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Diversity, Pluralism and Tolerance: The Roots of Economic Progress?

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Diversity, Pluralism and Tolerance: The Roots of Economic Progress?

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Introduction

Diversity is widely seen as a desirable objective. Universities have “diversity officers” whose job it is to increase diversity and encourage the inclusion of under-represented minorities. This policy has two sources of support, one is based on ethics, the other is about efficiency. One justification is that low diversity is the result of sins of the past such as colonialism and racism, that involved systemic discrimination against some groups that are now under-represented. Hence fairness and justice demand that these be addressed. A different idea is that low-diversity, whatever its causes, is inefficient. It is argued that higher diversity improves economic performance and stimulates creativity and growth by drawing on a larger pool of cultural material and a more diverse reservoir of experiences and attitudes, and thus increases the options for innovation and effective management and cooperation.¹

The enthusiasm of the supporters of diversity’s positive efficiency effects notwithstanding, there are clearly *both* benefits and costs to greater diversity, and their net impact on economic performance and progress vary over time and across societies and industries. The literature on the topic is large, and in the essay below I will only be able to deal with selected aspects of it, as exemplified by historical case studies. Before doing so, it is important to define carefully the difference between the three key concepts of diversity, tolerance and pluralism, and take a closer look at what economic analysis has to add to our understanding of these three concepts. I will then argue how economic history sheds light on the complexities of the economic effects of diversity.

The basic answer to the question what the economic effects of diversity are positive or negative can be summed up here. My answer is a variant on what is known in the history of technology as “Krantzberg’s Law” — diversity is neither good nor bad, nor is it neutral (Krantzberg, 1986). What this statement means is that the effect of diversity can be substantial, but its net impact on economic efficiency and growth depends on the institutions of society. Much like the effect of natural resources, it can be either a curse or a blessing.

Some Definitions

¹The canonical sources for this argument are Page (2007) and Florida, (2012).

Terms like “diversity,” “tolerance, and “pluralism” are used frequently in this literature and need some careful definitions if we are to unpack the effects of diversity. By *diversity* I mean outcomes. How are different sub-populations who share recognizable different traits represented across the economy and what are their relative status, socio-economic status, relations, etc? A diverse society is composed of coherent groups that differ from one another in an important and observable characteristic shared by members of the group. Hence the aggregate has a higher variance in that dimension than a non-diverse society. Diversity is traditionally measured by a dispersion metric such as the Herfindahl index.

Tolerance here will be a pure matter of preferences, that is, culture. One natural way of defining it is by asking how much an object to what others believe or what they look like. In the limit, perfect tolerance means we are utterly indifferent to what others believe as long as they do not act on it. It measures a willingness to “let a hundred flowers bloom.” It is also a measure of homophily, the degree to which we have a liking for others who are like us in their religion, language, ethnic background, phenotype and so on. Given that homophily appears to be hardwired into our preferences (Fu, Nowak, Christakis, and Fowler, 2012), society has to set up institutions that constrain our behavior to act on it. While these may not necessarily make people more tolerant (that is, change their preferences), it will affect their behavior.²

The *institutions* that prevent people from acting out their homophilic preferences are what I what I mean by pluralism. Institutions can be seen as “civilizing agents” --- they prevent intolerant people from acting on their aversions and instincts and overcome their “natural” proclivity to be suspicious of others who look, behave, think, or talk differently and not act on their heterophobia (“dislike” of such people). Even countries with “good” institutions often are subject to the consequences of homophily. Such institutions can attain the economic advantages of diversity while minimizing the costs.³

²“Tolerance” will thus have to be distinguished from “toleration,” which involved both the *belief* in religious freedom and its *practice*, and thus comprises both cultural and institutional elements. Cf. Zagorin, 2003, p. 7.

³While pluralist institutions are expected to be welfare enhancing in general, we cannot say for sure that they are inevitably strictly Pareto-improving, since those with strong homophilic preferences may be made unhappy by laws and arrangements that allow minorities to exercise their rights. This may seem a pedantic point if exercising such rights involves no externalities, but when the right of free speech permits offensive and hateful language, a cost

Pluralist institutions, unlike tolerance, are not individual choices and taken parametrically by each individual. Examples include universal franchise, making minority languages official, complete freedom of worship and religion, and outlawing discriminatory practices such as redlining, higher education quotas, and similar rules that protect minorities.⁴ The exact connection and interaction between tolerance (that is, culture) and pluralism (that is, institutions) is always complicated and the two co-evolve in subtle and complicated ways, as culture and institutions are apt to do (Alesina and Giuliano, 2015). Obviously, if an overwhelming majority of society is highly tolerant, this is likely to lead to pluralist institutions. But at times fanatically intolerant minorities that acquire power (for possibly unrelated reasons) may impose a highly antipluralist set of institutions, as happened in Germany in the 1930s. On the other hand, if individuals grow up in a society that has strongly pluralist institutions, they may internalize those in their preferences. Optimally “good” pluralist institutions are the ones that permit people to hold and express fake beliefs and expression, but prevent actions conditional on those beliefs that have negative spillover effects.

