Journal of International and Global Studies

Volume 7 | Number 1 Article 5

11-1-2015

Is Political Evolution Over? An Anthropological Analysis of the Twentieth Century

Robert Bates Graber Ph.D.
Department of Society & Environment, Truman State University, rgraber@truman.edu

Recommended Citation

Graber, Robert Bates Ph.D. (2015) "Is Political Evolution Over? An Anthropological Analysis of the Twentieth Century," *Journal of International and Global Studies*: Vol. 7: No. 1, Article 5.
DOI: 10.62608/2158-0669.1261
Available at: https://digitalcommons.lindenwood.edu/jigs/vol7/iss1/5

Is Political Evolution Over?
An Anthropological Analysis of the Twentieth Century

Robert Bates Graber, PhD
Department of Society & Environment
Truman State University
rgraber@truman.edu

Abstract

Why did human societies grow from small bands and villages into highly populous nations and empires? This process, termed political evolution, is explained by one major strand of anthropological theorizing as having resulted from population pressure, warfare, and conquest. War is seen as having been essential because polities do not willingly surrender autonomy. The 20th century apparently brought both an increase in population pressure (the ratio of humans to the available resource base) and a considerable amount of war, but only a modest increase in political evolution as measured by the average population of nations. One interpretation of this is that in order to precipitate political evolution, population pressure and war are only necessary conditions, not sufficient ones; if and when substantial political evolution resumes, it again will be by force of arms. A second interpretation is that a great deal of political evolution did occur in the 20th century, but in a new form: voluntary federation. Motivated by fear of future global war, nations surrendered modest but appreciable autonomy to join the League of Nations, then its successor, the United Nations. Regression analysis using decennial time-series data reveals a highly significant relationship between voluntary federation and population density, supporting the possibility that voluntary federation is indeed the culminating form of political evolution. ($N = 11$, $R^2 = .7495$, $t = –5.189$, $p < .001$).

Keywords: *annexation, conquest, League of Nations, political evolution, population pressure, twentieth century, United Nations, voluntary federation, war*

Acknowledgements: All regression analyses were run using the SHAZAM for Windows (2004) econometrics package. I thank Dean De Cock, Emily Pollard, and especially Jane Sung for statistical advice; any errors of fact or interpretation are my responsibility, not theirs. I would also like to thank peer reviewers Paul (Jim) Roscoe and Richard Scaglion for their perceptive insights that enabled me to refine the argument and analysis of this essay.

When humans have trouble getting along, the easiest solution is avoidance. At the group level, this leads to splitting. Thus, even a religious commitment to brotherly love does not necessarily prevent groups from splitting when conditions allow it. The extraordinary cultural diversity among Mennonites in America, for example, reflects a history of conflicts ended by group splitting (Graber, 1979).[1] Due at least in part to this tendency to resolve conflict by "going our own way," humans have found it very difficult to evolve large societies. With a world to inhabit, hunting-gathering bands remained small. For millions of years prior to around twenty thousand years ago, small bands subsisting on wild plant and animal foods evidently numbered only in the dozens; if the human population, growing and expanding as it was, did not produce larger societies, population growth must have been constantly offset by growth in the number of societies. Even after agriculture began and settled life became common in some parts of the world, villages ordinarily numbered only in the hundreds of people. Like the bands before them, these villages were evidently not subject to government from outside—that is, they enjoyed political autonomy, and that is the sense in which we may term them societies (Nolan & Lenski, 2011).

Theoretical Framework

Until quite recently, human population growth took the form primarily of increase not in the size of human societies but in their number. This suggests the theoretical postulate that human societies have an intrinsic tendency not to grow but to proliferate. An ethnographic approximation to uninhibited proliferation of societies is provided by the Yanomamö people of the Amazon Basin. Here, population growth does create a tendency for villages to grow; as a village becomes more populous, however, tensions rise and conflict increases until a subgroup leaves to found a new village elsewhere. (This splintering off of new groups is facilitated in this example by the availability of vast areas for expansion, depopulated by slaving and epidemics following European contact in the early 18th century [Wright & Carneiro da Cunha, 1999, p. 367]). Over time, the aggregate result of population growth is an increase in the number of villages jointly occupying a larger area, with no evident increase in the average number of people per village (Chagnon, 1974, 2012).[2] Political evolution, then, would depend on conditions that somehow materially inhibited this proliferative tendency; indeed, the idea that political evolution depended on definite material conditions having such an effect is implicit in the leading anthropological theory of political evolution (Carneiro, 1970). Reduced opportunities for geographic expansion appear to have been the crucial factor; this supposition is highly consistent with the fact that when a few human societies did finally grow large, they did so predominantly in fertile river valleys flanked by such relatively unproductive environments as mountains or deserts. In such *circumscribed* environments, population pressure led to warfare over increasingly scarce farmland; this gradually caused the stepwise forging of villages into chiefdoms, chiefdoms into states, and, sometimes, states into empires. In this classic formulation of what came to be called "circumscription theory," Carneiro (1970) added that at least a modicum of political evolution also can result from being hemmed in by other societies (referred to as "social circumscription" [Chagnon, 1968]) or simply from existing in close proximity to rich food sources, such as rivers generously supplied with fish (identified as "resource concentration"). Carneiro places his theory of political evolution in broader context by categorizing it as a "coercive" theory, in contrast to "voluntaristic" ones; the latter, he says, invariably founder on "the demonstrated inability of autonomous political units to relinquish their sovereignty in the absence of overriding external constraints" (Carneiro, 1970, p. 734). This

is why wars of conquest, or the immediate threat thereof, have been essential for political evolution.

The process by which warfare recurrently led to the political evolution of larger societies is detailed by Carneiro. He begins by stressing the interplay of external and internal changes:

> While the aggregations of villages into chiefdoms, and of chiefdoms into kingdoms, was occurring by external acquisition [*i.e.*, success in war], the structure of these increasingly larger political units was being elaborated by internal evolution. These inner changes were, of course, related to outer events. (Carneiro, 1970, p. 736)

The formation of larger societies meant that new functions had to be performed, with successful warriors playing leading roles:

> The expansion of successful states brought within their borders conquered peoples and territory which had to be administered. And it was the individuals who distinguished themselves in war who were generally appointed to political office and assigned the task of carrying out this administration. Besides maintaining law and order and collecting taxes, the functions of this burgeoning class of administrators included mobilizing labor for building irrigation works, roads, fortresses, palaces, and temples. Thus, their functions helped to weld an assorted collection of petty states into a single integrated and centralized political unit. (Carneiro, 1970, p. 736)

Success in war was also the germ of the structural differentiation that accompanied these new functional imperatives:

> These same individuals, who owed their improved social position to their exploits in war, became, along with the ruler and his kinsmen, the nucleus of an upper class. A lower class in turn emerged from the prisoners taken in war, [who were then] employed as servants and slaves by their captors. In this manner did war contribute to the rise of social classes. (Carneiro, 1970, p. 736)

Successful conquest warfare externally thus entails new functions internally; it also entails a measure of coercive power—power that tends to determine who will perform which functions in the enlarged society.

