Introduction (by Louis Putterman) (6-15-03; revised 4-12-07, 8-13-12, 11-10-17)

An index of state antiquity was developed by Brown University Professor of Economics Louis Putterman and then Brown University undergraduate Valerie Bockstette circa 1999 – 2000 to test the proposition that present-day countries that had been the site of nation-states, kingdoms or empires over longer spans of history have achieved more rapid economic development in recent decades. This proposition or conjecture was suggested to us by the observation that countries in East Asia, with long histories of nationhood, have done much better economically in the late 20th century than have countries in sub-Saharan Africa on which the nation-state was imposed by 19th century colonization. It was suggested by Burkett, Humblet and Putterman (1999) that stocks of human capital associated with a country’s culture and the opportunities it affords citizens to learn-by-doing may vary from country to country as a result of very long-term historical processes, such that countries where intensive agriculture, urbanization, use of money, taxation, and government administration developed earlier may have been at an advantage in modernizing under late 20th Century conditions. (The idea is further developed in Putterman, 2000.) Whereas Burkett et al. used population density and related indicators of agricultural intensity as their proxies for early development, Bockstette, Chanda and Putterman (2002) used the index of state antiquity for a similar purpose. Both higher population density and earlier state development turned out to be good predictors of recent rates of economic growth.

The index used by Bockstette et al. was constructed as follows. They began by dividing the period from 1 to 1950 C.E. into 39 half centuries. Years before 1 C.E. were ignored on grounds that the experience of more than 2000 years ago would be unlikely to have much effect today, and in order to avoid low-return research effort using low quality information. For each period of fifty years, they asked three questions (and allocated points) as follows: 1. Is there a government above the tribal level? (1 point if yes, 0 points if no); 2. Is this government foreign or locally based? (1 point if locally based, 0.5 points if foreign [i.e., the country is a colony], 0.75 if in between [a local government with substantial foreign oversight]); 3. How much of the territory of the modern country was ruled by this government? (1 point if over 50%, 0.75 points if between 25% and 50%, 0.5 points if between 10% and 25%, 0.3 points if less than 10%). Answers were extracted from the historical accounts on each of 119 countries in the *Encyclopedia Britannica*. The scores on the three questions were multiplied by one another and by 50, so that for a given fifty year period what is today a country has a score of 50 if it was an autonomous nation, 0 if it had no government above the tribal level, 25 if the entire territory was ruled by another country, and so on. To combine the data of the 39 periods, Bockstette et al. tried alternative rates for discounting the influence of the past, ranging from 0 to a discount of 50% for each half century. At a 50% discount rate, for example, the contribution to our index of having had an autonomous state over the whole territory from 1850 to 1900 is $50 \times (1.5)^{-1} = 33.33$. The bulk of the analysis in the paper used statehist05, which has a discount rate of 5% (i.e., 0.05). Finally in order to make the series easier to interpret, the sum of the discounted series was divided by the maximum
possible value the series could take given the same discount rate. Thus the value that the
index could take for any given country lay between zero and one.

The research on which the index was based was by the researchers’ own admission far
from definitive. A secondary source, the *Britannica*, was used because no more
specialized compilation could be found containing the necessary information, and
because a project using primary materials on each country would have required time and
funding unavailable to them. It would be desirable for a more careful study to be
undertaken by specialists. However, because we know of no such effort on the horizon,
and because the initial results in Bockstette et al. were so intriguing, we decided to do
what is within our means to check and improve the quality of the information going into
the index. It is for this reason that, with the support of the Political Economy and
Development research program of the Watson Institute for International Studies at Brown
University, a new version of the index and the present appendix, which details the basis
of the new index for each included country, was prepared. The additional research was
done by Andrew Taylor, a candidate for the masters degree in Development Studies at
Brown, during the summer of 2002, with work continuing into the 2002-03 academic
year, under the supervision of and in close consultation with Louis Putterman. This
research also relied mainly upon the *Encyclopedia Britannica*, but unlike the original
exercise, more attention was payed to the Macropedia articles in the *Britannica* on-line,
which are region- as opposed to country-based. Special attention was devoted to
countries like Peru, Mali, and Indonesia, where there are long histories of states, but
sometimes covering only a portion of the present-day country, and the histories of which
are little referred to in the country entries but better discussed in the regional entries of
the Encyclopedia. The resulting version of the data set, version 2, was used in the
statistical work of two papers: Chanda and Putterman, 2005, and Chanda and Putterman,
2007.

More new work was done in the summer of 2004. Up to that time, the index had not
been calculated for most of the ex-Communist countries, because they had usually been
left out of cross country economic growth studies due to the absence of appropriate data
or concerns about differences of economic system. To investigate the effects of early
development and state history on countries under Communism and on the same countries
in the transition from that system, new state histories were compiled in 2004 with the
research assistance of Stephen Queenan, a Brown undergraduate. In connection with
other research projects on growth in Africa and on the history of European colonization,
new countries in the developing world were also added, with Queenan’s help. Once
again, the main source was the *Britannica*. The revised data, called Version 3, are used
in Iliev and Putterman, 2007, Cinyabuguma and Putterman, 2011, and Putterman and
Weil, 2010. Finally, observations for two countries, Iraq and Saudi Arabia, were
compiled in 2010, used in Ertan, Putterman and Fiszbein, 2016, and Chanda, Cook, and
Putterman, 2014, and added to this posting in August, 2012.

Some limitations and difficulties in constructing the index should be noted. Coding the
first question, “is there a government above the tribal level?,” turns out to be extremely
difficult because the demarcation between tribes and states is imperfect and includes
many shades of gray. Also, the available information is often quite incomplete, e.g. for
the remote past, there is in some cases archeological evidence of a city that is assumed to
have had influence over some hinterland, but no clear evidence of regular administration
of a demarcated area by the city. We made one concession only to the ambiguous
tribe/state boundary: as in the original index, we coded this first variable (referred to
below as S1) 0.75 when what existed seems best thought of as a “paramount chiefdom”
rather than a true state. With enough information and expertise, it would be ideal to treat
presence of a state as a continuous, rather than binary or tri-valued variable, but this has
not been done here.

As Bockstette et al. state, the question “Is this government foreign or locally based?” is
meant to distinguish colonial from home, but not necessarily indigenous, rule. Thus, for
example, Australia under British rule was a colony (S2 = .5), while Australia under home
rule is given the value S2 = 1, though it is not governed by the aboriginal population.
This hints at what might be considered a conceptual weakness of the index: it reflects the
proportion of the last two millennia during which a territory had a government, which
may coincide well or weakly with the depth of state experience of the people who occupy
the territory today. Alternatives are conceivable, but daunting. For example, we could
identify the present-day ethnic composition of each country, then calculate an index of
depth of state experience of each ethnic group, going back to their place of origin, and
then assign to the modern country an average of those group’s indices, weighted by their
population shares. But we could not realistically do this with the information and
resources at our disposal, so the index remains territory- rather than people-based.

The final question, “How much of the territory of the modern country was ruled by this
government?” is sometimes problematic insofar as there is a dearth of information about
the territorial extent of some early states. A more conceptual issue is how to deal with
countries which have always had the large majority of their populations living within a
small part of their territory, with a large part being desert, wasteland, or otherwise
uninhabited. We allowed judgment to augment quantitative precision, in this regard,
giving extra weight to inhabited areas and downweighting traditionally uninhabited ones.
For example, we consider a government with full control over the Nile valley to have
ruled half or more of Egypt (S3 = 1) regardless of how effectively it controlled territory
in the surrounding deserts.

As a post-script, I note that new research to extend Statehist v3.1 began circa 2012 –
2013 as a collaboration between Oana Borcan, at that time a Ph.D. candidate at the
University of Gothenburg, Sweden, Ola Olsson, professor at that university, and
Putterman, still at Brown University. This was an effort to extend the statehist data into
the years before 1 CE, to the first states in Mesopotamia (in the fourth millennium BCE),
along with filling the years 1951 – 2000 CE that were left out of past versions of the
statehist data. In some cases, that research also led to reconsideration of coding for the
early CE years; that is, when evidence of state or paramount chiefdom status being
achieved as of 1 BCE was found, reconsideration of a 0 state value for the years 1 – 50
CE was sometimes found to be warranted. The new statehist data series associated with
Borcan, Olsson and Putterman (forthcoming) should be viewed as superseding Statehist
v3.1 whenever the two sets of determinations are in conflict. Where indices of state antiquity in Statehist v3.1 are indicated by variable names “statehistn01, statehistn05,” etc., the Borcan et al. data use “statehiste01, statehiste05,” etc., where “e” indicates “extended,” since the main departure of the Borcan et al. data is to extend the old data into the BCE period and to 1951-2000. A link to the Borcan et al. data will be found here.

References:


**Using the statehist v3.1 data**

The posted data are organized as follows. The remainder of this document contains, for each country, an explanation of the values assigned in the present (third) version of the index. Countries are listed here alphabetically by country name. The accompanying spreadsheet lists the countries alphabetized in the sometimes differing order of three letter World Bank country codes. After country names are columns listing the summary value, from 0 to 50, for each country for the period 1901-1950, followed by those for the period 1851-1900, etc., back to the period 1-50 (C.E.). Following this are six columns listing the discounted values of the overall country indicators statehist00v3, statehist001v3, statehist01v3, statehist05v3, statehist10v3 and statehist50v3, where the numbers 00, 001, 01, etc. stand for the discounting rates 0%, 0.1%, 1%, 5%, 10% and 50%, respectively, and v3 indicates version 3. The final six columns correspond to the previous six except that here each discounted sum is normalized by dividing it by the maximum value that statehist could in principle take given the discounting rate in question; the divisor, that is, is the value that would be attained by statehist if the entry for all 39 periods were the number 50. We add “n” to the variable name in the column heading (statehistn00v3, etc.) to indicate that these values are normalized. (Values for the most recently added countries, Iraq and Saudi Arabia, remain to be calculated.) Please address questions to Louis_Putterman@Brown.Edu.

**Appendix for State Antiquity Index** (Note: this material is being preserved for comparative reference, but the extended and revised descriptive summaries associated with the Borcan et al. data described above should be considered to supersede it. To access that data, click here.)

Prepared with the assistance of Valerie Bockstette, Andrew Taylor, and Stephen Queenan.

**Afghanistan:** Positive values\(^1\) begin in the initial period 1-50. The value which is assigned for the initial period 1-50 is (1,.75,1) and continues until the year 200. This value of (1,.75,1) reflects the rule of the Peshawar-based (now in Pakistan) Kushan kingdom ; S2=.75 for this period because, although rule was not from within what is now Afghanistan, Kushan rule needs to be differentiated from a colonial or occupational state which would receive S2=.5. The next assigned value, beginning in 201 and continuing until the year 800, is (1,.75,.75). This valuation reflects a situation where various conquering forces from outside the Afghan area (such as the Sassanians of Persia (now Iran)) competed with each other and local prinedoms for control of the area ; the value

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\(^1\) Positive value is defined as any case in which S1 > 0. In other words any case where the assigned valuation is not equal to (0,0,0), thus signaling that there exists a government “above” the level of tribe or clan.
of .75 for S2 reflects the mixture of foreign-based and local control, and the value of .75 for S3 reflects multiple powers occupying what is now Afghanistan. For the period 801-850 a value of (1,1,.75) has been assigned which reflects the rule of a number of local Islamic dynasties in the Afghan area. The period 851-1400 receives a value of (1,.75,.75) which reflects the competition between external powers (the Samanids of Persia and then, for the period 1250-1400, the Mongols) and local dynasties for control of the Afghan area. The period 1401-1500 is valued at (1,1,1) because of Timurid consolidation of the Afghan area and the fact that their capital was at Herat, in Afghanistan. The period 1501-1700 is valued (1,.5,1) because of foreign-based control of the Afghan area by the Mughals of India and the Safavids of Persia after the collapse of the Timurid dynasty. The period 1701-1900 is valued (1,.75,.75) because of mixed control of the Afghan area by domestic and foreign powers (namely Persians, Indians, and British). The final period 1901-1950 is valued (1,1,1) because of British withdrawal from Afghanistan and domestic consolidation of the area.