Contemporary Evidence

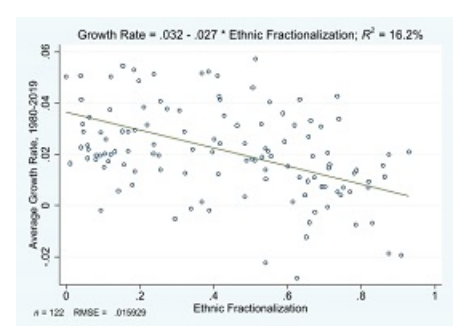
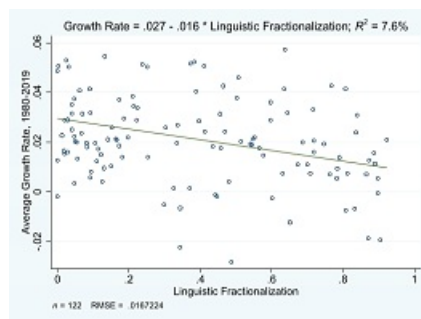
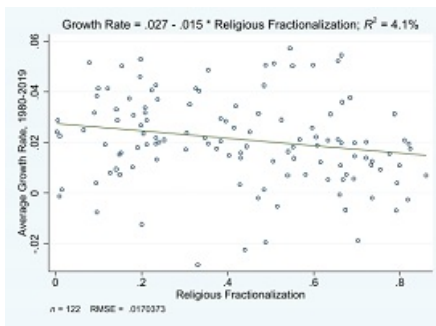
Social scientists and economists have spent the past quarter century confronting the question of whether diversity is good for economic performance and growth, but a survey of the literature reveals that there are no simple one-line answers. For one thing, diversity is of course undefined unless we decide diversity of *what*. It sounds reasonable, first, to distinguish between traits that are a matter of choice, such as religion, ideology, and cultural belief, as opposed to traits that are set at birth such as phenotype, ethnic origin, and genetics. Language falls in between. The two groups create different sources of resentment of “otherness.” Traits that are a matter of choice may lead to resentment precisely because a minority could have conformed to the traits of the majority but chose not to. Hardwired traits may breed resentment when they tap into much deeper sources of homophily

when is involved.

⁴A possible exception is the use of quotas and other rules to compensate groups for past discrimination that have led to a long-run uneven playing field, such as affirmative action. Yet in a purely pluralist society, such compensating practices would be phased out eventually.

and xenophobia, fear of the unfamiliar and so on. For the historian an obvious dimension of diversity is religion, to which I will return below.

The evidence of contemporary economies can be conveniently subdivided into macroeconomic and microeconomic evidence.⁵ The macro evidence is largely based on cross-country or panel datasets and use various measures of fractionalization as the proxy for diversity. Alesina and LaFerrara (2005) produce some useful estimates for religious, linguistic and ethnic fractionalization and its input on GDP growth rates (or levels). Below I reproduce these figures,



⁵These are not new questions: Thomas Aquinas argued that diversity among creatures was necessary in order that "the divine goodness might the more perfectly be bestowed on things" and adds "there should be diversity among them, so that what could not be perfectly represented by one single thing, might be more perfectly represented in various ways by things of various kinds." Cited by das Neves and Melé (2013).

extended to 2019. They clearly show that the raw correlations are weak, and adding further controls (not reported) does nothing to improve them. All three slopes are negative, however, which probably indicate that on balance the negative factors slightly dominate the positive factors, but that without specifying a much more detailed structural model, at this point the effect of diversity on the macroeconomy is weak.

On the microlevel, empirical work is extensive but the evidence is equally mixed. One meta-analysis (Stahl et al., 2010) finds that cultural diversity at the firm level inherently involves trade-offs, meaning that the “optimal mix” may vary depending on the specific task at hand. Furthermore, culturally diverse teams had higher creativity (as postulated by Page), but also more conflict and less social integration. Cultural diversity does not have a direct impact on team performance but the effect is indirect, mediated by “process variables” such as creativity, cohesion, and conflict; and is moderated by contextual factors such as team tenure, the complexity of the task, and whether the team is co-located or geographically dispersed. In another survey, Stahl and Maznevski (2021) find that a meta-analysis based on 44 studies conducted between 1985 and early 2018, indicates that deep-level (cultural and knowledge-based) diversity is associated with more creativity due to its relationship with higher information diversity. This effect tends to be stronger when the team is co-located or is engaging in a task with high interdependence. Surface-level (phenotypical) diversity, which can raise social identity threats, was negatively related to creativity and innovation for simple tasks. In short, there are many cases that confirm Florida’s and Page’s enthusiasm about diversity but also many that do not. Perhaps historical studies can shed a different light on the matter.

Lessons from History I: Pluralism and Minorities

The effects of diversity on economic performance can be better understood from historical cases in which minorities of one kind or another dwelled amidst a majority of people who differed from them in some observable way. A classic example is Jews, who until 1948 were a minority everywhere, and traditionally were subject to various forms of discrimination and persecution. Yet having Jews around was usually an economic benefit for the rest of the population. The reason was that in many cases Jews provided goods and services that the local population had difficulty

providing. They were in the words of Yuri Slezkine, a “service minority” — specialized in certain sectors (usually in the service and manufacturing ones) that the majority would not or could not perform. Similar groups were the Roma, Armenian migrants in the Middle East, German settlers in southern and eastern Europe, and Chinese expatriates in the Far East.

In a remarkable paper, Saumitra Jha (2013) has written down the economics when a minority will be treated in a pluralist way, at least under normal circumstances. These can be summarized conveniently as Jha’s five principles of pluralism, and list when and under what circumstances the minority will be well-treated.⁶

1. *Complementarity*: If the two groups produce goods or services that are basically complementary, and if the majority recognizes these benefits, they are likely to allow the minority considerable freedoms and profit from their existence. The inhabitants of the Jewish *shtetls* in eastern Europe provided a host of services in retail, transportation, finance, taverns, and more in a population that was heavily agricultural (Petrovsky-Shtern, 2017). In eighteenth-century Germany, court-Jews provided administrative services and in Poland at that time they provided estate management.
2. *Locked-in specialization*: The majority (local) group should not be able to replicate or seize and then successfully deploy the resources that the other group uses more intensively. If the minority group, being politically weaker, derives its economic success from a resource that can be readily expropriated, the temptation for the majority may be very strong. Service minorities had an incentive to specialize in activities that depended on human capital (such as medicine and management) or networks of members of their own group that local members of the majority group did not have access to. When such lock-in conditions change, the pluralist equilibrium could be upset.⁷

⁶Jha’s test case is the position of Muslims in Hindu India, but his model works well for most minorities.