Archaeological, historical, ethnohistorical, and ethnographic evidence suggests significant roles for population pressure and conquest warfare in political evolution. One particular piece of evidence deserves singling out in this context because it actually relates population density—and, therefore, it will be suggested, population pressure—directly to the distinction between conquest and non-conquest warfare. In this study, of the nine valleys in Papua New Guinea that were scored "high" in population density, three saw internal wars that "often" resulted in annexation of territory; the other six did not. In the seventeen valleys that were scored "low" or "moderate" in population density, on the other hand, such conquest was described, universally, as absent or rare (Sillitoe, 1977).[3]

Circumscription theory lies squarely in the tradition of sociocultural evolutionism[4] and is indebted especially to the work of Herbert Spencer (Graber & Roscoe, 1985). Because the latter tradition has fallen into considerable disfavor in recent decades (Carneiro, 2003), however, non-evolutionist theories of political evolution have been attempted, though they remain perplexing. A review of political-evolutionary theories is beyond the scope of the present paper; suffice it to say that the non-evolutionary theories tend not to provide clear alternatives to evolutionary ones. The nearest approach to explaining the formation of chiefdoms by one non-evolutionist theorist, for example, appears to be that "the regrouped people … would comprise little melting pots, where hybrid identities and diverse cultural practices could produce any number of potential

historical trajectories" (Pauketat, 2007, p. 197). This sounds rather less like a theory than like a refusal to theorize (cf. Carneiro, 2010). Another non-evolutionist, straining to avoid even a hint of political-evolutionary stages, suggests that all political formations, whatever their scale, developed, more or less directly and independently, from an original condition of "bandishness" (Yoffee, 1993; cf. Carneiro, 2003, pp. 273 -275). Anthropological theories of political evolution, whatever their stripe, pertain more directly to preindustrial than to modern political evolution; nonetheless, the evolutionists' stress on population pressure, war, and conquest provides an interesting framework for analyzing the 20th century.

The Twentieth Century

The 20th century saw plenty of population pressure—and, of course, of war. Population pressure, taken broadly, involves the ratio of humans not only to land but to economically valuable resources in general: Considerations such as access to raw materials and control of trade routes are relevant as well. German expansionism figured from early in the century, predating World War I. Ideologically, "lebensraum" (or 'living space') was a kind of natural-scientific rationalization, derived from the work of geographer Friedrich Ratzel, of the theory of war just described. The vigor of any species would necessarily find expression in continual expansion of the territory it occupied. Applied to humans, this was taken to entail warfare, conquest, and colonization. Hitler's thinking was along just such traditional lines. When Germany invaded the Soviet Union in 1941, for example, his hope was for Germans—the "super-race"—to settle the annexed territory; some of the surviving Russians would be deported, the rest, enslaved. It would be a mistake, however, to think of Germany as the sole case of population pressure and war in the 20th century. Here is a broader view of the great powers around 1900:

> In concrete instances, two or more powers wanted the same piece of land, as a territorial addition or as a sphere of influence. France and Great Britain both wanted Egypt; France and Germany both wanted Morocco; Russia and Austria-Hungary both wanted control over the Balkans; Russia and Japan both wanted Manchuria; and so on around the map. Compromises were made, [and] lands and spheres of influence were shared, but in the long run, there simply wasn't enough to go around. (Brinton, Christopher & Wolff, 1957, p. 582)

This population pressure, though rooted in the Industrial Revolution of the 18th century, had by no means remained confined to Europe. Between 1750 and 1850, Europe's population had nearly doubled, from 140 million to 266 million, while over the same interval, Asia's population had grown from perhaps 400 million to 700 million.

> Whatever the reasons—better climatic conditions, improved fecundity, decline in diseases—increases of that size were alarming, and although agricultural output both in Europe and Asia also expanded in the eighteenth century and was in fact another reason for the rise of population, the sheer number of new heads (and stomachs) threatened over time to cancel out the benefits of all such additions in agricultural output. Pressure upon marginal lands, rural unemployment, and a vast drift of families into the already overcrowded cities of Europe in the late eighteenth century were but some of the symptoms of this population surge. (Kennedy, 1989, p. 146)

Writing some two centuries later, biologist Paul Ehrlich warned: "There is not enough food today. How much there will be tomorrow is open to debate. If the optimists are correct, today's level of misery will be perpetuated for perhaps two decades into the future. If the pessimists are

correct, massive famines will occur soon…." (Ehrlich, 1975, p. 24). "Our problems would be much simpler," he added, "if we needed only to consider the balance between food and population. But in the long view, the progressive deterioration of our environment may cause more death and misery than the food-population gap" (Ehrlich, 1975, p. 26).

If a measure of population pressure characterized the 20th century, so certainly did war. By far most lethal, of course, were the two world wars, but there were many others. In his classical list of "Wars of Modern Civilization," Quincy Wright identified 278 wars that broke out between 1500 and 1940, of which 24 were fought in the 20th century. "The seventeenth and twentieth centuries are remarkable," he observed, "for the long duration of their wars and the twentieth century for the extraordinary intensity of its wars" (Wright, 1954 [orig. 1942]), p. 639). Similarly, of the 93 "international wars" fought between 1816 and 1965, as identified by J. David Singer and Melvin Small, 32 broke out in the 20th century (Singer & Small, 1972, p.59 [table 4.1]). Yet all this war appears to have resulted in remarkably little in the way of political evolution. The major examples are provided by the world wars. After the first of these, the victorious nations, instead of annexing the vanquished ones, created a system of mandates devoted to guiding the defeated nations to eventual democratic self-government—a remarkable new way for victors to handle their "spoils of war." The Second World War did see the annexation of several nations by Germany, but this conquest proved short-lived. Longer-lived was Russia's annexation of the Baltic republics and parts of Poland and Romania; still, by the century's end, this conquest too had failed (for details see Graber 2006, pp. 67–68). (These cases warn against being unduly impressed by sheer coercion, inasmuch as the integration it produces lasts only as long as the power center holds.) Furthermore, the disintegration of the major empires in the decades after World War II brought several dozen nations into existence, and over a dozen more were added in the century's final decade, with the disintegration of the Soviet Union.

The net result of the world wars on population can be summarized quantitatively using the *World Almanac 2000*, which conveniently reproduces, for comparative purposes, a table from the *World Almanac 1900* a century earlier. For world population, we find estimates of 1.6 billion in 1900 and 5.996 billion in 2000 (p. 878); the former population comprised 53 empires and countries (p. 773), the latter, 181 countries (pp. 878–79). These yield mean populations per polity, respectively, of 30 million and 33 million. For both dates, most of the units fall toward the lower end of the range; that is, the distributions, instead of being symmetrical, are "right skewed." In such cases, the median is often preferred as a measure of central tendency. The median population per polity in 1900 was 4.0 million (as found in that year by Afghanistan); a century later, this median had risen to 5.4 million (as found in that year by Laos). If by political evolution we mean the process of forging ever more populous human societies, then, there was evidently some such evolution, but it seems surprisingly modest, especially in light of the duration and intensity of twentieth-century war. In particular, we might have expected a quadrupling of population to produce fusion into a smaller number of much larger societies, rather than the observed fission into a larger number of only slightly-larger societies.[5]

Two Alternatives

That the two world wars of the 20th century resulted in the creation of only slightly larger societies—that is, seemingly little political evolution—leaves two broad alternatives (other than outright rejection of the theory that population pressure and war precipitate political evolution).