**Albania:** Positive values begin in year 1 with (1,.5,1) because Albania was under the control of the Roman Empire. This lasted until 400 when the Roman Empire split and the Byzantine Empire retained control of some of the country while much of it fell under the control of principalities virtually independent of Byzantium. After 800 other foreign powers invaded including the Bulgarians, Norman crusaders, Serbs, and Venetians as the Byzantine Empire weakened. This lasted until 1388, so for the years 401-1350 the values are scored (1, .75, .75), reflecting some local control and a combination of several governments. In 1388 the Ottoman Turks invaded and controlled Albania until 1443. Thus the period 1351-1400 is assigned a weighted average of 50 multiplied by \([.76(1,.75,.75)+.24(1,.5,1)]\)=27.375. Under the leadership of Albanian Gjergj Kastrioti the Turks were removed in 1443 only to return in 1506. Thus the period 1401-1450 is assigned a weighted average of 50 multiplied by \([.86(1,.5,1)+.14(1,1,1)]\)=28.5. With the reestablishment of the Ottoman Turks in 1506 the period 1501-1550 is given a weighted average of 50 multiplied by \([.12(1,1,1)+.88(1,.5,1)]\)=28. The Turks ruled unchallenged until 1757; thus the period 1551-1750 is scored (1,.5,1). In 1757 the power of the empire weakened as autonomous lords came to power within the empire, controlling parts of the country. This lasted until 1831 when the Turks abolished the feudal system and regained complete control. The period under the local lords is scored (1,.75,.75) reflecting some local control and a combination of governments. Thus 1751-1800 is assigned a weighted average of 50 multiplied by \([.14(1,.5,1)+.86(1,.75,.75)]\)=27.6875. The period 1801-1850 is given a weighted average of 50 multiplied by \([.62(1,.75,.75)+.38(1,.5,1)]\)=26.9375. The Turks ruled until 1912 when Albanian national delegates declared Albanian independence, and the Balkan allies helped defeat the Turks. Thus 1851-1900 is scored (1,.5,1). Albanian independence lasted until 1939 when Italy and Germany invaded. They left in 1944 and Albania reestablished independence, this time under Communist control. The period 1901-1950 is assigned a weighted average of 50 multiplied by \([.34(1,.5,1)+.66(1,1,1)]\)=41.5.
**Algeria:** Positive values begin in the initial period 1-50 and are (1,.5,1) due to Roman occupation of a significant part of the Algeria area. This valuation extends until the year 450. The period 451-700 is assigned no positive value as the Roman empire disintegrated and the Vandals overran North Africa. Positive values resume in the period 701-750 when the Maghrib was claimed as a province by the Umayyad Caliphate. The value changes to (1,.75) in 751-800 as local Islamic dynasties assumed rule of the Algeria area. This value continues until the year 1100. The value for 1101-1250 is (1,.75,1) as rule of the Algeria area was consolidated under quasi-domestic (based in Mauritania and then Morocco) religious dynasties. The value for 1251-1500 is (1,.75) as control of the area was again assumed by multiple local Islamic dynasties. The value for the period 1501-1700 is (1,.5,1) as Algeria became subject to the Ottoman empire. The period 1701-1850 is valued (1,.75,1) because of a 1689 rebellion by Ottoman troops in Algeria that left the area a quasi-independent military republic. The remaining period of 1851-1950 is valued (1,.5,1) because of French colonial occupation of the area; independence was not regained until 1962.

**Angola:** For reference see *Macropaedia* listing under “Southern Africa”. Positive values for Angola begin in the period 1351-1400 where the country receives (1,1,.75), which reflects the rule of the indigenous Kongo and Ndongo kingdoms. The value of (1,1,.75) continues until 1550. The value (1,1,.75) is assigned for 1551-1700; this value reflects an increased Portuguese presence in the area, although the area was not fully colonized (in which case there would be .5 for S2) and the two indigenous kingdoms still held some significant power (thus .75 for S3 reflecting competition between the two kingdoms and the colonizing Portuguese). The entire remaining period, 1701-1950, is assigned (1,.5,1) which reflects consolidated Portuguese colonial power in the Angola area that did not end until the 1970’s.

**Argentina:** For reference on the Inca empire see *Macropaedia* listing under “Pre-Columbian Civilizations”. Positive values begin in the period 1451-1500 and are weighted. During the mid 1470’s (1475 is taken as the starting point) the Inca empire expanded well into northwestern Argentina and the period 1451-1500 is a weighted average:50 years multiplied by [.5(0.0,0) + .5(1,.5,.75) = 9.375 (half of the period with no above-tribe rule, half under the rule of the Inca). The value of (1,.5,.75) remains for the period 1501-1550. Upon settlement by the Spanish (and after the collapse of the Inca empire) the values are (1,.5,.5) for 1551-1600, (1,.5,.75) for 1601-1800, (1,.75,1) for 1801-1850, and (1,1,1) for 1851-1950. These values reflect a partial settlement of the Argentina area by the Spanish (thus values of .5 and .75 for S3 for 1551-1800), a period (1801-1850) where there was increasing local autonomy from foreign powers and, finally, a period of Argentine independence.

**Armenia:** Positive values begin in 0 as Rome and Parthia tried to establish their own candidates on the throne. 0-63 is coded (1,.5,.75) with S3 being .75 because of competing foreign powers. In 63 the Treaty of Rhandeia installed a Parthian on the
throne but as a Roman Vassal. S3 continues to be .75, so the period 63-390 is coded (1,.5,.75). In 390, the country was split into two sections, Byzantine Armenia and Persarmenia. Persarmenia was autonomous, so with some foreign rule and some local rule, S2 is .75. The period 351-400 is assigned a weighted average of 50 multiplied by [.80(1,.5,.75) + .20(1,.75,.75)] = 20.63. 390-428 is coded (1,.75,.75). In 428, chiefs of local clans initiated the replacement of their local ruler by a Persian governor. 428-484 is coded (1,.5,.75). The period 401-450 is assigned a weighted average of 50 multiplied by [.56(1,.75,.75) + .44(1,.5,.75)] = 24. In 484 Vahan Mamikonian led a revolt that secured religious and political freedom from Persia. The period 451-500 is assigned a weighted average of 50 multiplied by [.68(1,.5,.75)+.32(1,1,1)]=28.75. 484-628 is coded (1,1,1). In 628, all of Armenia fell under Byzantine rule. The period 601-650 is assigned a weighted average of 50 multiplied by [.56(1,1,1)+.44(1,.5,.75)]=39. 628-653 is coded (1,.5,1). In 653, Constans II surrendered Armenia to the Arabs who granted it virtual autonomy. The period 651-700 is assigned a weighted average of 50 multiplied by [.06(1,.5,1) + .94(1,1,1)] = 48.5. 653-908 is coded (1,1,1). In 908, multiple kingdoms arose in Armenia that were recognized by the caliph, making S3 = .75. The period 901-950 is assigned a weighted average of 50 multiplied by [.16(1,1,1) + .84(1,.75,.75)] = 39.5. 908-1045 is coded (1,1,.75). In 1045, the Byzantine Empire seized control of the Armenian kingdoms. 1001-1050 is assigned a weighted average of 50 multiplied by [.90(1,.75) + .10(1,.5,1)] = 36.25. Armenia remained in the hands of a single foreign power until 1620, passing through hands of the Seljuq Turks, the Mongol Empire, Persia, and the Ottoman Empire, successively. 1045-1620 is coded (1,.5,1). In 1620, Persia regained some regions while the Ottomans retained others, making S3 = .75. The period 1601-1650 is assigned a weighted average of 50 multiplied by [.40(1,.5,1) + .60(1,.5,.75)] = 21.25. 1620-1916 is coded (1,.5,.75). In 1916, Russia acquired all of Armenia, making S3 = 1. In 1918, Armenia formed an independent republic. In 1920, Armenia became a Soviet republic without independence. The period 1901-1950 is assigned a weighted average of 50 multiplied by [.32(1,.5,.75) + .04(1,1,1) + .64(1,.5,1)] = 24.

**Australia:** Positive values begin in the period 1801-1850 at (1,.75,1). Even though British settlers arrived in 1788 the initial settlements were tenuous and Australia wasn’t truly settled until the next century. The values for 1851-1950 are (1,1,1) and reflect Australia’s independence from Great Britain.

**Austria:** Positive values begin in the initial period 1-50 and are (1,.5,1) because of Roman occupation of the area. This valuation extends until the year 400. The period 401-800 is valued (1,.75,.75). This valuation of (1,.75,.75) for 401-800 reflects multiple forces which were a mixture of foreign-based and local kingdoms (for instance Frank-loyal Bavarians and Avar-loyal Slavs) vying for control of the Austria area. The period 801-900 is assigned a value of (1,.75,1) which reflects Charlemagne’s consolidation of power in the Austria area. The period 901-1200 is designated the value (1,.75,.75) which reflects a number of shifts in power between multiple competing forces (Bavarian princes, Slavs, Magyars, etc.) after Frankish consolidation of the Austria area had ended. From 1201-1950 a value of (1,1,1), reflecting Austria’s burgeoning superpower status and national consciousness, has been assigned.
**Azerbaijan:** Azerbaijan was populated by nomadic Turkic tribes, Kurds, and Caucasian Albanians with no organized government from 0 to 600. That period is coded (0,0,0). Positive values begin 601 when Islamic polities were established under local rulers called shahanshah. The period 601-1000 is coded (1, 1, .75), with S3 = .75 because of the combination of multiple polities. In 1001, the country became part of the Seljuq Empire. Foreign rule continued until 1918, as the country passed through Persian and Russian hands successively. 1001-1918 is coded (1,.5,1). In 1918, Azerbaijan became an independent republic, but this independence was short lived because in 1920 the Red Army invaded and established the Azerbaijani Soviet Socialist Republic. S2 returns to .5 after 1920, but is 1 between 1918-1920. The period 1901-1950 is assigned a weighted average of 50 multiplied by [.04(1,1,1) + .96(1,.5,1)] = 26.

**Bangladesh:** For reference see also *Macropaedia* listing under “India” and “Pakistan”. Positive values begin in the period 751-800 and are (1,.5,1) because of the rule of the Bangladesh area by the Pala dynasty based in Bihar, India. This valuation extends until the year 1200. The period 1201-1750 is valued (1,.75,1) as the Bangladesh area exercised some local autonomy mixed with subjection to foreign-based powers (various Muslim dynasties, the Mughal empire, and the British). The value for 1751-1900 is (1,.5,1) as the area became subject to British colonialism. The final period 1901-1950 is valued (1,.75,1) as Bangladesh gained some greater autonomy from the British.

**Barbados:** For reference see *Macropaedia* listing under “West Indies”. Positive values begin in the period 1601-1650 where they are a weighted average: European settlement of Barbados was begun by the English in 1627. Thus the period 1601-1650 is weighted according to the formula 50 years multiplied by [.54(0,0,0) + .46(1,.5,1)] = 11.5 (27 years of the period with no formal government, 23 years under colonial rule). The rest of Barbados’ history, from 1651-1950, is valued at (1,.5,1).

**Belarus:** There was no government above the tribal level from 0-750. Positive values begin in 751 as Slavic tribes like the Dregovichi, Radimichi, Krivichi, and Drevlyane formed principalities. 751-850 is coded (1,1,.75). In 851, all of the tribes came under the suzerainty of the first east Slavic state, Kievan Rus. The country remained in the hands of a single foreign power until 1772 as it passed through the hands of the Mongol Empire, Lithuania, and Poland. The period 851-1772 is coded (1,.5,1). In 1772, the Russian empire received the eastern portion of Belarus and in 1795, it received all of the country through the Third Partition. The period 1751-1800 is assigned a weighted average of 50 multiplied by [.46(1,.5,75) + .54(1,.5,1)] = 22.13. 1795-1921 is coded (1,.5,1). In 1919, the Belorussian Soviet Socialist Republic was formed and land was gradually transferred to it by Russia. In 1921, the country was split between Poland and Russia according to the Treaty of Riga. In 1939, Poland’s territory was ceded to the Belorussian S.S.R., making S3 = 1 after being .75 between 1921 and 1939. The
Belorussian S.S.R. remained under the control of Moscow. The period 1901-1950 is assigned a weighted average of 50 multiplied by [.36(1,.5,.75) + .64(1,.5,1)] = 22.75.