⁷This is effectively the argument made by Becker and Pascali (2019), who maintain that the Reformation weakened the prohibition on lending at interest in Protestant regions, and turned Jews and Christians from strong complements to weak substitutes, and hence reduced the economic gains from pluralism. The insight of Slezkine (2004; 2nd ed. 2019) is similar: antisemitism in Eastern Europe flared up in the second half of the nineteenth century

3. *Size and inequality:* The “non-local” group should not be so small and/or so economically successful that it accumulates huge wealth, especially wealth that is transparent such as luxury homes and large estates. Such assets may give the larger and politically stronger group a temptation to seize them and the vulnerable minority may be in a weak position to protect the assets.
4. *Redistribution:* Assuming the minority is economically successful, what is further conducive to a reasonably harmonious relation is a set of mechanisms that redistribute income between the two groups without violence while maintaining incentives. An example is a tax assessed on the successful minority (but not at confiscatory rates) and redistributed as rents to the people in power. This creates a powerful incentive for both sides to create a pluralist modus vivendi.
5. *Intertemporal tradeoff:* The discount rate of the ruling class should not be too high for them to ignore the long-term effects of losing the benefits of the minority. In cases of national emergency the discount rate would peak, and the temptation to expropriate the vulnerable minorities would be too tempting.

To those five principles, all enunciated or implied by Jha, one could add one more of considerable historical importance.

6. *Political Entrepreneurs:* Political structures should be resistant to political entrepreneurs, usually populist demagogues or ideological fanatics, who exploit the culture of intolerance and xenophobia to draw political rents from inciting the majority population against some convenient target such as a vulnerable minority. These instances of the “economics of hatred” (Glaeser, 2005) are all too common and they can easily negate the substantial economic benefits of pluralism. The expulsion of non-Christian religious minorities from Spain, especially the Jews in 1492 and the Moriscos in 1609 are examples of such destructive political entrepreneurship

because the skills that Jews had in service occupations could be more easily reproduced by non-Jews, who then used political power to displace Jews and keep them out.

(Chaney and Hornbeck, 2016).⁸ Glaeser points out that pluralism may depend on the cost of disseminating false racist narratives as opposed to the costs of verifying them. This is correct, but we should keep in mind the great danger of confirmation bias in these matters which immunizes people to evidence. Sadly, when it comes to racial hatred or religious bigotry, anything that we would regard as evidence can be readily dismissed by those subscribing to an intolerant culture.

Lessons from History II: The Reformation.

The Reformation in Europe provides an instructive example of the effects of diversity, in this case religious diversity. Unlike cases where “religious diversity” really was a proxy for ethnic or racial diversity, the Reformation in Europe created a severe shock to the low-diversity religious equilibrium that had reigned in Europe for at least eight centuries, in which, apart from a smattering of Jews and some outposts of non-conformist Christians, much of Europe had not experienced religious diversity. All that changed dramatically in the first half of the sixteenth century.

What were the economic effects? Clearly, for the first century after the Reformation, it is clear that religious diversity was mediated by antipluralist institutions. The principle of *cuius regio eius religio* formalized at the peace of Augsburg in 1555 embodied the fundamental idea that “others” were no welcome anywhere. Germany (and Europe) was to be divided into Protestant and Catholic areas. That principle was never fully carried out on the ground, but it reflects the state of mind about religious tolerance in the middle of the sixteenth century. In 1562, the French religious wars started with a massacre of Huguenots at Passy and were to last for thirty six years. Elsewhere in Europe, too, massive violence between different brands of Christianity continued for many decades. These religious conflicts reached a crescendo of sorts with the 30-years war in Germany with devastating results for the economies of Central Europe.

Yet the senselessness of this slaughter of people just because they believed in a different version of Christianity became apparent early on. Sebastian Castellio, a French preacher and

⁸Another instance would be political scapegoatism, in which a minority is blamed for some misfortune that occurs in society that otherwise seems to defy explanation. The persecution of Jews after the Black Death would be a well-documented example of such social scapegoatism.

philosopher, incensed about the execution of the heterodox scholar Miguel Servetus in Calvin's Geneva for "blasphemy," wrote an influential pamphlet entitled *Should Heretics be Persecuted?* (1554). Castellio's most famous line in the book summarizes the idea of tolerance well: "When I reflect on what a heretic really is, I can find no other criterion than that we are all heretics in the eyes of those who do not share our views" (cited by Marshall, 2006, p. 266). That Castellio's beliefs were a minority view in his own time is illustrated by the fact that after his death, Calvin's henchmen dug up his remains, burned them and scattered his ashes.⁹ Indeed, the defense of tolerance itself was seen by fanatics as a heresy that ought not to be tolerated (Kaplan, 2010, p. 21). For many decades, Protestants and Catholics competed as to who would commit more atrocities in their suppression of the other.

Slowly but certainly, however, Castellio's views won the day. In France, a party known as the *politiques* regarded the idea of pluralism as a pragmatic issue, in which the interests of the realm should dominate whatever intolerant beliefs the population might hold. Inspired by the French politician Michel de L'Hôpital (1506-1573), this group argued that compromises with religious minorities which could not be forcibly converted were inevitable, and that an attempt to enforce uniformity had seriously disruptive political and economic consequences (Fitzpatrick, 2000, pp. 28-29). The horrors of the 30-years war accelerated the cultural changes that led slowly to rising tolerance. Progress in the adoption of more pluralist institutions was uneven and full of setbacks. It was widely believed that even if tolerance may be desirable, dissenters from the state religion might undermine the foundations of society and might not be loyal to the state. The French monarchy was committed to the principle of *un roi, une foi, une loi*.¹⁰ Acts of violent suppression of religious minorities were still common enough: not only that Louis XIV revoked the Edict of Nantes, but he also was responsible for the bloody suppression of the so-called Camisard rebellion (1702-1704).

