-equally-important constituencies on board their economic agenda.

While inequality and equality arguments capture extreme poles on a spectrum, the time is ripe to depict the real-life balance of equality and inequality within the social compound. In order to address real-world relevant view on inequality, mainstream economics must therefore be complemented by heterodox insights on socio-economic dynamics of equality and inequality within one system. Describing inequality and equality as two sides of the same coin, raises hope to benefit from the positive aspects of both economic approaches. In addition, knowledge on the harmonious composition of equality and inequality within society will allow to maximize welfare effects and lower negative externalities of inequality and equality extremes, such as plutocracy or communism, within economic markets. As a first step towards resolving societal losses imbued in the complex debate of equality versus inequality, the following paper innovatively explores new opportunities to foster a harmonious interplay of equality and inequality within societal networks. The vital combination of equality and inequality through mutually beneficial wealth transfers and favorable social interaction offering merit-based societal status improvement opportunities is thereby outlined to offer Pareto-improving transfers within

¹ <https://www.whitehouse.gov/blog/2013/06/11/what-great-gatsby-curve>

educational systems but also as a means to stabilize economic markets in the post-2008/09 World Financial Crisis era and serve a whole-rounded constituency (Puaschunder, 2012b).

III. THE POWER OF EQUALITY AND INEQUALITY DYADS

The most recent attention to inequality has raised demand for imbuing equality into society. After decades of neo-liberal advocacy for inequality, the time seems ripe to contest inequality. While contemporary equality advocates speak up for the ideal of an equal society, this paper attempts a different approach, trying to argue for the economic efficiency of equality and inequality represented concurrently alongside networks with implicit value transfer points, which can be entered merit-based. By drawing on the example of elite educational institutions as well as segregated societal environments featuring transformation hubs with access to social and human capital, the paper aims at providing the first economic modeling of merit-based equality and inequality transfers within societal networks. Merit-based equality and inequality concurrently represented in one system is presented as an economically efficient and Pareto-improving solution by the case of Ivy League education (Chapter 3.1) and society as a whole (Chapter 3.2).

a) *The Beauty of Ivy*

Social environments and education play a key role in determining peoples' success (Puaschunder, 2012a). The role of location and subsequent access to education opportunities for human capital formation has become subject to scrutiny in many inequality studies, foremost to address issues of intergenerational mobility (Bowles & Gintis, 2002; Katz & Autor, 1999; Brasington, Kato & Semmler, 2010; Mincer, 1958). While there are recent studies on intergenerational transmission mechanisms to explain intertemporal inequality (Nyblom & Stuhler, 2014; Puaschunder, 2015b); no information exists about the interplay of inequality representing agents and merit-based entrants of transformation systems.

Ivy League professional schools are often criticized for breeding inequality in legacy admissions (Bazerman, 2014; Bazerman & Tenbrunsel, 2011).² Legacy admits are students who bring in a family legacy, often in terms of admission history to the institution sometimes criticized for breeding a family tradition of elitism, e.g., such as royal dynasties and/or long-lasting political or diplomatic ties. Parents' wealth, income and networks determining the admission into elite clubs is often blamed for crowding out merit-based scholarship and subsequently if individuals cannot advance based on education, work and natural skills,

then their societal status remains dependent on their parents' wealth, income and networks – a situation which stagnates society (Cooper, Durlauf & Johnson, 1994; Corak & Heisz, 1999).

Besides legacy admits, Ivy Leagues are granting access to elite education to underprivileged children who outperform given their elevated levels of intelligence, ambition and drive. Merit-based access to elite institutions decreases inequality by imbuing intergenerational mobility to people improving their societal placement from one generation to the next. While individual ability and ambition appear as more just determinants of one's place in society, merit-based allocations are also more productive from an economic perspective (Arrow, Bowles & Durlauf, 1999).

This paper argues a model of elite academic institutions' success being built on the transfer between agents who represent equality and inequality, while serving a societal purpose of merit-based intergenerational mobility.