Belgium: For history of the Belgium area before 1579 see Macropaedia listing for The Netherlands: “Netherlands, The:History of the Low Countries (to 1579)”. Positive values begin at the year 1 due to Roman occupation of a significant part of the Belgium area. The value of (1,.5,.75) is assigned for 1-400. The period 401-450 receives no positive value as the area was loosely ruled by Germanic tribes after withdrawal by the Romans. Positive values resume in the period 451-500 when a large part of the Belgium area came under the local control of the burgeoning Frankish kingdom. The value of (1,1,.75), which reflects [first] partial settlement of the Belgium area by the Franks and [second] infighting amongst various Frank dynasties (in both cases S3 = .75), is assigned for the period 451-900. The next period, 901-950, is assigned a weighted average because the counts in the Belgium area became vassals of the Holy Roman Emperor in 925. The weighted average is: 50 years multiplied by [.5(1,1,.75) + .5(1,.75,1)] = 37.5 (half of the period spent under partial/divided Frank rule, half spent under consolidated, feudal Holy Roman rule). The value (1,.75,1) is assigned for 925-1830 and reflects the domination of local rule by, respectively, the foreign-based Holy Roman Empire, Burgundian dynasty, Austrian Habsburgs, Spain, France, and the Netherlands. The period 1801-1850 is a weighted average because of the 1830 revolution which gained Belgium independence: 50 years multiplied by [.6(1,.75,1) + .4(1,1,1)] = 42.5 (30 years of the period as part of the Netherlands, 20 years as an independent state). The period 1830-1950 is assigned a value of (1,1,1).

Benin: For reference see Macropaedia listing under “Western Africa”. Positive values begin in the period 1601-1650 where they are weighted: in 1625 the Dahomey kingdom was established in what is now southern Benin, the most densely populated area of the country. The weighted average is calculated as such: 50 years multiplied by [.5(0,0,0) + .5(1,1,.75)] = 18.75 (half of the 1601-1650 period spent with no centralized government, the other half spent under the Dahomey kingdom). This valuation of (1,1,.75) continues until 1730; the periods 1701-1750 and 1801-1850 are weighted because the Dahomey kingdom was conquered by the Nigeria-based Oyo kingdom in 1730 and forced to pay tribute until 1823. Thus the period 1701-1750 is a weighted average: 50 years multiplied by [.6(1,.75,1) + .4(1,.5,.75)] = 30 (30 years of the period with much of the country under the Dahomey kingdom (1,1,.75), and 20 years with much of the country under foreign-based rule (1,.5,.75)). The period 1751-1800 receives this latter value of (1,.5,.75) since foreign-based domination continued until 1823. The period 1801-1850 is a weighted average: 50 years multiplied by [.46(1,.5,.75) + .54(1,1,.75)] = 28.875 (23 years of the period under continued foreign domination, 27 years of re-assumed Dahomey rule). The period 1851-1900 receives this latter value of (1,1,.75). The final period, 1901-1950, was spent under French colonial rule and is assigned a value of (1,.5,1).
Bolivia: For reference on the Tiahuanaco and Inca empires see the *Macropaedia* listing under “Pre-Columbian Civilizations”. Positive values begin in the initial period 1-50 and are (1,1,.3) due to the existence of the Tiahuanaco empire in the far western part of the Bolivia area. This valuation holds until the year 600. The value (1,1,1) is assigned for 601-1050 as the influence of Tiahuanaco expanded during the Middle Horizon period. The value (1,1,.75) is assigned for 1051-1450 as Tiahuanaco disintegrated into a number of simpler regional states. The period 1451-1825 is valued (1,.5,1) as the Bolivia area fell under the control of the Incas and then the Spanish. The period 1801-1850 is a weighted average because of Bolivian independence that was gained in 1825:50 years multiplied by [.5(1,.5,1) + .5(1,1,1)] = 37.5 (half of the period under colonial rule, half as independent). The entire remaining period (and thus 1825-1950) is valued (1,1,1).

Bosnia and Herzegovina: The period 1-9 is coded (0,0,0). Positive values being in year 9 when the Romans conquered native tribal groups. The period 1-50 is assigned a weight average of 50 multiplied by [.18(0,0,0)+.82(1,.5,1)]=20.5. 9-1180 is coded (1,.5,1). In 401, the area became part of the Byzantine Empire. In 928, Bosnia was taken over by a Serb princedom that acknowledged the sovereignty of the Byzantine Empire. From 1180-1463 Bosnia maintained independence despite repeated Hungarian aggressions. The period 1151-1200 is assigned a weight average of 50 multiplied by [.60(1,.5,1)+.40(1,1,1)]=35. 1180-1463 is coded (1,1,1). In 1463, the Ottoman Turks conquered Bosnia. The period 1451-1500 is assigned a weighted average of 50 multiplied by [.26(1,1,1) + .74(1,.5,1)] = 31.5. Ottoman and successor outside governments make us code the period 1463-1945 as (1,.5,1). The Ottomans ruled until 1908, when Austria-Hungary formally annexed the area. In 1918, the United Kingdom of Serbs, Croats, and Slovenes (renamed Yugoslavia in 1929) was created, which was ruled by the Serbian Karadjordjevic dynasty. It was a centralized state run, for the most part, by Serbian government, army, and bureaucracy. From 1941-1945 Bosnia was ruled by the Axis-controlled puppet government based in Croatia. In 1945, Yugoslavia was reestablished, this time under Communist Josip Broz Tito. The state was more decentralized under this arrangement so $S_2=.75$. The period 1901-1950 is assigned a weighted average of 50 multiplied by [.90(1,.5,1) + .10(1,.75,1)] = 26.25.

Botswana: For reference see *Macropaedia* listing under “Southern Africa”. Positive values begin in the period 1101-1885 is valued (1,1,.5) as multiple states developed over parts of the country. This valuation extends until the year 1885. The period 1851-1900 is a weighted average as the Botswana area became a British protectorate in 1885:50 years multiplied by [.7(1,1,.75) + .3(1,.5,1)] = 33.75 (35 years ruled by multiple domestic states, 15 years under the British). The final period 1901-1950 (and thus 1885-1950) is valued (1,.5,1) as Botswana would not regain independence until 1966.

Brazil: The first positive values begin during the period 1501-1550 where they are weighted:though Europeans first discovered Brazil in 1500 (when it was sparsely
populated by indigenous tribes) a systematic effort by Portugal to establish “organized”
government in the area did not begin until 1533. Thus the period 1501-1550 is a weighted
average: 50 years multiplied by \[0.64(0,0,0) + 0.36(1,.5,1)\] = 6.75, where the decimal
multipliers (0.64 = 32/50; 0.36 = 17/50) are derived from the fact that only 17 years of the 50
year period were spent organizing a government. Thus the year 1533 is chosen as a
significant demarcation, and S3 for the period 1533-1550 is 0.75 because at this time only
the coastal areas were truly incorporated in this Portuguese attempt at organized
government and it would not spread further inland until the second half of the century.
The period 1551-1800 is valued (1,.5,1) as the Portuguese consolidated colonial power in
Brazil. The period 1801-1850 receives a weighted average value because of Portuguese
recognition of Brazilian independence in 1825: 50 years multiplied by \[0.5(1,.75,1) +
0.5(1,1,1)\] = 43.75 (half of the period with some local autonomy, half with recognized
independence). The entire period since independence, 1825-1950, is valued (1,1,1).

**Brunei**

Positive values begin in 501 as the country fell under the control of China and later the
Majaphit Kingdom in Java. The period 501-1400 is scored (1,1,1). In 1401, the country
became an independent sultanate, making S2 = 1. The period 1401-1850 is scored
(1,1,1). In 1888, Brunei became a British protectorate, resulting in S2 = 0.5. The period
1851-1900 is assigned a weighted average of 50 multiplied by \[0.76(1,1,1) + 0.24(1,.5,1)\] =
44. This lasted through 1950 except for brief Japanese occupation during WWII, which
does not change the scoring. 1901-1950 is coded (1,.5,1).

**Bulgaria:** Positive values begin in 635 when Khan Kubrat lead a successful revolt
against the Avars and organized an independent tribal confederation. The period 601-650
is a weighted average of 50 multiplied by \[0.70(0,0,0) + 0.30(.75,1,1)\] = 11.25. The .75 for S1
reflects the tribal confederation being only slightly above the tribal level. The Bulgarian
state began in 681 when Byzantium recognized it by treaty after a failed invasion.
Bulgarian independence lasted until 1018. The period from 651-700 is a weighted
average of 50 multiplied by \[0.62(.75,1,1) + 0.38(1,1,1)\] = 42.25, reflecting a unified
Bulgarian empire following 681. The period 701-1000 is (1,1,1). In 1018 Bulgaria lost
its independence to the Byzantine Empire and remained under the control of Byzantium
until 1185. The period 1001-1050 is a weighted average of 50 multiplied by
\[0.36(1,1,1) + 0.64(1,5,1)\] = 34. The period 1051-1150 is (1,1,1). In 1185, the Asen brothers
lead a successful revolt to regain Bulgarian independence. This second empire lasted
until 1396. The period 1151-1200 is a weighted average of 50 multiplied by
\[0.70(1,5,1) + 0.30(1,1,1)\] = 32.5. The period 1201-1350 is (1,1,1). In 1396 Bulgaria lost its
independence to the Ottoman Empire. The period 1351-1400 is a weighted average of
50 multiplied by \[0.92(1,1,1) + 0.08(1,5,1)\] = 48. When the Ottoman Empire began its
decline in 1600 Bulgarian spahis were able to convert their fiefs into hereditary estates
that could not be regulated by the government. The period 1401-1600 is (1,1,1).
Because of some local control under the Ottoman Empire after 1600, the period 1601-
1850 is (1,75,1). In 1878 Bulgaria was liberated from Turkish rule by the Treaty of San
Stefano. Though Bulgaria was not a colony, Russia influenced many of Bulgaria’s
decisions. Thus the period 1851-1900 is (1, .75, 1), reflecting the end of Ottoman rule and the beginning of Russian influenced independence. In 1908 Ferdinand declared that Bulgaria was a kingdom and made himself tsar. This represented the end of Soviet influence. From 1944-1950 Bulgaria was occupied by Soviet forces and Communist power was consolidated. The period 1901-1950 is a weighted average of 50 multiplied by [.16(1,.75,1) + .72(1,1,1)+.12(1,.5,1)] = 45.

**Burkina Faso:** For reference see *Macropaedia* listing under “Western Africa”. Positive values begin in the period 1451-1500 and are (1,1,.75), reflecting the rule of multiple kingdoms (the Mossi and the Gurma) in the Burkina Faso area. This value extends until 1900 as the area continued to be ruled by multiple domestic kingdoms. The final period, 1901-1950, is assigned a value of (1,.5,1) as Burkina Faso became a colony of France.

**Burundi:** For reference see *Macropaedia* listing under “Central Africa”. Positive values begin in the period 1651-1700 at (1,1,.75), which reflects a decentralized, feudal, Tutsi-dominated kingdom. The valuation of (1,1,.75) extends from 1651-1900. Though Burundi was awarded to Germany in the late 19th century the first German settler did not arrive until 1906. The final period 1901-1950 receives a value of (1,.5,1) which reflects Burundi’s colonial status.