The first is to conclude that for some unknown reason, population pressure and war in the 20th century simply produced rather little in the way of political evolution. The classical theory, after all, claims not that these conditions are *sufficient* for political evolution but only that they are necessary. If and when significant, genuine political evolution resumes, it will, as always, be by dint of war, be it actual or threatened. This, in effect, is the position taken by Robert Carneiro: "If a world state is to come, it will be through the successful exercise of military force by a superpower" (Carneiro, 2004, p. 170). "It is most likely to come about," however, he adds, "not as the result of a single, massive global conflict, resulting in the immediate and total vanquishing of the remaining nations of the world, but by a relentless piecemeal advance of American (or some other nation's) military might" (Carneiro, 2004, p. 172).

The second alternative is to suggest that twentieth-century war did indeed "pay off" in considerable political evolution but in an unexpected form—namely, voluntary federation. Immediately after the First World War, the manifest horrors of industrialized warfare, and the threat of more such war in the future, motivated the formation of the League of Nations.[6] The Second World War, disclosing new horrors crowned by the use of atomic bombs, prompted the immediate formation of the United Nations—a reformation, in some respects, of the League of Nations. Especially with the advent of nuclear power, the danger of global war became an "overriding external constraint" sufficient to motivate nations to accept limitations on their freedom of action—their "sovereignty" or "autonomy" (cf. Carneiro, 1970, p. 734).

The first objection to this interpretation, perhaps, would be that the member nations of these organizations have not really surrendered their autonomy. Implicit here is the idea that autonomy is a quality or trait of polities that is simply present or absent; it may be more realistic, however, to think of it quantitatively:

> Consider, for example, a more or less typical American Indian society of the sixteenth or seventeenth century, an autonomous group whose members were caught up in a pervasive system of social activity. In time, the group established trade relations with Europeans or Americans and eventually came under their political control. This process often involved the gradual absorption of the Indian group by a larger, more powerful society. It would obviously be impossible, in such a case, to say at what point the Indian society ceased to exist (*i.e.*, lost its autonomy) and became a subgroup within another society. Autonomy is clearly not an "all or nothing" quality . . . . Its existence is a matter of degree. (Lenski & Lenski, 1978, p. 9)

The likely rejoinder would be that the *amount* of autonomy (or sovereignty) surrendered in joining the League of Nations and the UN is negligible. Yet consider the crucial Article 10 of the League of Nations Charter: "The Members of the League undertake to respect and preserve as against external aggression the territorial integrity and existing political independence of all Members of the League. In case of any such aggression or in case of any threat or danger of such aggression the Council shall advise upon the means by which this obligation shall be fulfilled." Standing ready to help repel aggression initiated against any member from outside (or by another member [Article 16]), as advised by the organization's government, scarcely sound like trivial commitments. Such commitments presumably did not appear trivial to the thirty-nine U.S. senators who blocked the United States' joining the League of Nations in 1920.[7] As their leader warned, "The United States is the world's best hope, but if you fetter her in the interests and quarrels of other nations, if you tangle her in the intrigues of Europe, you will destroy her power for good and endanger her very existence. Leave her to march freely through the centuries to come as in the years that have gone" (Senator Henry Cabot Lodge, speech of August 12, 1919).

Nor do similar commitments made in joining the UN appear trivial to the legislators who have sought withdrawal of the US from that organization and who have introduced "American Sovereignty Restoration Acts" several times between 1997 and 2015.

Have voluntary federations nonetheless proven too weak to represent bona fide political evolution? There is a persistent tendency to focus on the failures of these federations while overlooking their successes. Remembered is the League's critical failure to restrain Italy's aggression before World War II broke out; forgotten is its creation of the mandate system and its resolution of potentially dangerous disputes between Sweden and Finland and between Greece and Bulgaria.[8] Remembered is the UN's failure to prevent the outbreak of several wars; overlooked are its many humanitarian achievements and its increasing number of peacekeeping missions around the world (Graber, 2006, chapter 9). The UN is sometimes described as having proven largely irrelevant in the Cold War, yet closer examination reveals that the UN in fact functioned vitally, behind the scenes, in the Cuban Missile Crisis simply by providing mediation both sides were willing to trust (Kennedy, 1969). It is scarcely fair to blame the League for failing to prevent World War II while giving its successor, the UN, no credit for there having been no World War III. Should the UN fail, it will be replaced, like the League before it, by a more effective successor—on the optimistic assumption, that is, that we avoid a catastrophe severe enough to overwhelm our capacity to organize at that level.

It is tempting to note that political anthropologists are accustomed to acknowledging, as autonomous political units, societies with but weak governance: namely, the small bands and villages that evidently comprised all of humanity until some tens of thousands of years ago, some of which retained enough autonomy into recent times to allow anthropological observation. Political leaders in these small societies lead as best they can, using their powers of persuasion; they ordinarily have virtually no coercive power. What qualifies a polity as autonomous, then, is not that it is strongly governed internally but that it is free of government from outside (Graber 2004b, pp. 203–204; Graber 2006, pp. 82–84). But here a cogent rejoinder can be imagined: these autonomous bands and villages cannot be properly considered products of political evolution. Rather, they are pre-evolutionary "raw material." It is only with the integration of such small, weakly governed units into larger ones, after all, that political evolution as such commences—the consolidation of autonomous communities into chiefdoms (Carneiro, 1981). And for this (concludes the rejoinder), war, or its immediate threat, was needed, and continues to be needed.

An Empirical Test

Theoretical debate having reached something of an impasse, it would be beneficial, if possible, to bring empirical evidence to bear on the question. If the general threat of future war indeed grew capable of generating true political evolution in the new form of voluntary federation, it should be possible to link that federation process back to the underlying theoretical "prime mover," population pressure. No such correlation would be expected, necessarily, under the alternative position that further political evolution, by force of arms, is yet to come. The task, then, is to determine whether the coalescence of the League of Nations and United Nations correlated with population pressure. This requires an operational definition of population pressure. By population pressure is meant the load placed by a human population on the total resource base available for its support. When technology can be assumed approximately constant, as over brief periods (or longer periods of cultural stability), plausible assumptions lead to the conclusion that population pressure tends to be proportional simply to population density

(Graber, 1995, chapter 5). This assumption, however, is clearly unrealistic for the 20th century, which witnessed rapid technological change. Optimists like Julian Simon (1996) would tend to think sheer density increase would overestimate actual pressure increase because it takes no account of increases in technological productivity; pessimists like Paul Ehrlich (1975) would tend to think density increase alone would underestimate actual pressure increase because it takes no account of environmental deterioration resulting from industrial technology. It is worth remembering that it was Simon who won a famous wager with Ehrlich about the price change of five commodity metals from 1980–1990, but it is sobering to observe how belated is our recognition of the extent to which carbon emissions have been causing ozone loss and climate change. Regarding population pressure as proportional to population density is less partial to the pessimistic position than it may appear: It implies only that their rates of change—in proportional or percentage terms—are approximately equal and, as such, entails nothing about whether population pressure was absolutely high in 1900 or 2000 or about whether there is an ultimate "carrying capacity" for Earth (Cohen, 1995). Indeed, using population density as a proxy for population pressure might be considered a middle path between the optimistic and pessimistic positions. Another way to think of it is as a natural "default option" in the absence of definite knowledge about how to take technological change into account, quantitatively.