Overall, the value of agents for elite educational institutions is captured based on the rational expectations of their future wealth and given a constant discounting rate of their success. In period t , the agents' value for an elite educational institution is defined as the expectation

$$V_t = E_t \frac{1}{1+r} (I_{t+1} + M_{t+1}) \quad (\text{Equation 2.1})$$

where by V_t represents the future expected discounted value of the student pool, E_t the expectation of future success discounted by r , the time-invariant riskless interest rate of the value of human capital, I_{t+1} the future expected value of legacy admits and M_{t+1} the future value of merit-based admitted students. Merit-based admission is hereby defined as entrance to elite universities purely based on elevated levels of intelligence, ambition and drive.

Imposing arbitrage conditions that investing into legacy admits and merit-based students must be equally profitable, therefore the growth of value is assumed to be equal but on different dimensions that are complementary and allow a transfer between these diverse student populations within the entire university's network.

The overall present-time value of the admitted student pool of Ivy League institutions is given by

$$V_t = I_t + M_t + T_{I+M} \quad (\text{Equation 2.2})$$

where by T_{I+M} denotes an implicit value transfer opportunity between legacy admits and merit-based students. The value of Ivy League education can thus be decomposed of the future value of the student pool's human capital price of known legacy wealth and known intelligentsia of meritocracy admitted children as well as the transfer opportunities between these groups within the legacy network. The value itself is determined by the

² how-you-can-do-better-than-the-ivy-league-944cd730cf83

human capital price as the sum of all discounted future profits arising from legacy wealth, intelligentsia and network transfer between legacy and intelligentsia. While unequal legacies may bring in backward looking, stable value in terms of family prestige; merit-based placed equal opportunity agents offer ambition, drive and fluid intelligence as a guarantee for future innovation and advancement. Legacies' historical wealth and capital is traded for merit-based outperformers' intelligence and innovation image in these inequality-equality transfer hubs. Note that in reality, equally intelligent legacy admits as non-legacy admits may exist but for simplicity in the theoretical model extremes are assumed based on descriptive going-native evidence (Bazerman, 2014).³

For Ivy Leagues the mixed student body brings a diversification advantage to spread risk of future failure of one of the groups later in life. The diversified student composition thereby also represents a temporally diversified spectrum of legacy and future prospects. Within the Ivy Leagues networks, there is an indirect wealth transfer as legacy admits are more often paying full tuition and their families make generous donations to the education institutions, while non-legacy admits benefit from scholarships and access to fully-funded resources. Both groups themselves also benefit from the image transfer and membership in a particular ivy group. Within the Ivy League network, the diverse peers therefore gain from each other by mutually beneficial transfers that allow positive image spillovers and direct wealth transfers. While legacy students gain an image of intelligentsia, the underprivileged benefit from a lifelong association with favorable legacy, heritage and social status their families will never have, no matter how hard they strive. Legacies benefit from inflated intelligence perceptions, merit-based intellectuals from the inherited wealth and networking opportunities with their legacy peers within the Ivy League network. For society, Ivy Leagues thereby serve as merit-based economic transition hubs to instigate intertemporal mobility and breed societal equality.

Overall, when positive interaction effects occur in these social capital access hubs, this can give rise to better opportunities for both group members and turn the combination of equality and inequality into a Pareto-improving situation (Brasington et al., 2010). From the admission perspective, heterogeneity within the student pool is favorable, thus extreme cases of legacies and extreme cases of underprivileged but smart students in one entering cohort appear most favorable if considered the entire network. Counter arguing the current attention to equality, this paper thus advocates for equality of opportunity but inequality of outcome based on either legacy heritage value or intellectual capacity, ambition

or drive. The model of inequality and equality representing agents transferring value and benefitting from positive image spill-over effects can also be extrapolated onto the societal level as follows (Chapter 3.2).