⁹The great novelist Stefan Zweig wrote a book on this episode, comments that Castellio's words "demanded immense moral courage in those days. For the significance of this formulation was that a whole era, its leaders, princes, and priests, Catholics and Lutherans alike, were flatly told that their heresy-hunting was absurd, thousands and tens of thousands had been persecuted and put to death, hanged, drowned, or burned, illegally" (Zweig, 1951, ch. 6).

¹⁰John Locke's thought, while largely supportive of tolerance, was sufficiently ambiguous to be the source of dispute among historians, and he was decisive in his views that atheists are not to be tolerated since clearly "promises, covenants, and oaths, which are the bonds of human society, can have no hold upon an atheist."

And yet, the worst aspects of religious bigotry were slowly vanishing in the second half of the seventeenth century.¹¹

Intolerance, then, did not disappear magically in 1648, not even in the most commercially advanced countries. Moreover, being “tolerated” was not the same as emancipation. The more pluralist institutions (formal and informal) of progressive western societies were still remote from color/race/religion blind. Greater tolerance for much of eighteenth century Europe was still consistent with serious discrimination against minority groups at many levels. In Great Britain, dissenters could live and practice their religion after the Act of Toleration of 1689, but were excluded from many spheres until the Emancipation Act of 1829. The Act of Toleration excluded many religious groups such as Unitarians and Catholics, but de facto the limited pluralism of the Act applied to all minority groups.¹² At the same time, even in Britain the move to a pluralist society was slow, uneven, and full of setbacks and retreats.¹³ Profound prejudice remained deeply ensconced in British culture. In 1788, the Enlightened English intellectual Edward Gibbon, observing the anti-Catholic Gordon Riots of 1780, wrote that they reflected “a dark and diabolical fanaticism, which I had supposed to be extinct, but which actually subsists in Great Britain.” Two generations later, John Stuart Mill in his *On Liberty* felt the same way.¹⁴

¹¹The last person executed for blasphemy in Great Britain was the Scottish student Thomas Aikenhead, hanged in 1697. Formally, the death penalty for blasphemy remained on the books until 1825. Pluralism, however, is not so much about the written de iure rules as they are about their de facto implementation and enforcement. Here reality could be a lot more pluralist than formal arrangements. Even after the expulsion of the Huguenots in 1685, in many small communities in France there was a de facto toleration of Protestants, depending on the attitude of the local Church officials (Linton, 2000, p. 162).

¹²In a famous passage in his sixth letter *Regarding the English Nation*, Voltaire exclaimed that at the London Royal Exchange “the Jew, the Mohammedan and the Christian negotiate with one another as if they were all of the same religion, and the only heretics are those who declare bankruptcy.”

¹³A 1753 bill that would give Britain’s Jews after a residence qualification and the evidence of two supporting witnesses, the right to be naturalized ‘without receiving the Sacrament of the Lord’s Supper’ had to be withdrawn after furious opposition by bigoted Tories who felt it threatened the essence of a Christian Nation and indicates that pluralism had to tread cautiously because it remained contested deep in the age of Enlightenment (Champion, 2000, p. 139).

¹⁴“Yet so natural to mankind is intolerance in whatever they really care about, that religious freedom has hardly anywhere been practically realized, except where religious indifference, which dislikes to have its peace disturbed by theological quarrels, has added its weight to the scale. In the minds of almost all religious persons, even in the most tolerant countries, the duty of toleration is admitted with tacit reserves... Wherever the sentiment of the majority is still genuine and intense, it is found to have abated little of its claim to be obeyed.” Mill [1859], 2011, p.

If Europe embarked on a growing commitment to pluralism in the nineteenth century, we must realize that only a growing culture of tolerance constituted a solid foundation of the legal and administrative reforms that gave minorities many rights beyond permission to simply reside in a given country. The eighteenth-century Enlightenment, by and large, supplied that foundation. While the *philosophes* whose work we identify as enlightened disagreed on many issues, there seems to be little disagreement among them as to the desirability of a “live and live” attitude that is, a culture of toleration. This is not to say that there were no important differences between Enlightenment intellectuals on this matter and that their support for pluralism was unqualified or entirely driven by ethics as opposed to pragmatism. Yet in the end there seems little to disagree with Grell and Porter (2000, p. 19) when they summarize the history of tolerance in Europe by declaring that “it was the thinkers of the Enlightenment who most clearly voiced those arguments for toleration, in all their strengths and weaknesses, which continue to envelop us in our present multicultural and multireligious societies. Here, as in so many other ways, we are the children of the Enlightenment.”

The importance of the Enlightenment for long-term economic development has long been underestimated, but today there are signs that its impact is being recognized (Mokyr, 2005; Squicciarini and Voigtländer, 2015). The mechanisms through which an elite cultural movement could affect economic outcomes are varied, but an emphasis on pluralism and on a tolerant attitude toward the publication of innovative material, no matter how disturbing to those committed to the conventional wisdom can already be seen in the late seventeenth century with the “radical” writings of John Toland, who roundly condemned all forms of institutionalized Christianity in his 1696 book *Christianity not Mysterious*.¹⁵ On the Continent, Pierre Bayle argued strenuously that a society of atheists did not need religion to keep people from misbehaving and could live by honor and civility (Grell and Porter, 2000, p. 8). The actual reality on the ground was much slower to change, and experienced many setbacks on its long and winding road to European pluralism.

14.

¹⁵A century later, radical tolerance in the West had evolved; Thomas Paine famously wrote that “Toleration is not the *opposite* of Intolerance, but is the *counterfeit* of it. Both are despotisms. The one assumes to itself the right of withholding Liberty of Conscience and the other of granting it...The former is church and state, and the latter is church and traffic” (Paine [1791] 2017 p. 272).