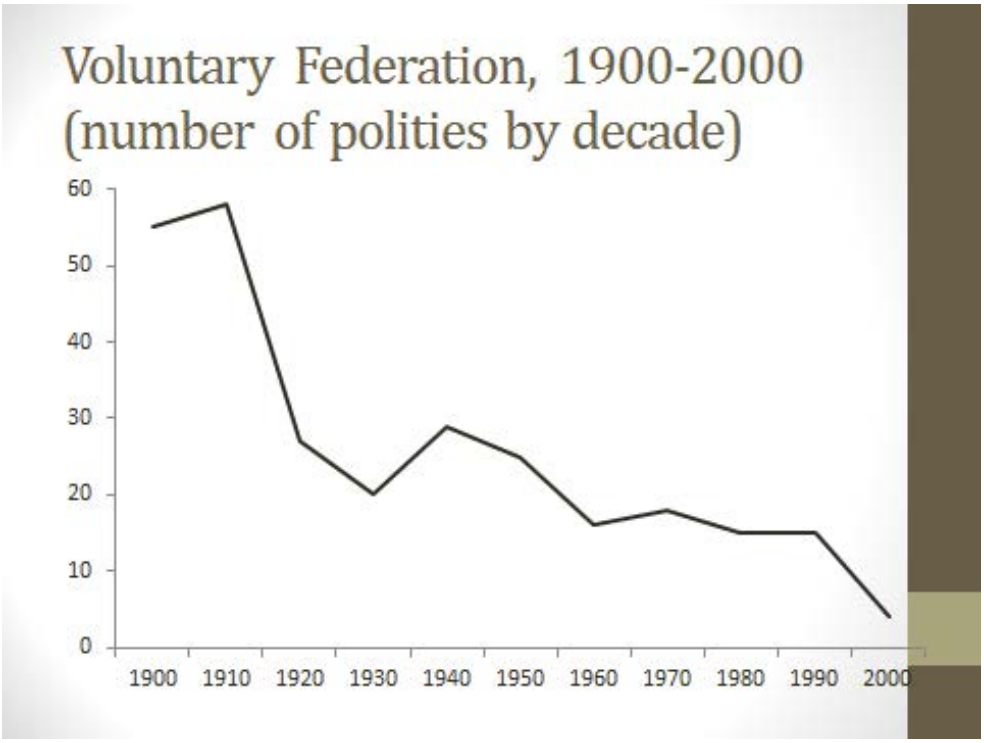
Because the inhabited area of Earth did not change appreciably in the 20th century, global population may be taken as global density, and density increase may be interpreted as global population-pressure increase. World population estimates are displayed in Table 1. The estimates for 1900 through 1940 are from the United States Census Bureau (2015a); those for 1950 through 2000 are from the United States Census Bureau (2015b). For present purposes, the League of Nations and United Nations are considered polities in their own right, alongside the non-member countries with which they coexist(ed). The countries belonging to a federation are therefore not counted; the federation is counted not in addition to its members but *instead* of them.[9] The polity counts, by decade, are displayed in Table 1. (For the actual entities included in these counts, see the Appendix.) The "Polities" time series is graphed in Figure 1. Note, in particular, that the curve is relatively smooth except for a hump for the period from 1930 to 1960. This hump reflects the withdrawal of several states from the League of Nations before and during World War I; the number drops back down, as if to resume its proper course, with the formation of the United Nations. It is of some interest that this quantitative continuity should be noticeable, especially considering that the charter members of the UN were in fact somewhat different from the terminal members of the League. It is as though what was being expressed was a degree of world sentiment as such, rather than the sentiments in a specific set of nations. When Switzerland, the last non-member of the countries existing when the UN began, joined the UN in 2002, the process was, in an important sense, complete. Since then, new nations have been fostered into membership by the UN itself.[10] For various reasons, a handful of anomalous polities currently remain, as in 2000, outside the UN; this is likely to continue to be the case. This suggests a future not of the "relentless piecemeal advance" of a superpower to world domination but rather of the "chronically compromised universality" of a voluntary federation—the UN or a successor (Graber, 2013).

Table 1

Population & Polities,1900-2000

Year	Pop. (in billions)	Polities
1900	1.65	55
1910	1.75	58
1920	1.86	27
1930	2.07	20
1940	2.30	29
1950	2.56	25
1960	3.04	16
1970	3.71	18
1980	4.45	15
1990	5.29	15
2000	6.09	4

Figure 1

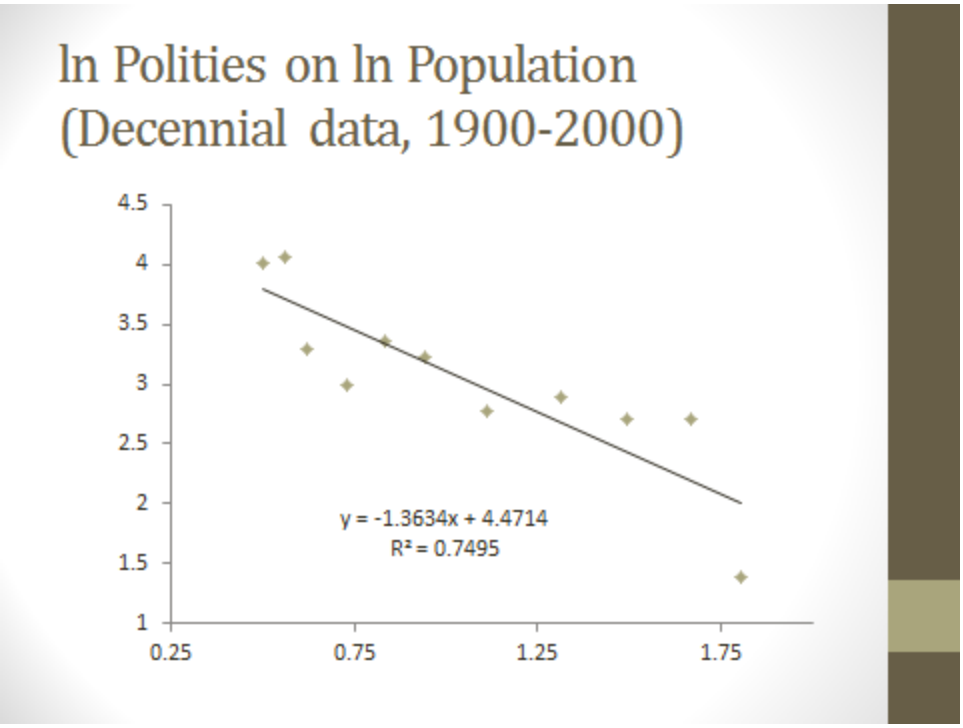


When number of polities is regressed on population, analysis of residuals indicates that the data may well violate the model's assumptions; after replacing the data with their natural logarithms, however, this is no longer the case.[11] Figure 2 displays the data points and the best-fit regression line. The relationship between voluntary federation and population pressure is evidently moderately strong (R^2 = .75), and highly nonrandom (t = –5.189, p = .001).[12] The full regression equation, with standard errors in lower parentheses, is as follows:

$$\ln(\textit{polities}) = -1.3634\,[\ln(\textit{population})] + .4714$$
$$\qquad\qquad\quad (.2628) \qquad\qquad\quad (.2994)$$

This relationship could be coincidental, particularly due to undetected problems in the data.[13] It is what would be expected, however, if voluntary federation is indeed the form in which political evolution has been pushed, by population pressure, to a recent end.

Figure 2



Conclusion

Late in the 19th century, Hebert Spencer wrote that warfare, as a means of political evolution, was finished. "From war has been gained all that it had to give," he declared; "peaceful federation is the only further consolidation to be looked for" (1897, Vol. 2-2, p. 664). Though he was prescient in that subsequent wars indeed proved largely ineffective for directly forging larger societies, those wars—the world wars—did have something more to give: an abiding fear of large-scale future war. With the knowledge of how to make nuclear weapons came the capacity for species self-extinction, a threat that, given the durability of scientific

knowledge, is unlikely to go away (Schell, 1982). "In the nuclear world," says Commander Hunter in the gripping movie *Crimson Tide*, "the true enemy is war itself."

The development of the League of Nations and the United Nations is not ideally characterized, for present purposes, as "voluntary federation": "Voluntary" connotes freedom of will, which, however one considers it philosophically, is seldom likely to be useful scientifically. Because the theory presented is not "coercive" in terms of Carneiro's dichotomy, it is necessarily "voluntaristic." That is the only other possibility. But it is not, therefore, an idealist (rather than materialist) theory. An intention, such as to form—or join—a federation of nations, must itself be seen, scientifically at least, as determined by conditions. Its very occurrence, in the minds of people, depends on conditions; certainly no less dependent on conditions is that intention's chance of realization. Finally, why not use Spencer's term "peaceful federation" for the evolution of the League of Nations and United Nations? Because if the present analysis is correct, war indeed was crucial—no longer as a means of conquest but as an enduring source of terror. "Safety will be the sturdy child of terror, and survival the twin brother of annihilation," so went Winston Churchill's grim and famous prediction of 1955. Perhaps that is what they have been; perhaps that is what they will continue to be.

Notes

[1]Traditionally, Mennonites in the United States held services only every other week; a schismatic subgroup of a congregation, if it could acquire a key to the meetinghouse, had a ready-made way to avoid those with whom they disagreed: simply meet on the "off" Sundays, when the meetinghouse otherwise would be vacant. Even today, one can find Mennonite meetinghouses at which horse-and-buggies one Sunday are replaced by black automobiles a week later. Of course, this only works once; after one schismatic group has been accommodated on the off Sunday, the need to find a place to meet becomes a factor inhibiting further schisms.

[2]Inspired especially by the work of Carneiro (and Chagnon), I developed a mathematical population-pressure theory of political evolution as follows: The population P inhabiting an area A has a density D, and of course, of P/A. (The same population also is distributed into N polities having mean population of $P/N = S$.) The population may be defined, then, as A times D. Taking natural logs and differentiating this with respect to time shows the instantaneous proportional growth rate of population P' to be the sum of the proportional growth rates of area (A') and density (D'). Assuming a positive rate of population growth, dividing through by P' makes it clear that D'/P' measures the extent to which population growth is taking the form of density increase *rather than* of areal expansion. It seems reasonable to interpret this ratio as reflecting the net effect, on a growing population, of any and all conditions—including, notably, those described by Carneiro—tending to inhibit that population's geographic expansion; accordingly, the ratio is termed "inhibition of expansion" (Graber, 1985). The simplest population-pressure theory of political evolution would make societal proliferation change to societal de-proliferation *to the extent that geographic expansion is inhibited*. This is achieved most simply by the equation $N' = 2A' - P'$. Note, in particular, that if A' equals P', then N' also equals P', but if A' equals zero, then N' equals *negative* P'. In the latter case, N is changing not in direct proportion to P but in *inverse* proportion to it. One implication of this is that the mean number of people per society (P/N) increases as the *square* of population density. This theory is detailed in Graber, 1995.

[3]This correlation appears, despite the sample's smallness, to be statistically significant (Fisher Exact probability = .0323). Failure to cross-classify resulted in serious misinterpretation of the data as originally published (Ember, 1982; Graber & Capps, 2004). The result just given, however, as well as those reported in the two papers just cited, should be considered provisional, I now believe, because the data were not tested for spatial autocorrelation.

[4]The hybrid adjective "sociocultural" is used here to encompass theoretical perspectives often referred to as either "social evolutionism" or "cultural evolutionism." Though these two can be differentiated for some purposes, it often is convenient to lump them together (e.g, Nolan & Lenski, 2011). Certainly the leading 19th century pioneers (e.g., Edward B. Tylor, Lewis Henry Morgan, and Herbert Spencer) conspicuously concerned themselves—implicitly if not always explicitly—with the long-term developmental processes (i.e., with the evolution) of systems comprising human societies and the cultures they carry (i.e., of sociocultural systems).

[5]By the theory summarized in note 2, a quadrupling of population—specifically, of density— should have reduced the number of polities to about one quarter of the original number, with a mean population sixteen times greater!

What in fact happened is not too different from what would be theoretically expected if Earth's inhabited area had magically expanded fourfold such that the larger population could have been accommodated with no increase in density.

[6]Recoil at the horrors of industrialized war, and the ideal of preventing future war, was not the universal reaction. There was also, in the United States, a strong wave of isolationism, and in not only Germany, Italy, and Japan but also in Hungary and even France, a quickening of the fascist ideals of order, discipline, power, struggle, and national glory. On the political right, the lesson was not to prevent the next war but to prepare to win it—or die trying (Kennedy, 1989, p. 285).

[7]Remarkably different was the fate of the United Nations Participation Act, which in 1945 passed easily: 65–7 in the Senate, 344–15 in the House. The futility of isolationism had grown quite clear.