In order for the diversified portfolio of equality and inequality representing students to be economically efficient, meritocracy is key. As for enabling intergenerational mobility, meritocracy builds equality. Inequality is a feature of immobile societies (Wolfers, 2015). If individuals cannot advance based on education, work and natural skills, then their societal status depends on their parents' wealth, income and networks (Atkinson, Maynard, & Trinder, 1983; Lee, Roys & Seshadri, 2014). The Great Gatsby Curve illustrates the connection between wealth in one generation and the ability of those in the next generation to move up the economic ladder compared to their parents.⁴ The curve shows that children from poor families are less likely to improve their economic status in countries where income inequality is higher, measured by societal wealth concentration.

Inequality decreases through intergenerational mobility – when people improve their societal placement from one generation to the next. Inequality therefore is a sign of persistence across generations. To overcome inequality over time, structural changes affect intergenerational mobility over multiple generations (Nyblom & Stuhler, 2014). But intergenerational mobility also requires meritocracy and access to merit-based education opportunities.⁵ Because social welfare spending reduces education gaps for students from disadvantaged backgrounds by up to 43 percent, Gary Becker and Richard Posner recommend that governments provide first-class education and social services to gifted yet underprivileged children (OECD, 2012).⁶ In the novel explanation of the economically-favorable stratified composition of Ivy Leagues to grant intergenerational mobility opportunities, a theoretical framework as well as an exploratory empirical investigation of the socio-dynamics between the two groups representing merit-based equality and inequality is missing. Overall granting merit-based access to Ivy League societal intergenerational transformation hubs is a feature of socio-economic development within diversified societies.

b) *Diversified societies*

Within the social compound, inequality persists when children cannot advance from their parents' social position. Intergenerational mobility is enabled through

³ <https://medium.com/galleys/how-you-can-do-better-than-the-ivy-league-944cd730cf83>

⁴ <https://www.whitehouse.gov/blog/2013/06/11/what-great-gatsby-curve>

⁵ <http://www.conferenceboard.ca/hcp/details/society/intergenerational-income-mobility.aspx>

⁶ <http://www.becker-posner-blog.com/2012/12/meritocracy-social-mobility-intergenerational-mobilityposner.html>

intertemporal opportunities of social transformation hubs given social interaction and meritocracy.

c) *Social interaction theory*

Social environment and human capital formation are necessary yet overlooked intergenerational advancement determinants (Borjas, 1995). According to the social interaction theory of inequality, the social environment and the network groups to which a person belongs play an important role for socio-economic outcomes (Brock & Durlauf, 2006; Durlauf, 2006). Socio-economic and cultural differences in geographically-distant districts stemming from current and past policies, institutions and societal conditions, lead to different access to social and human capital (Nyblom & Stuhler, 2014). The environment during childhood is seen as one of the key determinants of an individual's long-term societal status prospect (Bouchard & McGue, 1981; Chetty, Hendren & Katz, 2015). For instance, if a district is rich, determined by relative differences in property tax, the environment offers better schools, social welfare and cultural events. Social environments may lead to the agglomeration of opportunities, which are distributed bi-modal (Brasington et al., 2010). Agglomerations of social capital and opportunity are distributed unequal as captured by the World Bank⁷ (Brasington et al., 2010; Romer, 1990). Social environments either create opportunity hubs or poverty trap holes, which individuals cannot leave (Brasington et al., 2010; Goldberger, 1989). Intergenerational stickiness was found in housing zones determining education, marital fulfillment, and wages over time (Chetty et al., 2015; Lee et al., 2014; Osborne, 2002). Within the different areas, positive network externalities are distributed through social interaction within networks (Durlauf, 2001), which allows vertical intertemporal upward mobility (Brock & Durlauf, 2006; Durlauf, 2004, 2006). The driver to break intergenerational persistence through intergenerational mobility lies in intertemporal merit-based advancement opportunities within the societal compound (Brock & Magee, 1982).

d) *Intertemporal opportunities*

Intergenerational equity grants equity of chances – not outcomes, which should be merit based – over time for this generation and the following (Clinton, 2015; Loehlin & Nichols, 1976). If individuals cannot advance based on their education, work and natural skills, then their societal status remains determined by their parents' and ancestors' wealth, income and networks, which stagnates society (Becker, 1988; Bowles, Gintis & Osborne, 2008; Menchik, 1979).