What was the economic effect of pluralism? A comparison between Britain and France and their different levels of pluralism is instructive. The role of dissenters and religious minorities in the British Industrial Revolution has been well documented (Mokyr, 2009, pp. 361-63). Excluded from many career paths and the major universities, dissenters created their own educational institutions and many of them specialized in high-end artisanal occupations and commerce. In France, the bigoted Catholicism of Louis XIV in his later years led to the migration of some of the most skilled and productive members of the upper tail of the human capital distribution in France, among them Denis Papin, Abraham De Moivre, and John T. Desaguliers who found a home in Britain. Much of the clock- and watchmaking industry in France's neighbors originated with immigrants (Landes, 1983, p. 219). The favorable treatment of Huguenots in Prussia was demonstrated in a famous paper by Erik Hornung (2014). Similar phenomena can be observed in the Dutch United Provinces. Pluralism, no matter how incomplete, was a powerful tool in the competitive world of states in this era, and the migration of the educated and the skilled implied that no state whose policies were dictated by extreme intolerance could compete.

Did British pluralism contribute to the Industrial Revolution? Religious minorities were still not considered part of the establishment that ran the country, but for that reason their human capital and energy were channeled into commercial and industrial activities. Scholars have long stressed the high proportion of dissenters among the most successful entrepreneurs and innovators in the Industrial Revolution. A particularly good example were Quakers. The most famous of them were the Darbys of Coalbrookdale in Shropshire, who famously pioneered the use of coke in iron smelting. In late eighteenth-century Birmingham, Quakers made up 1 percent of the town's population but one-third of its ironmasters and tanners (Jones, 2008, p. 177).¹⁶ Much like other minority groups in other pluralist societies, dissenters felt that they could trust co-religionists more than others, which gave them an advantage in networked occupations in which trust was important.

The other paradigmatic example of a tolerant culture leading to (relatively) pluralist institutions and from there to economic prosperity is the Netherlands in the golden age. Again, by

¹⁶Margaret Jacob (2000 pp. ... complete) has stressed the importance of unitarianism in the eighteenth century British economy. Three of the most prominent figures of the Industrial Revolution, James Watt, Josiah Wedgwood and Joseph Priestley were unitarians, as were many others.

modern standards, this was hardly a pluralist society. Many cities had strict prohibition on the residence of people (many of the Protestants) who did not belong to the dominant Calvinist Church. The Dutch prominent liberal and pro-pluralist intellectual Dirck Coornhert was born and remained a Catholic all his life, and had to move repeatedly to escape intolerant cities, till he settled in Gouda in 1588, at that time a tolerant city. Tolerance in the Netherlands was a matter of geography (Israel, 1995, pp. 640-645). In Utrecht, for example, Jews could not stay overnight until 1789 and had to live in Maarsse, a good two hours walking away. Again, however, formal regulations and the actual practice on the ground may have diverged. The pre-eminent historian of Dutch tolerance has argued that authorities often turned a blind eye to violations of residency limitations and other constraints on minorities and concludes that “religious dissenters, however, enjoyed a de facto tolerance that made Dutch society religiously the most diverse and pluralistic in seventeenth-century Europe” (Kaplan, 2010, p. 174). Non-Calvinists may have been barred from public office, but they could worship in so-called *schuilkerken* (illicit churches) and while they were at times subject to harassment, by and large people got along. It would be no exaggeration to say that in capitalist Netherlands in its Golden Age, religious diversity was a feature, not a bug of society. Local authorities were encouraged in their permissive attitudes toward other religions by substantial bribes for their connivance in semi-public rituals and quite overt houses of worship (Frijhoff, 2002, p. 45).

Visitors to the United Provinces often commented on the pluralism of the Hollanders, usually with great approval (Kaplan, 2002, pp. 16-17). One example is Colonel Jean-Baptiste Stoupe, a transnational adventurer, spy, and gun-for-hire who joined Louis XIV’s invading army in 1672 and wrote a well-known tract entitled *The Religion of the Dutch* (Stoupe, 1681) in which he described in detail the dazzling array of different religions that he observed the public exercise of: “besides those of the reformed (Calvinist) church, we find Roman Catholics, Lutherans, Brownists, Independents, Arminians, Anabaptists, Socinians, Arrians, Enthusiasts, Quakers, Borrelists, Armenians, Muscovites, Libertines” not to mention Jews, Turks, and Persians “in regards that they are not Christians” (p. 14). This account demonstrates the diversity of the Dutch, and it seems safe to say that without a fair dose of Dutch tolerance and pluralism, this mosaic of religions would not have been observed. Dutch capitalism meant that profits trumped bigotry. Peter Stuyvesant, the intolerant Dutch governor of New Amsterdam asked in 1665 for permission from the West India

Company to kick out the few Jews that had settled there. The governors wrote back coolly that such a request would be “unreasonable and unfair, especially because of the considerable loss sustained by this nation, with others” (Oppenheim, 1909, p. 8).

Greed was one factor, political organization was another. Fragmentation of political power and the high degree of autonomy of local and provincial authorities in the united provinces led to competition for the best citizens and created an opportunity for minorities to sort themselves into places where they were more welcome and eschew those that were intolerant. In towns where guilds were more powerful such as Arnhem and Deventer, the Reformed Church was in a stronger position to preserve its hegemony vis à vis religious minorities. Yet as long as there were always towns that remained friendly to a particular religious group, there was somewhere to go to. Hence it may not have mattered that Zeeland was especially hostile to Catholics; they reached 20 percent and more of the population in Utrecht and Haarlem. If Jews could not live in Groningen or Deventer, they could live in Amersfoort and Maarssen. The same was true for Mennonites, Anabaptists and the other sects enumerated by Stoupe.