[8]The harshest criticism of the voluntary federations has come, from the beginning, mainly from the political right, but the federations have not been entirely spared by the left. Admittedly, the League's mandates settling World War I were less than perfect, both in their effect and their motivation; nevertheless, to label them "ever more elaborate fig leaves" to hide "imperial interests" seems rather extreme (Kennedy, 1989, p. 286; cf. Brinton, et al., 1971, Vol. 2, pp. 946–47, and Graber, 2006, pp. 68–70).

[9]To the best of my knowledge, the idea of estimating the total number of self-governing ("autonomous" or "sovereign") units into which the world's people were mutually exclusively and exhaustively distributed originated with Robert L. Carneiro (1978). This paper offered rough estimates of the total number of political units of all kinds—bands, villages, chiefdoms, states, and empires—into which the world's population was divided at several points in both the distant and the recent past (and used the graphed estimates to predict the appearance of a world state). The combining of units that are heterogeneous in terms of structure and scale into a single global count, therefore, is not new; to my knowledge, however, the first publication of a count combining the voluntary federations of the 20th century with contemporaneous non-member countries was my own (Graber, 2004a). The analyses in that article, and in my subsequent book (Graber 2006) used data points for every five years. This, however, had required interpolation of world population estimates for 1905, 1915, 1925, 1935, and 1945. This was done on the assumption that 21 data points would allow considerably stronger statistical conclusions than would only eleven. Having been advised that interpolation is best avoided, I reran all analyses using only decennial data. This provided much cleaner results. In particular, logarithmic transformation removed evidence not only for heteroscedasticity but for autocorrelation as well; this had not been the case for the five-year data. (The decennial sequence and results were first presented in Graber, 2013.) Accordingly, the analysis and results herein, though not differing dramatically from those published previously, should be considered as superseding them.

[10]By 2010, global population had risen to 6.86 billion, and the number of polities remained at four. (For summary remarks on inclusion of these figures in a regression analysis, see note 12.) Three of these were unchanged from 2000: the UN itself, plus the Vatican and Taiwan. The additional unit, however, had changed in a way that is quite telling. In 2002, Switzerland, the last holdout among the traditional states, had finally joined the UN and so no longer counted. It was replaced, however, by a newly independent country: Kosovo, already being fostered to statehood, it should be noted, by the UN itself. Thus, the long tradition, begun by the League of Nations and its mandate system after World War I, of fostering new states, continues; there are no longer any traditional states outside the UN. As of this writing (2015), a new country (ISIL) has recently formed itself by conquest of territory. It is anachronistic—certainly in this respect, but also in others; it appears unlikely to last.

[11]The number of runs in the residuals' signs rises from three (minimally acceptable) to seven (clearly acceptable); similarly, the Durbin-Watson statistic rises from .9913 (inconclusive) to 1.7577 (conclusively acceptable). Spearman's rank-order correlation between the predictor variable and the residuals' magnitudes falls from .7818 (clearly unacceptable) to –.2364 (clearly acceptable). These tests for, respectively, serial autocorrelation and heteroscedasticity follow, in particular, Gujarati & Porter, 2009; for a more technical treatment, see, e.g., Wooldridge, 2013).

[12]According to the ideal theory summarized in note 2, the true slope is –1. Though the observed slope (coefficient) deviates from this ideal somewhat more than would usually occur by chance, a deviation (in either direction) at least this great would not be rare ($p = .20$). Rerunning the regression including the 2010 data (see note 9) reveals a modestly better linear fit, with R^2 rising from .75 to .81; the correlation remains highly significant ($p<.001$). The slope steepens, however, from –1.36 to –1.49; the t value for the deviation from –1.00 increases from –1.38 to –2.17. The random probability for a deviation (in either direction) this extreme, while it remains greater than .05, is now less than .10. This decrease in compatibility with the ideal theory, though modest, is consistent with the possibility that Switzerland's joining the UN, in 2002, did signal the end of the federation process.

[13]In particular, the lack of statistical evidence for autocorrelation and heteroscedasticity (see note 11) does not prove their absence. If Type II errors indeed were avoided in deciding the data are free of these problems, the final

correlation cannot plausibly be considered coincidental: The probability of Type I error equals only the level of significance (alpha) at which the null is rejected (p = .001). But one or even two Type II errors may well have been committed, in which case the possibility of Type I error exceeds alpha by an unknown amount. The possibility of Type II error should be kept in mind when evaluating the results of regressions in which time-series data have been used.

References

Brinton, C., Christopher, J. B. & Wolff, R. L. (1957). *Modern civilization: A history of the last five centuries*. Englewood Cliffs, NJ: Prentice-Hall.

Brinton, C., Christopher, J. B., & Wolff, R. L. (1971). *A history of civilization* (4th ed, 2 vols.). Englewood Cliffs, NJ: Prentice-Hall.

Carneiro, R. L. (1970). A theory of the origin of the state. *Science*, *169*, 733–738.

Carneiro, R. L. (1978). Political expansion as an expression of the principle of competitive exclusion. In R. Cohen & E. R. Service (Eds.), *Origins of the state: The anthropology of political evolution* (pp. 205–223). Philadelphia: Institute for the Study of Human Issues.

Carneiro, R. L. (1981). The chiefdom: Precursor of the state. In G. D. Jones & R. R. Kautz (Eds.), *The transition to statehood in the New World* (pp. 37–79). Cambridge: Cambridge University Press.

Carneiro, R. L. (2003). *Evolutionism in cultural anthropology: A critical history*. Boulder, CO: Westview Press.

Carneiro, R. L. (2004). The political unification of the world: Whether, when, and how—some speculations. *Cross-Cultural Research*, *38*, 162–177.

Carneiro, R. L. (2010). Pauketat's *Chiefdoms and other archaeological delusions:* A challenge to social evolution. *Social Evolution & History*, *9*, 135–165.

Chagnon, N. A. (1968). The culture-ecology of shifting (pioneering) cultivation among the Yanomamö Indians. *International Congress of Anthropological and Ethnological Sciences, 3*, 249–55

Chagnon, N. A. (1974). *Studying the Yanomamö.* New York: Holt. Rinehart & Winston.

Chagnon, N. A. (2012). *The Yanomamö.* (6th ed.). Belmont, CA: Wadsworth.

Cohen, J. E. (1995). *How many people can Earth support?* New York: Norton.

Ehrlich, P. R. (1975 [orig. 1968]). *The population bomb*. Rivercity, MA: Rivercity Press.

Ember, M. (1982). Statistical evidence for an ecological explanation of warfare. *American Anthropologist*, *84*, 645–649.

Graber, R. B. (1979). The sociocultural differentiation of a religious sect: Schisms among the Pennsylvania German Mennonites (Unpublished doctoral dissertation). University of Wisconsin-Milwaukee, Milwaukee, WI.

Graber, R. B. (1988). A mathematical interpretation of circumscription applied to the Westward Expansion. *American Behavioral Scientist, 31*, 459–471.

Graber, R. B. (1995). *A scientific model of social and cultural evolution*. Kirksville, MO: Thomas Jefferson University Press.

Graber, R. B. (2004a). Is a world state just a matter of time? A population-pressure alternative. *Cross-Cultural Research*, *38*, 147–161.