Individual ability and ambition appear as fairer determinants of one's place in the social order and, from an economic perspective, merit-based allocations are also more productive (Arrow et al., 1999; Becker & Tomes, 1986).

Inequality persists in immobile societies (Erikson & Goldthorpe, 1992). An OECD (2010) Economic Policy Reform Report outlines a $r=.56$, 88 , $p<.05$ correlation between inequality and intergenerational wage persistence, measured by the gap between the estimated wage of an individual whose father had achieved tertiary education and the wage of an individual whose father had below upper secondary education (Solon, 1992; Solon, 1999; Taubman, 1976). For intergenerational mobility, meritocracy is key. Meritocratic intergenerational mobility is at the core of equitable societies (Arrow et al., 1999).

e) *Meritocracy*

In order for the diversified portfolio of equality and inequality representing students but also for unequally beneficial environments to be economically efficient, merit-based access to legacy and transformation hubs is essential. Meritocracy builds equality as for enabling intergenerational mobility.

Across countries intergenerational mobility is a feature of equal societies.⁸ Meritocracy and access to education are prerequisites for intergenerational mobility. Gary Becker and Richard Posner therefore recommend that governments provide first-class education and social services to gifted, yet underprivileged children.⁹ Social welfare spending helps reduce education gaps for students from disadvantaged backgrounds by up to 42.9 percentage points (Ashenfelter & Krueger, 1994; OECD, 2010).

But OECD economists find government-funded higher education and merit-based scholarships do not entirely reduce unfair favoritism of privilege (OECD, 2010). Instead, intergenerational immobility persists. OECD economists (2010, 2012) outline that government-funded higher education and merit-based scholarships are not enough to entirely reduce the favoritism of privilege. The link between individual and parental earnings ranges from 15% to 50% intergenerational earnings elasticity across OECD countries. Parental backgrounds influence student achievement in secondary education by up to 63 score points on the OECD's Programme for International Student Assessment (PISA) worldwide study, which measures 15-year-old school pupil's mathematics, science, and reading skills. Children of uneducated parents are three times less likely to enter higher education. They are also 44% less likely to finish higher

⁷ <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/EXTTOSOCIALCAPITAL/0,,contentMDK:20185164~menuPK:418217~pagePK:148956~piPK:216618~theSitePK:401015,00.html>

⁸ <http://www.conferenceboard.ca/hcp/details/society/intergenerational-income-mobility.aspx>

⁹ <http://www.becker-posner-blog.com/2012/12/meritocracy-social-mobility-intergenerational-mobilityposner.html>

education compared to those with fathers who also achieved higher education. Children from parents with academic backgrounds also benefit from a wage premium of up to 20% compared to those growing up in non-academic households. This human capital transmission from parents to children is attributed to parental spillover effects (Lee et al., 2014). The link between individual and parental earnings ranges from 15 to 50% intergenerational earnings elasticity across OECD countries (Charles & Hurst, 2002; Mazumder, 2008). Robert Putnam (2015) therefore argues that people might not overcome their parent's social economic status because societal class creates and molds one's expectations for success and ability (Mulligan, 1997). Living in a society with little merit-based opportunity reinforces low expectations for escape. Education may not make sense if there is no hope for merit-based mobility (Osborne, 2008). Intergenerational advancement may thus only prosper in the wake of meritocracy, an overlooked prerequisite of societal equality.

f) *Intertemporal social mobility hubs*

Extrapolating the inequality-equality dyads micro-model onto a macro-level, a diversified composition of equality and inequality may allow for positive transfer opportunities within society. Extending the idea of the necessity of value transfers between inequality and equality within societal networks may help deriving a more sophisticated understanding of the role of the social environment and human capital formation (Brasington et al., 2010).