**Cambodia:** Positive values begin in year 1 as southern Cambodia was under the control of the Kingdom of Funan. This kingdom lasted until 600, after which Cambodia was ruled by a multitude of smaller kingdoms. The period 1-600 is coded (1,1,.75). S3 is .75 because Funan did not control all of present-day Cambodia. The smaller kingdoms ruled until 802, so the period 601-800 is again coded (1,1,.75). In 802, the Khmer Empire was formed under the leadership of Jayavarman II. The period 801-850 is assigned a weighted average of 50 multiplied by [.04(1,1,.75) + .96(1,1,1)] = 49.5. The Khmer Empire remained powerful until 1590, so the period 851-1550 is coded (1,1,1). In 1590, the Tai invaded Cambodia and sacked the capital at Lovek. This ushered in a period of limited autonomy for Cambodia at the hands of its neighbors, Vietnam and Siam. The period 1551-1600 is assigned a weighted average of 50 multiplied by [.80(1,1,1) + .20(1,.75,1)] = 47.5. S2 becomes .75 after 1590 because of limited local control. In 1863, King Norodom signed a treaty giving France control over Cambodia’s foreign affairs. S2 remains .75. In 1884 Norodom signed a document that made Cambodia a French colony. S2 becomes .5. The years 1601-1850 are coded (1,.75,1). The period 1851-1900 is assigned a weighted average of 50 multiplied by [.68(1,.75,1) + .32(1,.5,1)] = 33.5 During WWII Cambodia was occupied by Japan, but French control was reestablished after the war and independence was not granted until 1953. 1901-1950 is coded (1,.5,1).

**Cameroon:** For reference see *Macropaedia* listing under “Western Africa”. Positive values begin in the period 851-900 and are (1,1,.3) because of the existence of the Sao
kingdom/state in a small part of the Cameroon area. This valuation extends until the year 1400. The period 1451-1900 is valued (1,1,.75) as the area came to be ruled by multiple small kingdoms. The final period 1901-1950 is valued (1,.5,.75) as Cameroon came under the colonial control of France, Britain, and Germany.

**Canada:** Positive values begin in the period 1601-1650 and are (1,.5,.3) because of European claims/settlements in a small part of eastern Canada. The value for 1651-1750 is (1,.5,.5) as these claims and settlements expanded westward (though they were often tenuous). The value for 1751-1800 is (1,.5,.75) as European settlements expanded still further westward. For 1801-1850 the value is (1,.75,1) as a larger part of Canada was settled and started to gain some autonomy. The remaining period 1851-1950 is valued (1,1,1) as Canada became consolidated and independent.

**Cape Verde:** For reference see *Macropaedia* listing under “Western Africa”. Positive values begin in the period 1451-1500 and are (1,.5,1) because of Portuguese settlement. The entire remaining period, 1501-1950, is valued at (1,.5,1) as Cape Verde didn’t gain independence from Portugal until 1975.

**Central African Republic:** For reference see *Macropaedia* listing under “Central Africa”. Only positive values are for the colonial period 1901-1950 and are (1,.5,1).

**Chad:** For reference see *Macropaedia* listing under “Western Africa”. Positive values begin in the period 851-900 and are (1,1,.3) because of the existence of the Kanem-Bornu empire in southwest portions of the country. This valuation extends until the year 1600. The period 1601-1900 is also valued (1,1,.3), because although Kanem-Bornu disintegrated into multiple states, there was no evident decline in their extent, territorially. The final period 1901-1950 is valued (1,.5,1) as the French assumed control of the area and Chad would not regain independence until 1960.

**Chile:** For reference on the Inca empire see *Macropaedia* listing under "Pre-Columbian Civilizations". Positive values begin in the period 1451-1500 and are a weighted average because of an Incan incursion into a large part of Chile around the year 1475:50 years multiplied by [.5(0,0,0) + .5(1,.5,1)] = 12.5 (half of the period with no above-tribe rule, half under Incan occupation). The period 1475-1818 is valued (1,.5,1) because of this Incan, and then Spanish, occupation. The period 1801-1850 is a weighted average because of Chilean independence in 1818:50 years multiplied by [.36(1,1,1) + .64(1,1,1)] = 41 (18 years of the period under Spanish colonial rule, 32 as independent). The entire remaining period (and thus 1818-1950) is valued (1,1,1).
China: Positive values begin in the initial period 1-50 and are (1,1,1) because of the rule of the Han empire. This valuation extends until the year 200. The period 201-600 is valued (1,1,.75) as the Han empire disintegrated into several warring states. The period 601-750 is valued (1,1,1) as rule was consolidated by the Sui and, later, the T’ang dynasties. The period 751-800 is valued (1,1,.75) as centralized order collapsed and political chaos ensued. The period 801-900 is valued (1,1,1) as T’ang power was restored. The period 901-1000 is valued (1,1,.75) as centralized rule again collapsed and multiple kingdoms and dynasties emerged. The period 1001-1279 is valued (1,1,1) as power was consolidated under the Sung dynasty. The period 1251-1300 is assigned a weighted average because of the establishment of the Yuan (Mongol) dynasty in 1279:50 years multiplied by [.58(1,1,1) + .42(1,.75,1)] = 44.75 (29 years of consolidated local rule, 21 years of quasi-local Mongol rule) ; S2=.75 for this period because the Yuan, though it employed the traditional Chinese bureaucracy and ruled from Beijing, is still commonly considered an occupation government. The valuation (1,.75,1) extends from 1279 until 1368. The period 1351-1400 is a weighted average because of the collapse of the Yuan in 1368:50 years multiplied by [.36(1,.75,1) + .64(1,1,1)] = 45.5 (18 years of quasi-local Yuan rule, 32 years under the Ming dynasty). The valuation of (1,1,1) extends from 1368 until 1900 as Chinese rule would remain centralized under the Ming and Ch’ing dynasties. The final period 1901-1950 saw a number of different periods, including Ch’ing rule from 1901-1911, local warlord rule between 1911 and 1927, relative unity under the Nationalists from 1927-1937, Japanese occupation of much of eastern China from 1937-1945, and Communist-Nationalist civil war from 1945-1949. To simplify, we will give half of these fifty years the values (1,1,1), and the other half the values (1,1,.75), where S3=.75 to indicate that there were two or more competing governments. We leave S2=1 because Japan ruled more than 10% of the traditional Chinese territory for less than a decade. Thus the averaged value for 1901-1950 is: 50 years multiplied by [.5(1,1,1) + .5(1,1,.75)] = 43.75.

Colombia: Positive values begin in the period 1501-1550 and are (1,.5,.75) because of partial Spanish conquest of the Colombia area along with a very small portion of Incan occupation. The values for the period 1551-1819 are (1,.5,1) because of Spanish colonization of the Colombia area. The period 1801-1850 is a weighted average because of Colombian independence in 1819:50 years multiplied by [.38(1,.5,1) + .62(1,1,1)] = 40.5 (19 years of the period under Spanish colonial rule, 31 years as independent). The entire remaining period (and thus 1819-1950) is valued (1,1,1).

Comoros
Positive values begin in 1886 when France placed the three islands of Comoros under its protection. The period 1851-1900 is assigned a weighted average of 50 multiplied by [.72(0,0,0) + .28(1,.5,1)] = 7. France did not relinquish control of the islands through 1950, thus 1901-1950 is coded (1,.5,1).
Congo: For reference see *Macropaedia* listing under “Central Africa”. Positive values begin in the period 1451-1500 and are (1,.75,1) as the Congo area was controlled by multiple local kingdoms. The period 1501-1900 is valued (1,.75,.75) as the area came to be controlled by multiple powers, both foreign (namely the Portuguese) and domestic. The final period 1901-1950 is valued (1,.5,1) as the Congo became a colony of France.

Costa Rica: For reference see *Macropaedia* listing under “Central America”. Positive values begin in the period 1551-1600 because of Spanish settlement and are (1,.5,1). This value continues until 1821 when Costa Rica joined the Mexican empire in declaring independence from Spain. Thus the period 1801-1850 is a weighted average: 50 years multiplied by 
\[.42(1,.5,1) + .58(1,1,1)\] = 39.5 (21 years of the period under colonial rule, 29 as independent). The entire remaining period (and thus 1821-1950) is valued (1,1,1).

Cote d’Ivoire: For reference see *Macropaedia* listing under “Western Africa”. Positive values begin in the period 1401-1450 and are (1,1,.5) which reflect the presence of the Kong kingdom in a relatively small part of what is now Cote d’Ivoire. This value of (1,1,.5) continues until the period 1701-1750 when other kingdoms began to appear in larger parts of Cote d’Ivoire. The value of (1,1,.75), which reflects the rule of multiple kingdoms/peoples, is assigned for this period and continues until 1901. The final period, 1901-1950, is assigned (1,.5,1) and reflects colonial French rule.

Croatia: The period 1-9 is coded (0,0,0). Positive values being in year 9 when the Romans conquered native tribal groups. The period 1-50 is assigned a weighted average of 50 multiplied by 
\[.18(0,0,0) + .82(1,.5,1)\] = 20.5. 9-500 is coded (1,.5,1). As Roman power declined, the Croats, a Slavic tribe, began to settle in the area. The period 501-910 is coded (0,0,0). An independent Croatian state had been formed by 910. 910-1102 is coded (1,1,1). The period 901-950 is assigned a weighted average of 50 multiplied by 
\[.20(0,0,0) + .80(1,1,1)\] = 40. In 1102, the crown passed into the hands of the Hungarian dynasty, but Croatia maintained some independence through an assembly and viceroy, making S2 = .75. 1102-1526 is coded (1,.75,1). The period 1101-1150 is assigned a weighted average of 50 multiplied by 
\[.04(1,1,1) + .96(1,.75,1)\] = 38. During 1526-1700 the Ottoman Empire occupied most of Hungary and Croatia, so the period is coded (1,.5,1). 1501-1550 is assigned a weighted average of 50 multiplied by 
\[.52(1,.75,1) + .48(1,1,1)\] = 31.5. In 1700, Hungary and Croatia regained independence, and Hungarian suzerainty was reconstituted under the old system. The period 1701-1918 is coded (1,.75,1). In 1918, the United Kingdom of Serbs, Croats, and Slovenes (renamed Yugoslavia in 1929) was created, which was ruled by the Serbian Karadjordjevic dynasty. It was a centralized state run, for the most part, by Serbian government, army, and bureaucracy. This caused S2 = .5. In 1941, Croatia came under the rule of a puppet government controlled by Germany and Italy. 1918-1945 is coded (1,.5,.1). In 1945, Yugoslavia was reestablished, this time under Communist Josip Broz Tito. The state was more decentralized under this arrangement so S2 = .75. The period 1901-1950 is assigned a weighted average of 50 multiplied by 
\[.46(1,.75,1)+.54(1,.5,1)\] = 30.75.
Cuba: The original inhabitants had no central government. Positive values begin in 1511 when Diego Velazquez founded the first Spanish settlement at Baracoa. By 1516, the island had been divided into seven municipal districts under a single administration. This later action changes S3 from .3 to 1. The period 1501-1550 is assigned a weighted average of 50 multiplied by [.22(0,0,0) + .10(1,.5,.3) + .68(1,.5,1)] = 17.75. The years 1551-1899 are coded (1,.5,1). In 1899 Cuba was granted its independence from Spain but the U.S., under the Platt Amendment, had the right to oversee Cuba’s international commitments, economy, and internal affairs. This fact makes S2 = .75 because of some local control and some foreign influence. The period 1851-1900 is assigned a weighted average of 50 multiplied by [.98(1,.5,1) + .02(1,.75,1)] = 25.25. Cuba gained full independence with the U.S. cancellation of the Platt Amendment in 1934. The period 1901-1950 is assigned a weighted average of 50 multiplied by [.68(1,.75,1) + .32(1,1,1).] = 41.5.

Cyprus: Positive values begin in the year 1 and are (1,.5,1) because of Roman occupation. This value continues until 1200 and reflects subsequent occupation by the Byzantines and later the Muslim Caliphate. The period 1200-1426 receives the value (1,1,1) which reflects the independent rule of Cyprus by a line of kings beginning with Guy. This valuation ends in 1426 when Cyprus was occupied by Egypt. Thus the period 1401-1450 is a weighted average: 50 years multiplied by [.5(1,1,1) + .5(1,.5,1)] = 37.5 (half of the period with independent rule, half under Egyptian occupation). The entire remaining period (and thus 1426-1950) is valued (1,.5,1) because of the Egyptian and, subsequently, Ottoman, British, and Turkish occupation. Cyprus did not gain independence until 1960.