Graber, R. B. (2004b). Author's response. *Cross-Cultural Research*, *38*, 201–205.

Graber, R. B. (2006). *Plunging to Leviathan? Exploring the world's political future*. Boulder, CO: Paradigm Publishers.

Graber, R. B. (2013, March). *What in the world is going on? A mathematical theory of political evolution*. Paper presented at the meeting of the Midwest Sociological Society, Chicago, IL.

Graber, R. B., & Capps. D. (2004). Population pressure and conquest warfare: The value of cross-tabulation and correlation for anthropology. In P. C. Rice and D. W. McCurdy (Eds.), *Strategies in teaching anthropology* (3rd ed.) (pp. 105–110). Upper Saddle River, NJ: Pearson

Graber, R. B., & Roscoe, P. B. (1988). Introduction: Circumscription and the evolution of society. *American Behavioral Scientist, 31*, 405–415.

Gujarati, D. N,, & Porter, D. C. (2009). *Basic econometrics* (5th ed.). New York: McGraw-Hill.

Kennedy, P. (1989). *The rise and fall of the great powers: Economic change and military conflict from 1500 to 2000*. New York: Random House (Vintage).

Kennedy, R. F. (1969). *Thirteen days: A memoir of the Cuban Missile Crisis*. New York: W. W. Norton.

Lenski, G., & Lenski, J. (1978). *Human societies: An introduction to macrosociology* (3rd ed). New York: McGraw-Hill.

Nolan, P., & Lenski, G. (2011). *Human societies: An introduction to macrosociology* (11th ed.). Boulder, CO: Paradigm Publishers.

Pauketat, T. R. (2007). *Chiefdoms and other archaeological delusions*. Walnut Creek, CA: AltaMira Press.

Russett, B. M., Singer, J. D., & Small, M. (1968). National political units in the twentieth century: A standardized list. *American Political Science Review, 62*, 932–951.

Schell, J. (1982). *The fate of the earth*. New York: Knopf.

Sillitoe, P. (1977). Land shortage and war in New Guinea. *Ethnology, 16*, 71–81.

Simon, J. L. (1996 [orig. 1981]). *The ultimate resource 2*. Princeton, NJ: Princeton University Press.

Singer, J. D. & Small, M. (1972). *The wages of war, 1816-1965: A statistical handbook*. New York: John Wiley & Sons.

Spencer, H. (1897). *The principles of sociology* (5 vols.). New York: D. Appleton.

United Nations (2000). *Basic facts about the United Nations*. New York: News and Media Division, United Nations, Department of Public Information.

United States Census Bureau (2015a). *Historical estimates of world population*. Retrieved from https://www.census.gov/population/international/data/worldpop/table_history.php

United States Census Bureau (2015b). *Total midyear population for the world*. Retrieved from https://www.census.gov/population/international/data/idb/worldpoptotal.php

Walters, F. P. (1975 [orig. 1950]). *A history of the League of Nations*. London: Oxford University Press.

Wooldridge, J. M. (2013). *Introductory econometrics: A modern approach* (5th ed.). Mason, OH: South-Western Cengage Learning..

Wright, Q. (1965 [orig. 1942]). *A study of war. Second edition, with a commentary on war since 1942*. Chicago: University of Chicago Press.

Wright, R. M. & Carneiro da Cunha, M. (1999). Destruction, resistance, and transformation—Southern, coastal, and northern Brazil (1580–1890). In F. Salomon & S. B. Schwartz, *The Cambridge history of the native peoples of the Americas.* Volume III: South America, Part 2. (pp. 287–381). Cambridge: Cambridge University Press.

Wyckoff, T. (1980). Standardized list of national political units in the twentieth century: The Russett-Singer-Small list of 1968 updated. *International Journal of Social Science*, *32*, 833–846**.**

Yoffee, N. (1993). Too many chiefs? (or, safe texts for the ‘90s). In N. Yoffee & A. Sherratt (Eds.), *Archaeological theory: Who sets the agenda?* (pp. 60–78). Cambridge: Cambridge University Press.

Appendix

This count is based on the combined work of Russett, Singer, and Small (1968) as extended by Theodor Wyckoff (1980), and finally completed through 2000 by Kevin Bauer and myself; on membership lists for the League of Nations (Walters, 1975, pp.64–65); and on membership lists for the United Nations (2000, pp. 289–97). Names and spellings generally follow these sources. For five-year inventories of countries as traditionally counted (ignoring the voluntary federations), see Graber 2006, Appendix A; for five-year inventories of polities counting the voluntary federations (but not their member nations) as polities, see Graber 2006, Appendix B.

What follows is a condensation of the five-year inventories into ten-year ones. All polities are listed, as of year's end, for 1920 and 1945. Federation member-nations also are listed, for 1920 and 1945, parenthetically; these are not included in determining *N*. Additions and deletions of unfederated (non-member) countries are listed non-parenthetically, of federation members, parenthetically; the latter are not included in determining net change in *N*. A polity joining a federation typically appears as both a non-parenthetical deletion and a parenthetical addition for that decade; conversely, a polity leaving a federation typically appears as both a non-parenthetical addition and a parenthetical deletion.

1900: Afghanistan, Andorra, Argentina, Austria-Hungary, Belgium, Bolivia, Brazil, Chile, China, Colombia, Costa Rica, Denmark, Dominican Republic, Ecuador, El Salvador, Ethiopia, France, Germany, Greece, Guatemala, Haiti, Holy See, Honduras, Iran, Italy, Jabal Shammar, Japan, Korea, Liberia, Liechtenstein, Luxembourg, Mexico, Monaco, Montenegro, Morocco, Nepal, Netherlands, Nicaragua, Paraguay, Peru, Portugal, Romania, Russia, San Marino, Spain, Sweden, Switzerland, Thailand, Transvaal, Turkey, United Kingdom, United States, Uruguay, Venezuela, Yugoslavia (*N*=55)

1910 additions: Bulgaria, Cuba, Norway, Panama, Saudi Arabia, (none)

1910 deletions: Korea, Transvaal (none)

1910 net change: +3 (*N*=58)

1920: Afghanistan, Andorra, Asir, Dominican Republic, Ecuador, Estonia, Ethiopia, Far Eastern Republic, Germany, Hejaz Sultanate, Holy See, Hungary, Jabal Shammar, Latvia, Liechtenstein, Lithuania, Mexico, Monaco, Nepal, Newfoundland, Russia, San Marino, Saudi Arabia, Turkey, United States, Yemen, League of Nations (46 otherwise-independent members, end of 1920: Argentina, Australia, Austria, Belgium, Bolivia, Brazil, Bulgaria, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czechoslovakia, Denmark, El Salvador, Finland, France, Greece, Guatemala, Haiti, Honduras, Iran [Persia], Italy, Japan, Liberia, Luxembourg, Netherlands, New Zealand, Nicaragua, Norway, Panama, Paraguay, Peru, Poland, Portugal, Romania, South Africa, Spain, Sweden, Switzerland, Thailand [Siam], United Kingdom, Uruguay, Venezuela, Yugoslavia; 2 non-independent members, end of 1920: Albania, India) (*N*=27)