To be sure, exactly because of the uneven nature of pluralism in the Dutch Republic, some scholars have objected to the widespread description of contemporaries of the Netherlands as a model of tolerance. Yet it was precisely the decentralization of political power that made pluralism power. Decentralized, polycentric government is typically more likely to be tolerant and diverse, simply because of coordination failures. More powerful autocrats like Ferdinand-Isabella, Louis XIV, or Czar Alexander III could carry out major acts of intolerance (at high cost). In the Netherlands this would have been far more difficult as local and provincial authorities would have had to coordinate their repressive policies. In that sense, the Dutch Republic was a miniature example of the political fragmentation argument, recently re-stated by Walter Scheidel in his *Escape from Rome*. In Europe, suppressing technological and intellectual innovation of any kind --- including religion --- was difficult simply because reactionary powers usually found it difficult to coordinate and because there were always niches in which more tolerant rulers were willing to accept “apostates.” Clever heterodox thinkers and religious skeptics inhabited the “seams” and skillfully played the states against one another.

The difficult question is whether this pluralism actually was a significant positive factor in the “embarrassment of riches” of the Dutch Golden Age. Clearly, some contemporaries thought so, none more than the early political economist Pieter de la Court (1618-1685), who pointed out in his famous *Interests of Holland* that the Dutch economy depended on emigrants, and that religious pluralism “hath brought in many inhabitants and driven out but a few” (De la Court, [1662] 1746, p. 68; Israel, 1995, p. 786). As an urban society, the Holland provinces required the constant infusion of immigrants on account of the high mortality rates in cities.¹⁷ There is, however, little evidence that religious diversity as such contributed to its prosperity and it was not able to prevent the economic decline of the Netherlands in the later eighteenth century. It seems more plausible that both pluralism and economic success were the result of a rationalist and capitalist culture that emerged in the Netherlands in medieval times and that even the most benighted Calvinist fanatics could not suppress (Prak and Van Zanden 2023, pp. 113-115).

Competition and Pluralism

The Dutch example illustrates an important element in European History that no-doubt played a role in the rise of religious pluralism, namely that internal competition in polycentric and decentralized political units is usually a salutary factor in the history of diversity. This is true even in the United States today, in which individuals who value a particular ideology have the option to settle anywhere they wish and thus vote with their feet. The Dutch Republic, despite its modest size, had a great deal of internal heterogeneity, which allowed minorities to pick and choose their location. What was true for the Netherlands was true for Europe as a whole. The competition did what it was supposed to do: antipluralist states such as France under Louis XIV eventually had no choice but to relent in their bigoted policies. In the eighteenth century after the death of Louis XIV, the persecution of Huguenots declined and some of them returned to France (one of them was the banker Jacques

¹⁷Frijhoff (2002) has noted that the organic connection between religious toleration and commercial prosperity was established as early as 1651 in Jean-Nicolas de Parival’s *Les Délices de la Hollande*, a best-selling book translated into many languages. The commercial benefits of toleration became a cliché, “often repeated by later travellers, from Basnage to Montesquieu, from the Marquis d’Argenson to Voltaire and Diderot, even while Dutch prosperity was undergoing serious and lasting setbacks” (p. 28).

Necker, director-general of the finances of the Kingdom under Louis XVI). In 1787, just before the Revolution, Louis XVI signed the Edict of Versailles gave the Huguenots certain civil rights *de iure*, even if it still denied them public worship and any political rights. A few years later the new government officially invited them to return to France with full citizenship rights.

The other salutary effect of the Reformation and the competition among religions was that with the loss of the Latin Church's monopoly position in the European market for ideas, religions had to compete. In any market — including the market for ideas — competition is a salutary force if the competitors stick to agreed-upon rules. Two groceries can compete over prices and quality, but hand grenades are not permissible. Over time, the struggle between religions in Europe moved from violence to more productive channels. Much scholarly and educational work was undertaken for the purpose of demonstrating the superiority of and attaining a victory for a branch of the now divided Western Christianity (Grafton, 2009, p. 11). The most important of those channels was education: one way the Catholic camp tried to fend off the threat of Protestants was to educate people, primarily through Jesuit Schools. Whether this was a successful tactic to defend Catholicism remains to be seen, but clearly the Jesuits made a substantial contribution to the accumulation human capital world-wide.¹⁸ The Protestants responded by setting up their own schools, the most famous of which were the dissenting academies in England (Stone, 1969). Many of the most prominent figures of the Industrial Revolution were educated at these academies, including the prominent ironmongers the Wilkinson brothers, and the chemists Joseph Priestley and John Dalton. Their graduates typically ended up in commerce, medicine, and industry. In a recent paper, Xiong and Zhao (2022) show that religious diversity and competition in the nineteenth century US led to a proliferation of Colleges, and thus laid the foundation for the American system of higher education. A back-of-the-envelope calculation suggests that there would have been approximately 22 percent fewer colleges by 1890 if the US had been dominated by a single denomination.¹⁹ As long as pluralist institutions can

¹⁸A striking example of the impact of Jesuit education on long-term economic welfare is provided by Valencia (2019) who shows that in the area of the Guaraní in South America, Jesuit education had a significant salutary effect.

¹⁹Their conclusion is worth quoting: “The ‘knowledge’ industry remains, to this day, a key feature of ‘American Exceptionalism’. US universities dominate global rankings: its top private research universities accumulate considerable wealth, attract talented students and faculty from abroad, and set the world's highest academic standards. This productive system is in part a consequence of unique circumstances in the 19th century: the

mediate the competition and antipathy between rival religions and prevent them from reverting to violent conflicts, it can exploit the diversity and lead to significant economic improvements.

Once competition is regulated to exclude illegitimate means, and the playing ground made even, competition between minorities, whether religious, ethnic, or other, can indeed have salutary effects. In Imperial Germany, Jews were legally emancipated despite widespread antisemitism. While much of the culture was still intolerant, the pluralist institutions were able to restrain the behavior of anti-Jewish elements in the population. The net result was that Jews in Imperial Germany punched above their weight in their contribution to the industrial, commercial, and scientific development of the nation. While their share in the population was about one percent in 1871 and about 0.8 percent in 1933, they were over-represented in every sector associated with modernization, industrialization, and advanced science and technology. According to the 1933 German Census, Jews in Germany comprised 16.25 percent of lawyers, 15.05 percent of brokerage and 10.88 percent of medicine (Warburg, 1939, p. 30). This may not have amounted to the complete domination that Nazi propaganda screamed about, but it reflects the impact that pluralist policies had on Germany's development.²⁰ In the banking sector, both smaller private banks and the larger universal banks, Jews had a very powerful presence.