Czech Republic: Up to 800 the land was inhabited by various tribes. Positive values begin in 818 when the Empire of Great Moravia was formed under Prince Mojmir and centered in what is now the Czech Republic. It included all of Bohemia, Slovakia, the southern part of Poland, and the western part of Hungary. The period 801-850 is assigned a weighted average of 50 multiplied by [.36(0,0,0)+.64(1,1,1)]=32. In 906, the Magyars of Hungary destroyed Great Moravia, which led to the ascendancy of Bohemia in the region. The Premyslid dynasty unified Czech tribes, and established a centralized Bohemia that encompassed Moravia. The variables remain unchanged. 818-1526 is coded (1,1,1). In 1526, Bohemia and Moravia fell under the control of the Hapsburg monarchy of Austria. The period 1501-1550 is assigned a weighted average of 50 multiplied by [.52(1,1,1)+.48(1,.5,1)]=38. In 1867, Hapsburg domains fell under the control of the dual monarchy of Austria-Hungary. The variables remain unchanged. 1526-1918 is coded (1,.5,1). In 1918, an independent Czechoslovakia, centered in Prague, was formed. The Czechs dominated the Slovaks because of their greater population and education. 1918-1939 is coded (1,1,1). In 1939, Germans occupied Bohemia and Moravia. 1939-1945 is coded (1,.5,1). In 1945, the USSR liberated
Czechoslovakia, and Communists gained control of the country in 1948. 1945-1950 is coded (1,1,1). The period 1901-1950 is assigned a weighted average of 50 multiplied by [.48(1,.5,1)+.52(1,1,1)]=38.

**Democratic Republic of Congo:** Prior to 1451, this country had no government above the tribal level. In 1451, southern Congo was split among African kingdoms, including the Kongo kingdom in the west and the Luba and Lunda empires in the east. The period 1451-1885 is coded (1,1,.75). In 1885, King Leopald II of Belgium acquired the region as his personal possession. The period 1851-1900 is assigned a weighted average of 50 multiplied by [.70 (1,1,.75) + .30(1,.5,1)] = 33.75. In 1908, Belgian Parliament voted in favor of annexation as the most sensible response to criticism of Leopald’s mistreatment of the province. It was renamed Belgian Congo. The period 1885-1950 is coded (1,.5,1).

**Denmark:** Positive values begin in the period 701-750 and are, because of scant evidence, somewhat arbitrarily (1,1,.5) because of the existence of states in some parts of Denmark. This valuation extends until the year 950. The period 951-1131 is valued (1,1,1) as Denmark became unified as a kingdom. The period 1101-1150 is a weighted average because of a protracted civil war that began in 1131:50 years multiplied by [.62(1,1,1) + .38(1,1,.75)]= 45.25 (31 years of unified domestic rule, 19 years of divided domestic rule). The period 1151-1200 is assigned a value of (1,.75,1) because of German overlordship of Denmark. The entire remaining period 1201-1950 is valued (1,1,1) as Denmark regained, and retained, independent and unified status.

**Djibouti**
Positive values begin in year 1 as the area was dominated by Christian Ethiopians from the Kingdom of Aksum. The period 1-1500 is scored (1,.5,1). In the 13th Century Muslim and Ethiopian rulers began a long series of wars. In 1501, the Muslim sultanate of Adal, in what is now Somalia, ruled the area. In 1543, small sultanates emerged within Djibouti, making S2 = 1 and S3 = .75. The period 1501-1550 is assigned a weighted average of 50 multiplied by [.86(1,.5,1) + .14(1,1,.75)]= 26.75. The period 1551-1850 is coded (1,1,.75). In 1888, France established political control of the area and called it French Somaliland. The period 1851-1900 is assigned a weighted average of 50 multiplied by [.76(1,1,.75) + .24(1,.5,1)]= 34.5. France held control through 1950, so the period 1901-1950 is coded (1,.5,1).

**Dominican Republic:** For reference see *Macropaedia* listing under "West Indies". Positive values begin in the period 1501-1550 upon settlement by the Spanish and are (1,.5,1). This valuation continues until the year 1850:though the Dominicans declared independence from Spain in 1821 they were quickly overrun and suppressed by the Haitians, thus not effectively gaining independence until 1844. The period 1851-1950 is valued (1,1,1).
**Ecuador:** For reference on the Inca empire see *Macropaedia* listing under "Pre-Columbian Civilizations". Positive values begin in the period 1401-1450 and are (1,1,.75) because of the existence of several warring indigenous states in the Ecuador area. This value continues until the year 1500. The period 1501-1822 receives a value of (1,.5,1) because the area was occupied first by the Incas and then by the Spanish. Ecuador achieved independence in 1822 and thus the period 1801-1850 is a weighted average: 50 years multiplied by \([.44(1,.5,1) + .56(1,1,1)] = 39\) (22 years of the period under Spanish colonial rule, 28 years as independent). The remaining period (and thus 1822-1950) is valued (1,1,1).

**Egypt:** Positive values begin in the initial period 1-50 and are (1,.5,1) because of Roman occupation of Egypt. This valuation extends until the year 850 (Egypt became subject to the Muslim Caliphate in 641). The period 851-900 is valued (1,1,1) because of the great degree of autonomy enjoyed by Egypt under the Tulunid dynasty. The period 901-950 is valued (1,.5,1) as Egypt again became a caliphal province. The period 951-1000 is a weighted average because of the establishment of the Fatimid Caliphate in Egypt in 973: 50 years multiplied by \([.46(1,.5,1) + .54(1,1,1)] = 38.5\) (23 years as subject to a foreign-based caliph, 27 years under the Egypt-based Fatimids). The value of (1,1,1) extends until the year 1171. The period 1151-1200 is a weighted average as Egypt’s Ayyubid dynasty began pledging allegiance (starting with Saladin in 1171) to the foreign-based Abbasid Caliphate but still maintained a high degree of local autonomy: 50 years multiplied by \([.42(1,1,1) + .58(1,.75,1)] = 42.75\) (21 years as independent under the Fatimids, 29 years as quasi-independent under the Ayyubids). The value (1,.75,1) extends until the year 1250. The period 1251-1517 is valued (1,1,1) as Egypt was autonomous under the Mamluk dynasty and because during this time the Abbasid Caliphate moved to Cairo. The period 1501-1550 is a weighted average as Egypt was conquered by the Ottomans in 1517: 50 years multiplied by \([.34(1,1,1) + .66(1,.5,1)] = 33.5\) (17 years under domestic rule, 33 years under the Ottomans). The value of (1,.5,1) extends until the year 1800. The value for the period 1801-1882 is (1,.75,1) as Egypt enjoyed greater local autonomy under the Ottomans and, later, the French. The period 1851-1900 is a weighted average as Egypt was occupied by the British in 1882: 50 years multiplied by \([.64(1,.75,1) + .36(1,.5,1)] = 33\) (32 years as partially autonomous, 18 years under British occupation). The final period 1901-1950 is a weighted average as Egypt gained independence from Britain in 1922: 50 years multiplied by \([.44(1,.5,1) + .56(1,1,1)] = 39\) (22 years under British occupation, 28 years as independent).

**El Salvador:** For reference see *Macropaedia* listing under “Central America.” Positive values begin in the period 1501-1550 and are a weighted average because of the permanent establishment of a Spanish colony in the area in 1528: 50 years multiplied by \([.56(0,0,0) + .44(1,.5,1)] = 11\) (28 years with no above-tribe rule, 22 years as a Spanish colony). The valuation (1,.5,1) extends from 1528 until 1824. The period 1801-1850 is a weighted average as El Salvador achieved independence in 1824: 50 years multiplied by
Equatorial Guinea
Positive values begin in 1494 when the Portuguese formally claimed the island of Bioko, which constitutes 10-25% of the country’s land and makes $S_3 = .5$. The period 1451-1500 is assigned a weighted average of 50 multiplied by $[.88(0,0,0) + .12(1,.5,.5)] = 1.5$. In 1778, the island was ceded to Spain, leaving the variables unchanged. The period 1501-1850 is scored $(1,.5,.5)$. In 1884, the Spanish settled the mainland and formed the province of Rio Muni, making $S_3 = 1$. The period 1851-1900 is assigned a weighted average of 50 multiplied by $[.68(1,.5,.5) + .32(1,.5,1)] = 16.5$. The period 1901-1950 is coded $(1,.5,1)$.

Eritrea
Positive values begin in 301 as the country was part of the Askumite Empire centered in Ethiopia. It remained a semi-independent state so $S_2 = .75$. The period 301-1500 is coded $(1,.75,1)$. In 1501, the area fell under the rule of the Ottoman Empire, making $S_2 = .5$. The period 1501-1850 is coded $(1,.5,1)$. In 1889, Eritrea became a colony of Italy, leaving the variables unchanged. The period 1851-1900 is coded $(1,.5,1)$. In 1941, the area came under British rule, but the scoring remains unchanged. The period 1901-1950 is scored $(1,.5,1)$.

Estonia: From 0 to 1237 Estonia was inhabited by the Finno-Ugric tribe, the Livs, with no organized government. This period is coded $(0,0,0)$. Positive values begin in 1237 as northern Estonia came under the control of Denmark, while southern Estonia was ruled by the German Brothers of the Sword. 1237-1346 is coded $(1,.5,.75)$. Thus, the period 1201-1250 is assigned a weighted average of 50 multiplied by $[.74(0,0,0) + .26(1,.5,.75)] = 4.875$. 1251-1346 is coded $(1,.5,.75)$. In 1346, the Danish crown sold its sovereignty over northern Estonia to the Brothers of the Sword, making $S_3 = 1$. The period 1301-1350 is assigned a weighted average of 50 multiplied by $[.92(1,.5,.75) + .08(1,.5,1)] = 19.25$. 1351-1558 is coded $(1,.5,1)$. In 1558, northern Estonia capitulated to the King of Sweden, returning $S_3$ to $.75$. The period 1551-1600 is assigned a weighted average of 50 multiplied by $[.16(1,.5,1) + .84(1,.5,.75)] = 19.75$. 1558-1629 is coded $(1,.5,.75)$. In 1629, the Truce of Altmark put all Estonian lands under Swedish rule. The period 1601-1650 is assigned a weighted average of 50 multiplied by $[.58(1,.5,.75) + .42(1,.5,1)] = 21.375$. The period 1629-1919 is coded $(1,.5,1)$. In 1721, Sweden ceded the land to Russia, causing no change in the variables. In 1919, Estonia was freed from Russian control with the help of the Allies. In 1940, Estonia was incorporated into the USSR. It was occupied by Germans 1941-1944, but Soviet troops reestablished control in 1944. The period 1901-1950 is assigned a weighted average of 50 multiplied by $[.42(1,1,1) + .54(1,.5,1)] = 34.5$. 

$[.48(1,.5,1) + .52(1,1,1)] = 38$ (24 years as a Spanish colony, 26 years as independent). The valuation $(1,1,1)$ extends from 1824 until 1950.
**Ethiopia:** Positive values begin in the initial period 1-50 and are (1,1,1) because of the existence of the Aksum kingdom in Ethiopia. This value extends until the year 1700 as the area continued to be ruled by a domestic kingdom. The value for 1701-1850 is (1,1,.75) as the central government in Ethiopia disintegrated and the country entered the feudal Age of the Princes. The period 1851-1950 is valued (1,1,1) as Ethiopia was again ruled by a consolidated domestic dynasty (with the exception of a five year Italian occupation during World War II).

**Fiji:** For reference see *Macropaedia* listing under “Pacific Islands”. Positive values begin in the period 1851-1900 and are a weighted average because of British colonization in 1874:50 years multiplied 
\[.48(0,0,0) + .52(1,.5,1) = 13 \text{ (24 years with no government above the level of tribe, 26 years as a British colony).} \] The final period 1901-1950 is valued (1,.5,1) as Fiji continued to be a British colony.