Nature and nurture determine societal success as outlined in psychological studies of economic success using twin populations (Costa & McCrae, 1992; Eysenck & Eysenck, 1985). In order to alleviate poverty, social interaction can lead to positive socio-economic outcomes overcoming heritage advantages and natural ability differences (Durlauf, 2004, 2006). The social environment surrounding an individual can lead to a take-off of the individual or can lock-up in substantial immobility, Brasington et al. (2010) and Chetty et al. (2015) capture, demanding for a more sophisticated understanding of the role of human capital formation. Thereby, in particular, the transfers that take place in social mobility hubs within societal networks needs to be explored. A closer scrutiny of the social settings by which inequality gets alleviated and network theory based explanations of intergenerational transfers are demanded.

Social interaction theory holds environment and education as key to intergenerational mobility within societal networks. The mere local conditions that parents and their children face during their lifetimes will change their position in society and determine their economic success and societal status (Chetty et al., 2015; Nybom & Stuhler, 2014). With the social

surrounding determining one's place in society, access to a certain community environment can improve social status but do not necessarily have to (Chetty et al., 2015). Social interaction hubs can be interpreted as either 'basins of attraction' or 'poverty traps' with a threshold separating the two areas (Brasington et al., 2010). The general attractiveness of a community is determined by the access to work, education, business and social contacts (Brasington et al., 2010). The social and physical environment of an individual shapes education levels and access to social capital. The environment as the attractiveness of a community depends on the magnitude of public and private investments (Brasington et al., 2010). Investments build basic public services such as education, health care, public transportation, safety, sanitation, jobs and services to the community. Environments represent unequal economies of agglomeration hubs as the more attractive an environment, the more investment it can thus further attract, and therefore the better the environment gets over time. Changes in the economic environment affect intergenerational persistence immediately but also over time in subsequent generations (Nybom & Stuhler, 2014). Policy or institutional reforms generate long-lasting mobility trends, which are often non-monotonic (Nybom & Stuhler, 2014). Agglomeration creates mechanisms where households in a better environment enjoy a greater advantage in growth due to attributes that make communities more desirable (Brasington et al., 2010). These attributes include climate, pollution, availability of parks and cultural institutions such as museums and libraries (Brasington et al., 2010). Communities benefit from these economies of agglomeration creating power hubs. Stronger economies of agglomeration bring about greater environmental and human resources with higher income (Brasington et al., 2010). A community with initial environmental and social interaction opportunity resources above a certain threshold tends towards the upper steady state, while a community with those below the threshold tends towards the lower steady state (Brasington et al., 2010). Power hubs build human capital and therefore reduce poverty in the long run.

Extending on Brasington et al. (2010), inequality is seen as vital mechanism to create power hubs with abundance of access to social capital and societal improvement opportunities. If everyone were equal, similar situations as in socialism would emerge, in which the overall societal infrastructure quality was run down. The mere existence of inequality creates power hubs, which attract positive attention to further investment and as a wishful entrance gate to future prosperity. Entering these power hubs is an incentive for underprivileged community members who may strive to move to the better areas and thereby be economically

productive in taking up the extra effort for gaining access to better communities.