Examination of a small subsample of the Jews who materially contributed to Imperial Germany's economic and scientific successes confirms this judgment in spades. Among the most notable were Albert Ballin, the son of a Danish Jewish immigrant who built a hugely successful shipping business and pioneered pleasure cruises catering to wealthy customers. He was personally close to the German Emperor and one of the Jews close to the imperial court known as *kaiserjuden*. Equally prominent was Emil Rathenau, who purchased the European rights to Edison's inventions and founded Allgemeine-Elektrizitäts-Gesellschaft (later known as AEG) in 1887. He became known as the "Bismarck of the German electric industry," the person who introduced electric light and trams to most German cities. His son Walther ran the German command economy during World War I and

absence of state-sponsored religion and the proliferation of Christian denominations."

²⁰Elon (2003, p. 6) notes that "In a relatively brief period [1870-1933], this small community [German Jews] produced a staggering array of entrepreneurs, artists, writers, wits, scholars, and radical political activists"

served as foreign minister in the early days of the Weimar Republic.²¹ In retailing, the department store established by Hermann Tietz (1837-1907) and his nephews. The vast and luxurious stores were a huge success and had 10 branches in Germany, employing 13,000 employees. The bankers Abraham von Oppenheim and Gerson von Bleichröder were the first Jews to be ennobled in Germany on account of their financial support in the expensive military and political maneuvers that led to the unification of Germany. Bleichröder was particularly close to Bismarck, despite the chancellor's rather explicit antisemitism and he was known as Bismarck's *privatjude* (Elon, 2003, p. 193).

In science and medicine, too, the contribution of Jews was way out of proportion, even if we leave out superstars such as Einstein and Freud. Perhaps the biggest contribution of all to Germany was made by the chemist Fritz Haber, a fervent German nationalist, who famously perfected the nitrogen fixing process for which he won the Nobel prize in chemistry, and with which he did Germany the doubtful favor of securing a supply of nitrates that allowed it to stay in the war for four and a half years rather than a few months. Equally accomplished was the biologist Paul Ehrlich who won the Nobel Prize in 1908 for laying the foundations of what is now known as immunology, as well as developing the first effective treatment of syphilis.

And yet, German Jews violated the principles enunciated earlier that make pluralism work and diversity a blessing rather than a threat. Their skills were not strongly complementary to those of their gentile neighbors. They were good at activities that non-Jewish Germans were also good at. For every Emil Rathenau there was a Siemens and a Krupp and for every Tietz and Wertheim there were non-Jewish storeowners such as Rudolph Karstadt. In science, Einstein's success spurred the wrath and jealousy of non-Jewish competitors such as the physicist Philipp Lenard, who famously dubbed Einstein's work as "Jewish physics." The culture of intolerance (that is antisemitism) was alive and well in Imperial and Weimar Germany, even as pluralism was still intact. Moreover, many of their assets were easily expropriated by greedy Nazis. The sharp turn of Germany from a nation

²¹His contribution to the German war effort was remarkable: Elon (2003) pp. 314-315 notes that "In his eight months in this post, Rathenau established the first truly planned modern economy in Europe. It is no exaggeration to say that, but for Rathenau and the gifted scientists, economists, and managers he engaged, Germany might have succumbed within months; its adversaries had greater stocks of food, minerals ... bullets, and open supply lines if stocks ran out."

of reluctant but effective pluralism to one of violent suppression of minorities demonstrates the fragility of pluralist institutions unless they rest on a firm cultural foundation of tolerance and willingness to co-exist with others.²² It also shows how vulnerable pluralism is to demagogic political entrepreneurs who are willing to rise a wave of racism, exploiting the conscious and subconscious homophily that makes so many people uncomfortable with and suspicious of “others.”

Much like the self-defeating bigotry of Louis XIV in the late seventeenth century, the Nazi racist policies were hugely harmful to Germany. Expelling the Jews, even if they were less than one percent of the population, drained a substantial proportion of Germany’s upper-tail human capital, which was essential to its continued technological and scientific leadership.²³ In a series of brilliant papers, Waldinger has demonstrated that the loss of its intellectual elite in science and medicine left Germany permanently weakened. By his calculations, more than 1,000 academics were dismissed from German universities. This number included 15.0% of physicists, 14.1% of chemists, and 18.7% of mathematicians. It does not include the loss of other elite intellectuals from universities or top STEM workers employed by the government or the private sector. The loss of top Jewish scientists and physicians caused a large decline in research output and this loss was persistent, still noticeable as late as 1980. Waldinger (2013, p. 813) estimates the total loss of top rated scientific publications to be around 34% in the disciplines of physics, chemistry, and mathematics.²⁴

²²Both the Kaiser and Bismarck, despite their friendship with some Jews and their reliance on support from wealthy and influential Jewish citizens, were demonstrably antisemitic. Wilhelm fell under the influence of the rabid English racist Houston Stewart Chamberlain, and even proposed making his works required reading in German Schools (Elon, 2003, p. 267). Bismarck’s ambivalent attitudes to Jews was equally obvious and open. At the Versailles peace conference he felt that his French counterparts must have been Jewish to judge from their physiognomy. “There was an insistent, harsh anti-Semitic tone at Versailles: at no other time in his life did Bismarck speak so often, so freely, so scathingly of the rootlessness of Jews, of their hustling, of their omnipresence” (Stern, 1979, p. 146).

²³For an exposition of the concept of upper-tail human capital, see Mokyr (2009, p. 122) and Mokyr (2016, pp. 121-126).