**Finland:** Positive values begin in the period 1251-1300 and are (1,.5,1) as Finland was subject to the Swedish crown. This value continues until the year 1800 as Finland continued to be subject to a foreign-based power(s), namely Sweden and, later, Russia. The value for the period 1801-1917 is (1,.75,1) as Finland gained some greater local autonomy as an autonomous grand duchy of Russia. The final period 1901-1950 is a weighted average as Finland gained independence in 1917:50 years multiplied by 
\[.34(1,.75,1) + .66(1,1,1) = 45.75 \text{ (17 years as an autonomous duchy of Russia, 33 years as independent).} \]

**France:** Positive values begin in the initial period 1-50 and are (1,.5,1) because of the occupation of Gaul by the Roman empire. This valuation extends until the year 450. The period 451-771 is assigned a value of (1,1,.75) as the area came under the control of multiple Germanic kingdoms. The period 751-800 is a weighted average as Gaul came under the unified control of Charlemagne in 771:50 years multiplied by 
\[.42(1,1,.75) + .58(1,1,1) = 44.75 \text{ (21 years of divided domestic rule, 29 years of unified domestic rule).} \] The valuation of (1,1,1) extends from the year 771 to the year 850. The period 851-1250 is valued (1,1,.75) as the area again became divided amongst multiple Frankish kingdoms. The period 1251-1350 is valued (1,1,1) as France came under the control of centralized leadership and grew to approximately its current size. The period 1351-1450 is valued (1,.75,.75) as a large part of France came to be held by the English during the Hundred Years War. The period 1451-1550 is valued (1,1,1) as the war ended and France regained its territory. The period 1551-1600 is valued (1,1,.75) as the country became seriously divided by domestic religious wars. The period 1601-1950 is valued (1,1,1) as France again came under unified control (given relatively short periods of revolution) and would remain independent save German occupation during the two World Wars.
**Gabon:** For reference see *Macropaedia* listing under “Central Africa”. Positive values begin in the period 1851-1900 and are (1,.5,1) because of French occupation of the area. This valuation extends through the final period 1901-1950 as Gabon would not gain independence until 1960.

**Gambia:** For reference see *Macropaedia* listing under “Western Africa”. Positive values begin in the period 1501-1550 and are (1,1,.75) because of the existence of multiple small, local kingdoms in the area. This valuation extends until the year 1750. The period 1751-1950 is valued (1,.5,1) as the Gambia would come under the control of the British and would not regain independence until 1965.

**Georgia:** Positive values begin in year 0 as Georgia was under Roman control. 0-330 is coded as (1,.5,1). In 330, Georgia was divided between the Byzantine and Persian empires, making S3 = .75. The period 301-350 is assigned a weighted average of 50 multiplied by [.60(1,.5,1) + .40(1,.5,.75)] = 22.5. 330-975 is coded (1,.5,.75). In 654, the Arab caliphs established an emirate in T’bilisi, not changing the variables. In 975, King Barat III united eastern and western Georgia into one state. The period 951-1000 is assigned a weighted average of 50 multiplied by (.50(1,.5,.75) + .50(1,1,1)] = 34.375. 975-1220 is coded (1,1,1). In 1220, eastern Georgia was reduced to vassalage under the Mongol il-khans, but the west remained independent. The period 1201-1250 is assigned a weighted average of 50 multiplied by [.40(1,1,1) + .60(1,.75,.75)] = 36.875. 1220-1510 is coded (1,1,.75). In 1510, the Turks invaded western Georgia, making S2 = .5. The period 1501-1550 is assigned a weighted average of 50 multiplied by [.50(1,.5,.75) + .50(1,1,1)] = 33.375. 1578-1744 is coded (1,.5,1), with the Turks relinquishing control to the Persians in 1601. In 1744, the Persians gave control over the Kingdom of Kartli to the local Bagratid, T’eimuraz, making S2 = .75 and S3 = .75. The period 1701-1750 is assigned a weighted average of 50 multiplied by [.88(1,.5,1) + .12(1,.75,.75)] = 25.375. 1744-1762 is coded (1,1,.75). In 1762, Erekle II united Kartli and Kakheti, covering much of present day Georgia. 1762-1783 is coded (1,1,1). In 1783, under the Treaty of Georgievsk, Georgia accepted Russian suzerainty. The period 1751-1800 is assigned a weighted average of 50 multiplied by [.24(1,.75,.75) + .42(1,1,1) + .34(1,.5,1)] = 35.75. 1801-1918 is coded (1,.5,1). In 1918, Georgia set up and independent state. In 1921, the Red Army entered Georgia and installed a Soviet regime. The period 1901-1950 is assigned a weighted average of 50 multiplied by [.06(1,1,1) + .94(1,.5,1)] = 26.5.

**Germany:** Positive values begin in the initial period 1-50 and are (1,.5,.5) because of Roman occupation of part of southern Germany. This valuation extends until the year 400. The period 401-800 is valued (1,.75) as multiple domestic kingdoms formed in the area. The period 801-1050 is valued (1,1,1) as most of present-day Germany was governed by Charlemagne and later Frankish and Saxon kings. The period 1051-1100
receives a weighted average because of a 20 year civil war beginning in 1077:50 years multiplied by [.6(1,1,1) + .4(1,1,.75)] = 45 (30 years of unified domestic rule, 20 years of civil war). The period 1101-1150 is valued (1,1,1) as rule was consolidated under Henry V. The period 1151-1200 is a weighted average as 30 years of the period was spent under the divided rule of Henry the Lion and Frederick I, while 20 years were spent under the consolidated rule of Frederick I:50 years multiplied by [.6(1,1,.75) + .4(1,1,1)] = 42.5. The valuation of (1,1,1) extends until the year 1250. The period 1251-1871 is valued (1,1,.75) as the Hohenstaufen dynasty disintegrated, political chaos ensued, and Germany continued as a non-unified federation of various princes and states. The period 1851-1900 is a weighted average as the German Empire was formed in 1871:50 years multiplied by [.42(1,1,.75) + .58(1,1,1)] = 44.75 (21 years of divided domestic rule, 29 years under the polity of the German Empire). The valuation of (1,1,1) extends from 1871 until 1950.

**Ghana:** For reference see *Macropaedia* listing under “Western Africa”. Positive values begin in the period 1251-1300 and are (1,1,.75) because of the existence of multiple domestic states in the area. This valuation extends until the year 1750. The period 1751-1900 is valued (1,.75,.75) as the Ghana area came under partial control of European powers in addition to domestic states. The final period 1901-1950 is valued (1,.5,1) as Ghana became a British colony.

**Greece:** Positive values begin in the initial period 1-50 and are (1,.5,1) because of Roman occupation of Greece. This valuation extends until the year 1200 as Greece continued to be controlled by foreign based powers (namely the Byzantines and the Franks). The period 1201-1450 is valued (1,.75,.75) as Greece was ruled by a complex series of powers, both foreign and domestic. The period 1451-1832 is valued (1,.5,1) as most of Greece was consolidated under Ottoman rule. The period 1801-1850 is a weighted average because Greece gained independence in 1832:50 years multiplied by [.64(1,.5,1) + .36(1,1,1)] = 34 (32 years under Ottoman rule, 18 years as independent). The entire remaining period (and thus 1832-1950) is valued (1,1,1).

**Grenada:** No government was present before 1650 when the French governor of Martinique purchased Grenada from a French company and established a settlement there. It switched hands between the British and the French a few times and remained with the British after 1783. Grenada became a self-governing state in association with the United Kingdom in 1967. The period 1651-1950 is coded (1,.5,1).

**Guatemala:** For reference see *Macropaedia* listing under “Central America”. For reference on the Mayan empire see *Macropaedia* listing under “Pre-Columbian Civilizations”. Positive values begin in the initial period 1-50 and are (1,1,1) because of the existence of the Maya civilization in a large part of Guatemala. This valuation extends until the year 900 when the Mayan empire was beginning to disintegrate. No
positive values are assigned again until the Spanish conquest. Positive values resume in the period 1551-1600 and are (1,.5,1) because of Spanish occupation. This value extends until the year 1823 when Guatemala gained independence. The period 1801-1850 is a weighted average:50 years multiplied by [.46(1,.5,1) + .54(1,1,1)] = 38.5 (23 years under Spanish and Mexican rule, 27 as independent). The remaining period (and thus 1823-1950) is valued (1,1,1).

**Guinea:** For reference see *Macropaedia* listing under “Western Africa”. Positive values begin in the period 1351-1400 and are (1,.5,1) because the Guinea area was under the control of the foreign-based Mali empire and, later, the Fulani kingdom. This valuation extends until the year 1950 as the area would later come under the colonial control of France.

**Guyana:** Positive values begin in the period 1601-1650 and are (1,.5,1) because of Dutch settlement of the area. This valuation extends for the entire remaining period because Guyana would remain a colony of European powers (the British and then the French after the Dutch) and would not gain independence until 1966.

**Haiti:** For reference see *Macropaedia* listing under “West Indies”. Positive values begin in the period 1501-1550 and are (1,.5,1) because of colonization by the Spanish. This value continues until 1800 as the Haiti area continued to be occupied by the Spanish and then the French. The value for 1801-1950 is (1,1,1) as Haiti gained independence in 1804.

**Honduras:** For reference see *Macropaedia* listing under “Central America”. For reference on the Mayan empire see *Macropaedia* listing under “Pre-Columbian Civilizations”. Positive values begin in the initial period 1-50 and are (1,1,.3) because of the existence of the Maya civilization in a small part of western Honduras. This valuation extends until the year 900 when the Mayan empire was beginning to disintegrate. No positive values are assigned again until the Spanish conquest. Positive values resume in the period 1551-1600 and are (1,.5,1) because of Spanish occupation. This value extends until the year 1838 when Honduras gained independence. The period 1801-1850 is a weighted average:50 years multiplied by [.76(1,.5,1) + .24(1,1,1)] = 31(38 years under Spanish rule, 12 as independent). The remaining period (and thus 1838-1950) is valued (1,1,1).

**Hong Kong:** For reference see also *Macropaedia* listing under “China”. Values are the same as those assigned for China for the years 1-1850 as Hong Kong was a part of China during these years. The period 1851-1950 is valued (1,.5,1) as Hong Kong came under British control and would not return to China until 1997.
Hungary: Positive values begin in year 1 as Hungary was under the control of the Roman Empire. This lasted until 350. Therefore the years 1-350 are valued (1, 0.5, 1). Following the fall of Rome there was no organized state until 892 when the Magyar tribesmen settled in Hungary under the elected leadership of Arpad. The period 351-850 is scored (0,0,0). From 892-1000 S1 is set at .75 because the state remained a somewhat loose tribal confederation. The period 851-900 is assigned a weighted average of 50 multiplied by [(.84(0,0,0) + .16(.75,1,1)] = 6. The period 901-1000 is scored (.75,1,1).

In 1000, Stephen was crowned the first Christian King of Hungary. This makes S1 = 1. Hungarian independence lasted until 1526, so the period 1001-1500 is scored (1,1,1). In 1526 the Turks defeated Hungary and occupied much of its central area. The western area came under the control of Austria, while the eastern area became its own principedom, Transylvania. The period 1501-1550 is a weighted average of 50 multiplied by [.52(1,1,1)+.48(1,5,.75)] = 35, the first part reflecting Hungarian independence, the second being due to partial Austrian and partial Turkish colonization and multiple rulers. The values (1,5,.75) continue during 1551-1650. The period 1651-1700 is a weighted average of 50 multiplied by [.98(1,5,.75)+.02(1,5,1)] = 18.875. S3 is changed to 1 after 1699 because the Hapsburg ruler of Austria, Leopald, became the King of Hungary following the departure of the Turks. Complete Austrian control lasted until 1867, so the years 1700-1850 are coded (1,5,1). In 1867 Hungary was given control over its internal affairs, while the Austrian Emperor remained the King of Hungary. This changes S2 to .75 because Hungary gained some local control. The period 1851-1900 is thus assigned a weighted average of 50 multiplied by [.34(1,5,1) + .66(1,75,1)] = 33.25. In 1918 Austria Hungary was broken up so S2 becomes 1. In 1944 German forces occupied Hungary and in 1945-1950 the Soviets helped to establish a Communist government. The period 1901-1950 is a weighted average of 50 multiplied by [.36(1,75,1) + .52(1,1,1) +. 12(1,5,1)] = 42.5.

Iceland: Positive values begin in the period 1251-1300 and are (1, 0.75, 1) as Iceland had been settled and exercised a good amount of local autonomy but was still nominally subject to, first, Norway and later Denmark. This valuation extends until the year 1900. The final period 1901-1950 is valued (1,1,1) as Iceland gained home rule and then independence early in the 20th century.