In contrast to Chetty et al.'s (2015) voucher experiment which chose random households to move up the economic ladder by relocation, the opportunity to move to power hubs should be granted merit-based to ensure the most efficient social advancement situation. Again, public policies should target at accommodating merit-based allocations to access fruitful communities, by alleviating discrimination and social welfare provision to those who cannot compete in meritocracy due to natural disabilities or disadvantages. Inequality and merit-based chances to equal access to these community hubs are thus Pareto-efficient societal networks. The novel model of equity-inequality transfers may capture how to instigate transfers from one basin of opportunity to another hole of inequality within societal networks. A clearer understanding of implicit wealth transfers between inequality and equality pegged onto merit-based societal contribution requirements will provide real-world relevant social harmonization strategies. Unraveling different transfer opportunities may help deriving public policy implications targeted at reducing inequality through mutually beneficial and thus Pareto-optimal network transfers. Gaining information on merit-based social mobility within real-world representative social structures will help policy advocates to gain a realistic outlook on economic improvement opportunities, whilst embracing a wide range of constituencies.

In this model, social mobility may be captured by p , the likelihood to advance to more access to 'social capital areas' ε based on the distance to social capital δ , the size of social capital κ accessible in the entire pool and the ambition a and ability α to accomplish successful social mobility dependent on meritocracy M .

$$p_{t+1} = \varepsilon - \delta + \kappa + (a + \alpha) * M \quad (\text{Equation 4.1})$$

with p denoting the likelihood to advance to access ε ranging from 0 to 1 and being measured in relation to other societal actors.

Meritocracy is captured in the equation of educational and occupational status S being a function of cognitive ability c , outperforming ambition b and social contributions δ determining the social position within society as exhibited in

$$S = f(c, b, \delta) \quad (\text{Equation 4.2})$$

The higher the level of meritocracy within a society, the more the societal status measured in educational and occupational placements will be determined by cognitive abilities and ambition. Within the power hubs of societally fluid networks, transfer between merit-based placed equality and privileged households may take place, leading to an overall Pareto-improving situation over time.

In a climate of previous either equality and inequality focused research, the transfers between the

actors of diversified communities within societal networks has not been studied. The overall mutually beneficial transfer between inequality islands in an ocean of for equality striving access seekers may lead to socially-unpleasant competition and socio-economic downfalls for those who have a natural disadvantage in competing, e.g., such as disabilities or discrimination. Social instability and social unrest may be negative externality effects of creating transfer hubs that underprivileged households can enter to enjoy access to social capital and thereby gain better future prospects to succeed. Social instability and societal unrest may be negative effects of mixing privileged and underprivileged households in the social capital transformation hubs. How to alleviate tensions between privileged and underprivileged households living together next to each other and how to breed harmony and positive inter-household transfers are yet unknown.

IV. DISCUSSION AND FUTURE RESEARCH

Thomas Piketty's (2014) *Capital in the 21st Century* revolutionized economic thoughts on inequality triggering a discussion on how to breed equality within society. The solution to achieve equality mostly ends at taxation and direct wealth transfers, reminding of socialist ideas. Rather than contributing to the current pendulum swing towards the ideal of equality after decades of neoliberal inequality dominance, this article proposes a novel approach to gain economic efficiency and societal well-being based on social environment and human capital formation within societal networks. The mixture of equality and inequality within a system may hold positive transfer value and be the most efficient strategy for economic systems when access to opportunities to transfer implicit wealth is distributed merit-based, under the premises of additional social welfare to counterweight discrimination and support of those who have a natural disadvantage to compete in meritocracy. By the example of Ivy League educational institutions but also elaborating on societal interactions in social transformation hubs, a novel economic wealth model was introduced. Within an economic system, dyads of *unequal* crystallized value based on heritage (e.g., royal families, legacy admits) and merit-based *equality* represented by offspring from families with underprivileged backgrounds, whose outperforming ambition, fluid intelligence and drive may lead to fruitful social interactions and beneficial wealth transfers, may create the most favorable economic outcome. The example of Ivy League Schools was extrapolated onto societal levels describing inequality-built favorable environments as transformation hubs if accessible merit-based by underprivileged families. Building on social interaction theory based value transfers in the equality domain and image transfer effects, the article outlined a blatant research gap on information about the direct and

indirect transactions and interactions between equality and inequality representing agents within societal networks. The article provides a first preliminary idea of an economic model of value transfer between equality and inequality represented next to each other within a Pareto-optimal economic system. Understanding the interaction and transfer opportunities will allow to embrace a wider constituency for policy makers and serve democracy truly whole-roundedly.