²⁴Strikingly, Waldinger shows that German science also suffered in the short term from the destruction of the physical plant and equipment due to allied bombing, but the loss of physical assets was less persistent and smaller than that of the upper-tail human capital.

Conclusions

Today's realities seem to be consistent with the notion that a high rate of diversity is economically beneficial when it is coupled to pluralist and enlightened institutions, but can be devastating when it is not. Some highly diverse nations have clearly paid a price for their ethnic or linguistic diversity with no obvious benefits. Ethiopia has 90 different ethnicities with anywhere between 77 and 92 languages spoken. Myanmar has 135 distinct ethnic groups grouped into eight "major national ethnic races." Has diversity been good for those "low institutional quality" countries? At the same time it is equally clear that in some countries diversity is beneficial for the economy, provided they are firmly based on a pluralist culture of live and let live, even if perhaps not much love is lost between the different groups, as for example the Flemish and French speaking groups in Belgium or Francophone and Anglophone Canada. In many of those case, perhaps the most underrated institution that makes diversity a success is a measure of voluntary segregation, an application of Robert Frost's famous poem that in some cases tall fences make good neighbors.

All the same, the Page-Florida notion that mixing different ethnic and linguistic groups can stimulate creativity. In some countries, diversity seems demonstrably a net blessing even if there were substantial costs. Israel, for instance, is one of the world's most ethnically, linguistically, culturally, and religiously diverse countries. It is also one of the most creative countries, punching considerably above its weight in information technology, medicine, biotech, agricultural, and hydraulic technologies, to name but a few. It also has a rich and complex cuisine, a magnificent music scene (both popular and classical), and a highly original literary and theatre industry. Israeli culture is what syncretism is all about: creating "fusion" not just of cuisines but of every cultural trait, creating new entities by recombining and hybridizing ideas from different culture. The modern Hebrew language, similarly is a synthesis of many languages, giving it an uncommon power and a flexibility. Senor and Singer (2009, p. 17) single out Israel as "among the most heterogeneous in the world. Israel's tiny population is made up of some seventy different nationalities" which they credit with its hugely successful high-tech sector.²⁵ There is no doubt that the influx of Eastern European

²⁵As the Irish economist and journalist David McWilliams explained in 2004, "Israel is quite the opposite of a uni-dimensional Jewish country ... It is a monotheistic melting pot of a diaspora that brought back with it the culture, language and customs of the four corners of the earth... Worldwide, you can tell how diverse the population is by the food smells of the streets and the choice of menus. In Israel, you can eat almost any specialty, from

immigrants carrying a large amount of human capital in the late twentieth century sharply increased both diversity and creativity. In 2018, Israel was second only to Taiwan in patents per capita (Rayome, 2018). In 2022, its high-tech sector accounted for 54 percent of total exports and employed close to 10 percent of the labor force. Israel spent more on R&D than any other member of OECD, 5.4 percent of GDP (Jeffay, 2022).

The other contemporary example worth citing of pluralism paying off to the economy is Singapore. Singapore is also quite diverse, with its population being a mixture of Chinese (74 percent), Malay (14 percent), and South Indian (9 percent) origin. It has no fewer than four official languages (English, Mandarin, Malay, and Tamil). It leaves nothing to chance: there is a government enforced ethnic integration policy known as EIP. The pluralist policies of Lee Kuan Yew were aimed at ethnic pacification, and were on balance a success even if they meant the curbing of some individual freedoms. The EIP (“Ethnic Integration Policy”) was introduced in 1989 to counter the emergence of ethnic enclaves. The four categories of racial groups: Chinese, Malay and Indian and “others” are being allocated into apartment buildings according to quotas set by the EIP. Having most citizens in public housing allows the government to exercise a large degree of control over their social dynamics. The EIP is perhaps the most visible sign of this control (Badalge, 2020). But Singapore’s government policy, best described as aggressive pluralism, are extended to education and employment as well.²⁶

The Singapore experience suggests above all that there is more than one path to pluralism. It is clear that forceful top-down policies can make a difference here. The Singapore government

Yemenite to Russian, from real Mediterranean to bagels. Immigrants cook and that is precisely what wave after wave of poor Jews did when they arrived having been kicked out of Baghdad, Berlin, and Bosnia.” David McWilliams, 2004. “We’re all Israelis Now.”

²⁶Public schools in Singapore place great emphasis on developing a common national identity but remain “studiedly neutral” with regard to the promotion of group identities. The Singapore social studies curriculum emphasizes the promotion of a common citizen identity while assigning cultural and religious identities to the private sphere. In order to promote “social cohesion within a diverse society” and to ensure the survival of the nation-state, the Singapore government gives great emphasis to multicultural issues in the social studies curriculum and officially declares that a primary aim of the subject is to develop “citizens who have empathy towards others and will participate responsibly and sensibly in a multi-ethnic, multi-cultural and multi-religious society” (Alviar-Martin and Ho, 2010).

conceptualized the relationship between the different ethnic groups as four overlapping communities arranged as partially overlapping circles that maximized common ground but retains each race's separate identity (Alviar-Matin and Ho, 2010, p. 129). When institutions are sufficiently strong to enforce an overall pluralist policy of peaceful and reasonably-harmonious co-existence, the consequences are economic prosperity. Singapore's GDP per capita in 2021 was 106,000 (right after Luxemburg, using PPP for comparison). It ranked seventh on the 2022 WIPO's Global Innovation Index (Israel ranked sixteenth).

None of this is to suggest that diversity is a necessary condition for economic success. Some of the most successful economies, such as the Scandinavian countries, South Korea, and Japan display little diversity. On the basis of either economic history or contemporary experience, it remains hard to argue that diversity in *any* dimension is a *major* (much less an *essential*) factor in any aspect of economic performance. The direction of its effect on the economy, moreover, depends on the quality of institutions. Perhaps this argues once again for a primary role for institutions in economic development, which seems to be a conclusion that much of the professions seems to gravitate towards.

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