India: Positive values begin in the initial period 1-50 and are (1, 1, 0.75) as control of India was divided amongst multiple domestic dynasties after the collapse of the Mauryan empire. This valuation extends until the year 1200. The period 1201-1550 is valued (1, 0.75, 0.75) as control of India was divided between a Delhi-based Muslim sultanate and local dynasties (most importantly the Vijayanagar empire). The period 1551-1700 is valued (1,1,1) as control of India would be consolidated by the locally-based Mughal empire. The period 1701-1800 is valued (1,1,0.75) as this empire disintegrated and control of India returned to multiple domestic dynasties. The period 1801-1950 is valued (1,0.5,1)
as India came under the control of the British and would not regain independence until 1947.

**Indonesia:** Positive values begin in the period 651-700 and are (1,1,.75) because of the existence of multiple indigenous kingdoms, primarily on Sumatra and Java, beginning with the kingdom of Srivijaya-Palembang in the 7th century. This value extends until 1700 when colonial European powers began to encroach on local powers. The period 1701-1850 is assigned a value of (1,.75,.75) as control of the Indonesia area was split between domestic powers and Europeans, namely the Dutch (primarily), the British, and the French. The period 1851-1950 is assigned a value of (1,.5,1) as Indonesia became a colony of the Dutch and would not regain independence until the very late 1940’s.

**Iran:** Positive values begin in the initial period 1-50 and are (1,1,1) because of the existence of the Parthian state in Iran. This valuation extends until the year 650 as the Iran area would continue to be ruled by a local empire (the Sassanian after the Parthian). The period 651-1500 is valued (1,.75,.75) as Iran fell under the control of multiple foreign-based and local Islamic dynasties. The period 1501-1950 is valued (1,1,1) as local rule was restored to Iran, first under the Safavids and lastly under the Pahlavis.

**Iraq:** Positive values begin in year 1 with Iraq falling under the umbrella of the Parthian empire, which operated more like a feudal system with semi-autonomous local rulers; we assign the period (1,.75,.75). This relationship lasted until the Parthians' replacement by the Sassanians in 224 C.E. The Sassanians engaged in a continuous struggle with the Roman Empire and descendant Byzantines over land for years, never fully controlling the area, so despite greater centralization within the area of Sassanian control, the values (1,.75,.75) remain appropriate. In 638 the Arabian Islamic Empire conquered all of what is now Iraq changing the values to (1,.5,1). The period 601-650 is given a weighted average of 50 multiplied by [.76(1,.75,.75)+.24(1,.5,1)]=27.375. The year 749 marks the crowning of the new Abbasid Caliphate in Al-Kufah, within present-day Iraq; thus, there was a ruling entity that both controlled the whole territory and was locally based, leading to values (1,1,1). The period 701-750 is given a weighted average of 50 multiplied by [.98(1,.5,1)+.02(1,1,1)]=25.5. A civil war broke out in the Abbasid Caliphate in 812 C.E. resulting in the brother Al-Mamun conquering Baghdad. Several localities obtained virtual independence, with a strong group of military emirs (1,1,.75). The period 801-850 is given a weighted average of 50 multiplied by [.24(1,1,1)+.76(1,1,.75)]=40.5. In 861, a civil war and 9 year period of military anarchy broke out among the foreign Turkish generals (1,.5,.75) who had subdued their former caliphate employers and now struggled amongst themselves over the riches of the region. The Abbasid Caliphate was restored in 870 but much control over the area had been lost due to rebellions (1,.75,.75). The period 851-900 is given a weighted average of 50 multiplied by [.22(1,1,.75)+.18(1,.5,.75)+.6(1,1,.75)]=34.125. The year 935 C.E. marks the beginning of a ten year struggle between ambitious Turkish (a.k.a. Turkmen, Turkic) generals over power (1,.5,.75) until finally Baghdad fell to the Buyid chief Mu'izz al-Dawlah, whose
base was in Iran, in 945 C.E. Since the foreign-based Buyid dynasty is described as never having complete control over present-day Iraq, we assign this period the values (1,.5,.75). The period 901-950 is given a weighted average of 50 multiplied by 
\[.7(1,1,.75)+.3(1,.5,.75)=31.875.\] In 1055 the Seljuk Turks of Iran invaded and conquered all of Iraq and began the reign of the Seljuk Turk Sultans, to which we assign values (1,.5,1), until 1152 C.E. The period 1051-1100 is given a weighted average of 50 multiplied by 
\[.1(1,.5,.75)+.9(1,.5,1)=24.375.\] Revolt against the declining Seljuk Sultans by the titular Abbasid Caliphs in 1152 C.E. resulted in the restoration of the Abbasid Caliphate in Baghdad although they struggled to maintain control over the whole area (1,1,.75). The period 1151-1200 is given a weighted average of 50 multiplied by 
\[.04(1,.5,1)+.96(1,1,.75)=37.\] The arrival of the Mongols and the fall of Baghdad in 1258 marked the beginning of the Mongol Khanate (1,.5,1). The period 1251-1300 is given a weighted average of 50 multiplied by 
\[.16(1,1,.75)+.84(1,.5,1)=27.\] Iraq fell into disorder following long-term Mongol tribal infighting from 1335-1410 (1,.5,.75) and was eventually conquered by the loosely organized Kara Koyunlu (Turkic Tribal confederation known as the Black Sheep) and its rival the Ak Koyunlu (Turkic White Sheep confederation) which maintains the value (1,.5,.75). The period 1301-1350 is given a weighted average of 50 multiplied by 
\[.7(1,.5,1)+.3(1,.5,.75)=23.125.\] The Turkic confederations are overrun by the Safavid Dynasty in Iran in 1508 changing the index to (1,.5,1). The expanding Ottoman Empire conquered Iraq in 1534 establishing firm control for centuries (1,.5,1). The period 1501-1550 is given a weighted average of 50 multiplied by 
\[.16(1,1,.75)+.84(1,.5,1)=24.\] Around 1750 C.E. a period of Ottoman acknowledged semi-local Mamluk rule took hold over Iraq changing the index to (1,.75,1). The arrival of the new Ottoman governor in Baghdad in 1831 C.E. marked the return to direct rule from Constantinople and the fall of the Mamluk regime (1,.5,1). The period 1801-1850 is given a weighted average of 50 multiplied by 
\[.62(1,.75,1)+.38(1,5,1)=32.75.\] The Armistice of Mudros in 1918 between the Allied powers of World War 1 and the Ottoman Empire marked the separation of Iraq from Constantinople. After a long British debate about whether to colonize the area or to establish a local government with oversight, the British chose the latter (1,.75,1). The period 1901-1950 is given a weighted average of 50 multiplied by 
\[.36(1,.5,1)+.64(1,.75,1)=33.\]

**Ireland:** Positive values begin in the period 401-450 and are (.75,1,1) because of a case of “paramount chief” in which the leaders of the Irish clans would elect a high king. This valuation extends until the year 1150. The period 1151-1200 is a weighted average because of the signing of the Treaty of Windsor (with which Ireland became subject to England) in 1175: 50 years multiplied by 
\[.5(.75,1,1) + .5(1,.5,1)=31.25 \] (half of the period as a paramount chieftdom, half as subject to England). The period 1201-1922 is valued (1,.5,1) as Ireland continued as subject to England. The final period 1901-1950 is weighted because of the establishment of the Irish Free State in 1922: 50 years multiplied by 
\[.44(1,.5,1) + .56(1,1,1)=39 \] (22 years of the period as subject to England, 28 years as independent).
Israel: For primary reference see *Macropaedia* listing under “Palestine”. Positive values begin in the initial period 1-50 and are (1,.75,.75) as control of the area was divided between local rulers and the Roman Empire. The entire remaining period 51-1950 is valued (1,5,1) as the area would be occupied from abroad by a number of great powers beginning with the Romans and ending with the Ottomans, and the modern state of Israel would not be created until 1948.

Italy: Positive values begin in the initial period 1-50 and are (1,1,1) as Italy was under the rule of the Roman Empire. This valuation extends until the year 550\(^2\). The period 551-1300 is valued (1,.75,.75) as the Roman Empire had disintegrated and control of the area was divided between foreign (Byzantines, Franks, German kings) and domestic (Lombards, duchy of Benevento, the papal state) powers. The period 1301-1500 is valued (1,1,.75) as Italy came under the divided domestic control of multiple city-states. The period 1501-1850 is valued (1,.75,.75) as control over Italy was divided between the domestic city-states as well as the French and the Spanish. The period 1851-1950 is valued (1,1,1) as Italy became a unified, independent kingdom in 1861.

Jamaica: For reference see *Macropaedia* listing under “West Indies”. Positive values begin in the period 1501-1550 and are (1,.5,1) because of Spanish colonization of Jamaica. This value continues for the entire remaining period as Jamaica would later become a colony of Britain and would not gain independence until 1962.

Japan: Positive values begin in the period 251-300 and are (1,1,1) as Japan had become unified under the Yamato court. This value continues until the year 1200 when Japan began to enter its Medieval period. The period 1201-1600 is valued (1,1,.75) as control over Japan was divided domestically between the distinct warrior (based in Kamakura) and aristocratic (based in Kyoto) classes. The period 1601-1950 is valued (1,1,1) as Japan again became unified during the Tokugawa period and later became a national government with an emperor during the Meiji Restoration.

Jordan: Positive values begin in the initial period 1-50 and are (1,.75,1) as the area was independent but also paid tribute to Rome. This value extends to the year 100. The entire remaining period 101-1950 is valued (1,5,1) as Jordan was controlled by a series of foreign-based powers (the Romans, Byzantines, Umayyad and Abbasid Caliphates, Ottomans, and British) and would not gain independence until the late 1940’s.

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\(^2\) Despite the sack of Rome by Germanic tribes in 410 and the popular “collapse” date of the Roman Empire in 476 the valuation of (1,1,1) is maintained until 550 as the conquering tribes generally adopted Roman culture, intermarried with the domestic population, employed the existing system of governance, and ruled from Italy.
**Kazakhstan:** There is no evidence of organized government from 0-1200, so the period is coded (0,0,0). Positive values begin in 1201, when the area fell under the control of the Mongol empire. 1201-1488 is coded (1,.5,1). In 1488, under Burunduk Khan, the Kazaks controlled almost the entire steppe region, making $S_2 = .75$. The Period 1451-1550 is assigned a weighted average of 50 multiplied by $.76(1,.5,1) + .24(1,.75,1) = 28$. 1488-1509 is coded (1,.75,1). In 1509, Kasym Kahn marked the beginning of an independent Kazak polity. 1509-1528 is coded (1,1,1). In 1528, three hordes formed, the Great Horde, Middle Horde, and Little Horde, each with its own khan. The period 1501-1550 is assigned a weighted average of 50 multiplied by $18(1,.75,1) + .38(1,1,1) + .44(1,1,.75) = 42.5$. 1528-1560 is coded (1,.75). In 1560, Haqq Nazar reunited the Hordes. 1560-1600 is coded (1,1,1). The period 1551-1600 is assigned a weighted average of 50 multiplied by $.18(1,.75,1) + .38(1,1,1) + .44(1,1,.75) = 42.5$. After 1600, no central power existed, just petty rulers, returning $S_3$ to .75. 1601-1680 is coded (1,.75). In 1680, Teuke Kahn reunited the hordes again. 1680-1758 is coded (1,1,1). The period 1651-1700 is assigned a weighted average of 50 multiplied by $60(1,.75,1) + .40(1,1,1) = 42.5$. In 1758, China took control of much of eastern Kazakhstan. 1758-1848 is coded (1,.75,.75). The period 1751-1800 is assigned a weighted average of 50 multiplied by $.16(1,1,1) + .84(1,.75,.75) = 31.625$. In 1848, Russia abolished all three hordes. The period 1801-1850 is assigned a weighted average of 50 multiplied by $96(1,.75,.75) + .04(1,.5,1) = 28$. In 1920, the Soviet government established the Kirgiz Autonomous Republic. 1848-1950 is coded (1,.5,1).

**Kenya:** For reference see *Macropaedia* listing under “Eastern Africa”. The only positive values are for the final period 1901-1950 as the indigenous inhabitants (the Masai and Kikuyu tribes) had no above-tribe government. The values for this period are (1,.5,1) as Kenya became a colony of the British.