In the current trend of equality demands, after a pendulum swing from neo-liberal inequality dominance, the idea of economically efficient inequality-equality dyads provides an innovative stance of capturing the positive effects of inequality being accessible by merit-based allocations. In Ivy League institutions but also in societal networks, merit-based access to unequal abundance in environmental conditions is captured as economically favorable. The concurrent representation of inequality and equality appears favorable as pure inequality often creates social tension and instability while pure equality may crowd out economically-favorable striving for improvement (Puaschunder, 2012a). Inequality is key to Ivy League educational experiences, where positive image transfers between privileged and underprivileged occurs. Inequality can also lead to the creating of powerful societal hubs, in which underprivileged may benefit from access to already established abundant social capital and long-term heritage wealth. The highest transfer opportunities are given in dyads with diverting privileged and underprivileged agents and households. The inequality-and-equality bundling strategy is an innovative and real-world relevant approach for implementing widespread societal welfare. By acknowledging the merits of both – inequality and equality – a wide range on the political spectrum can be brought on board to embark on a socially-beneficial and harmonious society. Alongside spearheading economic network theory development, creating intergenerational mobility advancement opportunities grants real-world relevant means for hard-working individuals to climb up intergenerationally. For academia, the novel angle towards the equality and inequality debate may alleviate tensions between two intellectual and political camps. Providing real-world relevant social development strategies will help politicians to embrace a wide range of constituents and implement economic policy at the forefront of democracy.

Presenting the idea of by-inequality-established social transformation hubs that can be accessed merit-based is not an attempt to counter argue Thomas Piketty's important work, but rather seeks to complement the Piketty results and enrich his noble perspective with an additional real-world relevant angle. The article is targeted at giving hope in Piketty's grim outlook of rising inequality by showing the economic merits of inequality when paying attention to merit-based

distributed value transfer opportunities within permeable social networks.

On a personal note, the author's academic career and intergenerational mobility would never have been possible without the social welfare provided by a social-democratic education system featuring equal access to opportunities and merit-based allocation of social benefits. But when it came to gaining most excellent higher education, the author transferred to an Ivy League as a non-legacy representing agent, where the power of inequality-equality transfers but also the socio-psychological dynamics of these transfers became apparent. These socio-psychological foundations of social mobility at Ivy Leagues are also described by Michelle Obama's Princeton University senior thesis, but have hardly been captured in contemporary equality research and demand for further scientific investigation (Robinson, 1985).¹⁰

Reflecting on Thomas Piketty's recommendation of drastic wealth transfers, e.g., his quest of a progressive global wealth tax of 50 taxation faced by all super-rich, we may add to imbue meritocracy to the gains of wealth redistribution. Simple direct investments and pure transfer payments without quality control or conditionalities have proven to be unsuccessful in breeding socio-economic transformation in the past, if we recall examples of cash-for-clunkers, IMF foreign direct investments without conditionalities but also minority programs that were simply based on cash transfers without providing underprivileged opportunities to contribute successfully to society.

As for the novelty of the proposed idea, future studies may address particularities of positive transfers between different equality levels representing agents within societal networks. Power agglomerations based on inequality and how to grant access in a societally just manner are additional quests arising from the detected research gaps. In the contemporary extensive writing on inequality, unraveling equity transfers opens ways to steer intertemporal social mobility (Arrow et al., 1999; Becker & Tomes, 1986; Piketty, 2014; Puaschunder, 2015a, b'). Pursuing to fill laissez-faire gaps on intergenerational concerns, outlining public or private sector endeavors in coordinating societal exchange would provide concrete means how to balance benefits between different societal strata in a fair way (Broome, 1999; Puaschunder, 2015a, b). *Public* and *private* sector contributions to wealth transfers should be addressed (Puaschunder, 2015b). Stringent hypothesis testing in cross-sectional studies could capture if public sector contributions are associated with public societal wealth transfer and private sector contributions associated with private intergenerational transfer (Phelps, 1961; Samuelson, 1975a, b). Additional hypothesis testing