1930 additions: Brazil, Costa Rica, Egypt, Mongolia (Albania [member since 1920, but only now otherwise independent], Dominican Republic, Estonia, Ethiopia, Germany, Hungary, Ireland, Latvia, Lithuania)

1930 deletions: Asir, Dominican Republic, Estonia, Ethiopia, Far Eastern Republic, Germany, Hejaz Sultanate, Hungary, Jabal Shammar, Latvia, Lithuania (Brazil, Costa Rica)

1930 net change: -7 (*N*=20)

1940 additions: Chile, El Salvador, Germany, Guatemala, Honduras, Hungary, Italy, Japan, Manchukuo, Nicaragua, Paraguay, Peru, Romania, Russia, Spain, Venezuela (Afghanistan, Ecuador, Egypt, Iraq, Mexico, Russia [USSR], Turkey)
1940 deletions: Afghanistan, Ecuador, Egypt, Mexico, Newfoundland, Russia [USSR], Turkey (Albania, Austria, Belgium, Chile, Czechoslovakia, Denmark, El Salvador, Estonia, Ethiopia, Germany, Guatemala, Honduras, Hungary, Italy, Japan, Latvia, Lithuania, Luxembourg, Netherlands, Nicaragua, Norway, Paraguay, Poland, Peru, Romania, Russia [USSR], Spain, Venezuela)
1940 net change: +9 (*N*=29)
1945: Afghanistan, Albania, Andorra, Bulgaria, Finland, Holy See, Hungary, Iceland, Ireland, Italy, Liechtenstein, Monaco, Mongolia, Nepal, Portugal, Romania, San Marino, Spain, Sweden, Switzerland, Thailand, Yemen, United Nations (47 otherwise- independent members, end of 1945: Argentina, Australia, Belgium, Bolivia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czechoslovakia, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, France, Greece, Guatemala, Haiti, Honduras, Iran, Iraq, Lebanon, Liberia, Luxembourg, Mexico, Netherlands, New Zealand, Nicaragua, Norway, Panama, Paraguay, Peru, Poland, Russian Federation [Russia/USSR], Saudi Arabia, Socialist Federal Republic of Yugoslavia, South Africa, Syrian Arab Republic [Syria], Turkey, United Kingdom, United States, Uruguay, Venezuela; 4 non-independent members, end of 1945: Belarus, India, Philippines, Ukraine) (*N*=23)
1950 additions: Democratic People's Republic of Korea, Federal Republic of Germany, German Democratic Republic, Jordan, Republic of Korea, Sri Lanka, Taiwan (Afghanistan, Iceland, Indonesia, India [member since 1945, but only now otherwise independent], Israel, Myanmar, Pakistan, Philippines [member since 1945, but only now otherwise independent], Sweden, Thailand, Yemen)
1950 deletions: Afghanistan, Iceland, Sweden, Thailand, Yemen (none)
1950 net change: +2 (*N*=25)
1960 additions: Mauritania, Republic of Vietnam, Socialist Republic of Vietnam (Albania, Austria, Benin, Bulgaria, Burkina Faso, Cambodia, Cameroon, Central African Republic, Chad, Congo, Cote d'Ivoire, Cyprus, Democratic Republic of the Congo, Finland, Gabon, Ghana, Guinea, Hungary, Ireland, Italy, Japan, Jordan, Lao People's Democratic Republic, Libyan Arab Jamahiriya, Madagascar, Malaysia, Mali, Morocco, Nepal, Niger, Nigeria, Portugal, Romania, Senegal, Somalia, Spain, Sri Lanka, Sudan, Togo, Tunisia, United Arab Republic [Egypt, and Syrian Arab Republic])
1960 deletions: Albania, Bulgaria, Finland, Hungary, Ireland, Italy, Jordan, Nepal, Portugal, Romania, Spain, Sri Lanka (Egypt, Syrian Arab Republic)
1960 net change: -9 (*N*=16)
1970 additions: Nauru, Samoa, Tonga, Zimbabwe (Algeria, Barbados, Botswana, Burundi, Democratic Yemen, Egypt, Equatorial Guinea, Fiji, Gambia, Guyana, Jamaica, Kenya, Kuwait, Lesotho, Malawi, Maldives, Malta, Mauritania, Mauritius, Mongolia, Rwanda, Sierra Leone, Singapore, Swaziland, Syrian Arab Republic, Tanzania, Trinidad and Tobago, Uganda, Zambia)
1970 deletions: Mauritania, Mongolia (United Arab Republic)
1970 net change: +2 (*N*=18)
1980 additions: Kiribati, Tuvalu, Vanuatu, (Angola, Bahamas, Bahrain, Bangladesh, Bhutan, Cape Verde, Comoros, Djibouti, Dominica, Federal Republic of Germany, German Democratic Republic, Grenada, Guinea-Bissau, Mozambique, Oman, Papua New Guinea, Qatar, Saint Lucia,

Saint Vincent and the Grenadines, Samoa, Sao Tome and Principe, Seychelles, Solomon Islands, Suriname, United Arab Emirates, Viet Nam, Zimbabwe)
1980 deletions: Federal Republic of Germany, German Democratic Republic, Republic of Vietnam, Samoa, Socialist Republic of Vietnam, Zimbabwe (none)
1980 net change: -3 (*N*=15)
1990 additions: Federated States of Micronesia, Marshall Islands (Antigua and Barbuda, Belize, Brunei Darussalam, Germany, Liechtenstein, Namibia, Saint Kitts and Nevis, Vanuatu)
1990 deletions: Liechtenstein, Vanuatu (Democratic Yemen, Federal Republic of Germany, German Democratic Republic)
1990 net change: 0 (*N*=15)
2000 additions: none (Andorra, Armenia, Azerbaijan, Belarus [member since 1945, but only now otherwise independent], Bosnia and Herzegovina, Croatia, Czech Republic, Democratic People's Republic of Korea, Eritrea, Estonia, Federal Republic of Yugoslavia, Federated States of Micronesia, Georgia, Kazakhstan, Kiribati, Kyrgyzstan, Latvia, Lithuania, Marshall Islands, Monaco, Nauru, Palau, Republic of Korea, Republic of Moldova, San Marino, Slovak Republic, Slovenia, Tajikistan, The former Yugoslav Republic of Macedonia, Tonga, Turkmenistan, Tuvalu, Ukraine [member since 1945, but only now otherwise independent], Uzbekistan)
2000 deletions: Andorra, Democratic People's Republic of Korea, Federated States of Micronesia, Kiribati, Marshall Islands, Monaco, Nauru, Republic of Korea, San Marino, Tonga, Tuvalu (Czechoslovakia, Socialist Federal Republic of Yugoslavia)
2000 net change: -11 (*N*=4: Holy See, Switzerland, Taiwan, United Nations [189 members, end of 2000])