¹⁰ <https://obamaprincetonthesis.wordpress.com/>

could scrutinize if public and private sector transfers are inversely related (crowding out) or can lead to complementary benefits (Puaschunder, 2015b).

Studying the interaction of individuals regarding striving for access to elite societies as well as transfer of crystalized and fluid intelligence within societal networks' power hubs will offer a more comprehensive and inclusive application of the rationalist and social intuitionist paradigms in the equality domain. Deriving information on circumstances under which decision makers are likely to grant access to elite clubs or share their intelligentsia and ambition within social transformation hubs is targeted at outlining ways how to improve intergenerational equity based on ethicality in the absence of legal enforcement and governmental control. Capturing social transfer triggers will help designing context that advance intergenerational mobility. Implicit value transfers opportunities will complement institutional efforts to solicit direct wealth redistribution advancing economic growth (Clinton, 2015; Shell, 1967; Tobin 1967). Investigating transfers from a global governance perspective will help understanding the impact of public and private sector contributions on equality.

In future studies, the complex interplay of individual and environment variables on economic success should be unraveled in order to retrieve contextual influences on equity. Institutional rules, policies and regulations should be analyzed in the search for meritocracy accessed opportunities to implement equality. Further, light should be shed on how the public and the private sectors can be systematically designed to promote a harmonious interplay of inequality and equality in order to retrieve real-world relevant intergenerational equity implementation strategies and education recommendations. Studying the interplay of individuals' propensity to engage in transfers and contextual environments to support equal access to transformation hubs based on meritocracy will allow controlling the interaction of individual and external variables to steer equality within societal networks. At the same time, unraveling the socio-economic dynamics of transfers will help avert intergenerational stickiness. Shedding light at potential intergenerational equity transfer downfalls will enable institutional technocrats to create contexts that automatically raise reciprocity and open ways to steer democratic compliance based on a cooperative relationship within transformation hubs. Delineating constraints for equality will help creating cultures that promote and encourage positive societal transfers as well as alleviate the societal downfall potential of disability and discrimination. Practical implications comprise of incentivizing outperforming yet underprivileged society members for their societal contributions and implementing quality controls of merit-

based opportunity allocations based on transparency and oversight.

Future research on equality may help understanding the socio-dynamics of equality transfers as enhanced by social norms, public and private rules, policies, and procedures that establish equality transfers as a prerequisite for a harmonious society. The socio-economic impacts and social dynamics of inequality-equality dyads should be studied by going native but also in economic modeling using nonlinear model predictive control (NMPC) (Greiner, Grüne & Semmler, 2012). In addition, the present research should be tied to preliminary findings of exploratory research on cross-country differences in skill complementarity, which captures countries where industries employ technologies in which skills are more complementary will exhibit social mobility (Abbott & Gallipoli, 2014).

Overall, while economists can improve access to economic market opportunities¹¹ and institutional policy makers can minimize discrimination and global governance entities instigate intergenerational transfers, social scientists should focus on how to build societal trust in merit-based intergenerational mobility (Brasington et al., 2010; Ghilarducci & Lee, 2005; Puaschunder, 2012b, 2015b). Meritocracy as the psychological backbone of a fair society, together with trust in upward mobility over time are key drivers of economic productivity, opening an innovative path to an economically growing, fair and harmonious society.

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¹¹ http://www.nytimes.com/2015/05/05/upshot/why-the-new-research-on-mobility-matters-an-economists-view.html?abt=0002&abg=0&_r=0

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