**Korea:** Positive values begin in the initial period 1-50 and are (1,1,.75) because of the rule of multiple domestic kingdoms in Korea. This valuation extends until the year 700. The value for the period 701-800 is (1,1,1) as Korea became unified under the Silla kingdom. The period 801-936 is valued (1,1,.75) as Korea again fell under the rule of multiple domestic kingdoms. The period 901-950 is a weighted average as Korea came under the unified rule of the Koryo kingdom in 936: 50 years multiplied by $.72(1,1,.75) + .28(1,1,1) = 41$ (36 years under multiple-kingdom domestic rule, 14 years under consolidated domestic rule). The period 936-1910 is valued (1,1,1) as Korea was controlled by consolidated domestic powers (namely the Koryo kingdom, the Ch’oe military regime, and the Choson dynasty). The final period 1901-1950 is valued (1,.5,1) because of 40 years of Japanese occupation.

**Kyrgyzstan:** There was no organized government from 0-1207. In 1207, the Kyrgyz nomads surrendered to Genghis Kahn’s son, Jochi. 1207-1855 is coded (1,.5,1), with the land becoming part of the Manchu Empire in 1757, and the khanate of Kokand in 1827.
The period 1201-1250 is assigned a weighted average of 50 multiplied by \([.14(0,0,0) + .86(1,.5,1)] = 21.5\). In 1855, the area was divided between Kokand and Russia. 1855-1916 is coded \((1,.5,.75)\). The period 1851-1900 is assigned a weighted average of 50 multiplied by \([.10(1,.5,1) + .90(1,.5,.75)] = 19.375\). By 1916, Russia had gradually taken control of the entire Kyrgyz territory. 1916-1950 is coded \((1,.5,1)\). The period 1901-1950 is assigned a weighted average of 50 multiplied by \([.32(1,.5,.75) + .68(1,.5,1)] = 23\).

Laos: Positive values begin in 401 when the various tribes in Laos fell under the suzerainty of the Khmer Empire. The period 401-1100 is coded \((1,.5,1)\). After 1100, various Lao principalities sprang up. This makes \(S_1 = 1\) and \(S_3 = .75\), so 1101-1350 is coded \((1,1,.75)\). In 1353 Fa Ngum conquered territories that included all of present day Laos and formed the first Laotian state Lan Xang. The period 1351-1400 is assigned a weighted average of 50 multiplied by \([.06(1,1,.75) + .94(1,1,1)] = 49.25\). The period 1401-1650 is \((1,1,1)\). In 1694, Laos fell under Vietnamese rule. The period 1651-1700 is assigned a weighted average of 50 multiplied by \([.88(1,1,1) + .12(1,.5,1)] = 47\). In 1707 the north split into two independent kingdoms, Luang Prabang and Vien Chan. The south formed an independent kingdom known as Champassak in 1713. The period 1701-1750 is assigned a weighted average of 50 multiplied by \([.14(1,.5,1) + .12(1,.5,.75) + .74(1,1,.75)] = 34.625\). In 1752 Myanmar invaded Luang Prabang and controlled it until Siam took over in 1778. In 1778, Siam invaded Champassak and Vien Chan. All three kingdoms were forced to pay tribute to Bangkok and assigned a Siamese commissioner, but their kings continued to rule. The period 1751-1800 is assigned a weighted average of 50 multiplied by \([.04(1,1,.75) + .96(1,.75,.75)] = 28.5\), and the years 1801-1900 are coded \((1,.75,.75)\). In 1904 France established a protectorate over Luang Prabang and took direct authority over the other two kingdoms. Japan had control of Laos from 1941-1946 but in 1946 the French returned and allowed Laos control of internal matters. The period 1901-1950 is assigned a weighted average of 50 multiplied by \([.08(1,.75,.75) + .84(1,1,1) + .08(1,.75,1)] = 26.25\).

Latvia: Latvia was inhabited by tribes from 0-1237. Positive values begin in 1237, when the German order of the Brothers of the Sword conquered all of the tribal kingdoms. 1237-1561 is coded \((1,.5,1)\). The period 1201-1250 is assigned a weighted average of 50 multiplied by \([.74(0,0,0) + .26(1,.5,1)] = 6.5\). In 1561, Latvian territory was partitioned, Courland becoming an autonomous duchy under the suzerainty of the Lithuanian sovereign and the area north of the Western Dvina being incorporated into Lithuania. 1561-1795 is coded \((1,.75,.75)\). The period 1551-1600 is assigned a weighted average of 50 multiplied by \([.22(1,.5,1) + .88(1,.75,.75)] = 30.25\). By 1795, Russia had secured all of the land following the Third Partition of Poland. 1795-1919 is coded \((1,.5,1)\). The period 1751-1800 is assigned a weighted average of 50 multiplied by \([.90(1,.75,.75) + .10(1,.5,1)] = 27.813\). In 1919, Latvia became independent under Prime Minister Ulmanis, but in 1940 the Red Army invaded, and Latvia was incorporated into the USSR. There was a German occupation from 1941-1944. The period 1901-1950 is assigned a weighted average of 50 multiplied by \([.58(1,.5,1) + .42(1,1,1)] = 35.5\).
Lebanon
Positive values begin in year 1 as the country was under the control of the Roman Empire and later the Byzantine Empire. In 661, the Umayyad caliphate incorporated Lebanon from Damascus, and in 750, the Abbasid caliphate took control from Baghdad. In 1280, Lebanon became part of the Mamluk state of Egypt and Syria. In 1516, the Ottoman Empire defeated the Mamluks and added Lebanon to the empire. The period 1-1900 is coded (1,.5,1). In 1920, France earned the right to govern the country following Turkey’s defeat in WWI. Lebanon gained independence in 1943, making S2 = 1. The period 1901-1950 is assigned a weighted average of 50 multiplied by \([.86(1,.5,1) + .14(1,1,1)]\) = 28.5.

Lesotho: For reference see *Macropaedia* listing under “Southern Africa”. Positive values begin in the period 1801-1850 and reflect a weighted average because of the establishment of the Basotho kingdom in 1824:50 years multiplied by \([.48(0,0,0) + .52(1,1,1)]\) = 26 (24 years with no above-tribe rule, 26 years under a domestic kingdom). The period 1851-1900 also receives a weighted average as the Basotho kingdom collapsed in 1869 and the British assumed control of the area:50 years multiplied by \([.38(1,1,1) + .62(1,.5,1)]\) = 34.5 (19 years under the Basotho kingdom, 31 years under British rule). The final period 1901-1950 is valued (1,.5,1) as Lesotho would not regain independence until 1966.

Liberia: Prior to 1828, the country had no government above the tribal level. In 1822, Jehudi Ashmun, a white American preacher, went to Liberia with the aid of the American Colonization Society to help established a colony populated by freed American slaves. By 1828, the colony had a government, a digest of laws, and the beginnings of a profitable foreign commerce at its first settlement at Cape Mesurado. Because so little of the region was controlled by the colony, S3 = .3. The period 1828-1847 is coded (1,.5,.3). In 1847, Joseph Jenkins Roberts, a black man born free in Virginia who had become the colony’s leader, declared Liberia an independent republic when the American Colonization Society intimated that Liberia should no longer have been dependent on it for existence. Because the settlement became independent of the Colonization Society, we set S2 = 1 and because Roberts enlarged the colony’s territory, S3 becomes =.5. The period 1801-1850 is assigned a weighted average of 50 multiplied by \([.56(0,0,0) + .38(1,.5,3) + .06(1,1,5)]\) = 4.35. The period 1847-1892 is coded (1,1,.5). In 1892, border disputes with the French and British ended when Liberia’s boundaries were officially established, but the government failed to effectively control the interior, so S3 = .75 only. The period 1851-1900 is assigned a weighted average of 50 multiplied by \([.84(1,1,.5) + .16(1,1,.75)]\) = 27. The period 1892-1950 is coded (1,1,.75).

Libya
Positive values begin in year 1 when the Roman empire controlled the territory. When the Roman Empire split in 395, the Byzantine Empire took control, but the variables remain unchanged by this event. The period 1-600 is coded (1,.5,1). In 642, Arab armies moved into the country and converted Libyans to Islam, but Libyans resisted control from Arab dynasties based in Damascus and Baghdad. The country was governed locally and separately in three different regions: Fezzan, Tripolitania, and Cyrenacia. This makes S2 = 1 and S3 = .75. The period 601-650 is assigned a weighted average of 50 multiplied by [.84(1,.5,1) + .16(1,1,.75)] = 27. The period 651-1550 is coded (1,1,.75). In 1551, the Ottoman Empire invaded and united the three regions, restoring S2 = .5 and S3 = 1. In 1911, Italy took control of the country, not affecting the variables. The period 1551-1950 is coded (1,.5,1).

**Lithuania:** Lithuania was inhabited by various tribes from 0-1250. Positive values begin in 1251, when the tribes were united under Mindaugas. 1251-1341 is coded (1,1,1). In 1341, following the death of Gedminas, two kingdoms emerged, Algirdas’ in the east, and Kestutis’ in the west. 1341-1381 is coded (1,1,.75). The period 1301-1350 is assigned a weighted average of 50 multiplied by [.82(1,1,1)+.18(1,1,.75)]=47.75. In 1381, the kingdoms were reunited by Kestutis. 1381-1569 is coded (1,1,1). The period 1351-1400 is assigned a weighted average of 50 multiplied by [.62(1,1,.75) + .38(1,1,1)] = 42.25. In 1569, Poland became the dominant partner in the Polish-Lithuanian alliance because it had greater representation in the Diet. 1569-1795 is coded (1,.75,1). The period 1551-1600 is assigned a weighted average of 50 multiplied by [.38(1,1,1) + .62(1,.75,1)] = 42.25. In 1795, Lithuania fell into Russian hands after the Third Partition of Poland. 1795-1918 is coded (1,.5,1). The period 1751-1800 is assigned a weighted average of 50 multiplied by [.90(1,.75,1) + .10(1,.5,1)] = 36.25. In 1918, an elected Lithuanian council declared independence. In 1940, the Soviet Union invaded Lithuania and made it join the USSR as a constituent republic. There was a German occupation from 1941-1944. The period 1901-1950 is assigned a weighted average of 50 multiplied by [.56(1,.5,1) + .44(1,1,1)]=36.

**Macedonia:** The period 1-9 is coded (0,0,0). Positive values begin in year 9 when the Romans conquered native tribal groups. The period 1-50 is assigned a weighted average of 50 multiplied by [.18(0,0,0) + .82(1,.5,1)] = 20.5. 9-500 is coded (1,.5,1). After 500, Goths, Huns, Bulgars, Avars, and other semi-nomadic people entered Macedonia. 501-600 is coded (0,0,0). The period 601-1941 is coded (1,.5,1) due to control by a succession of outside states. From 601-1346, the country was used as a military border for the Byzantine state. In 1346, it became part of the Serbian Nemanjic state under Stefan Dusan. In 1389, the Ottoman Turks invaded and took control of the region. In 1918, the United Kingdom of Serbs, Croats, and Slovenes (renamed Yugoslavia in 1929) was created, ruled by the Serbian Karadjordjevic dynasty. It was a centralized state run, for the most part, by Serbian government, army, and bureaucracy. From 1941-1945 Macedonia was occupied by Bulgaria. In 1945, Yugoslavia was reestablished, this time under Communist Josip Broz Tito. The state was more decentralized under this
arrangement so S2=.75. The period 1901-1950 is assigned a weighted average of 50 multiplied by \([.90(1,.5,1) + .10(1,.75,1)] = 26.25\).

**Madagascar:** Positive values begin in the period 1501-1550 and are (1,1,.75) as the island was ruled by a number of domestic states and dynasties. This valuation extends until the year 1900. The final period 1901-1950 is valued (1,.5,1) as Madagascar was annexed by the French in 1896 and would not regain independence until 1960.

**Malawi:** For reference see *Macropaedia* listing under “Southern Africa”. Positive values begin in the period 1451-1500 where they are a weighted average because of the establishment of the local Maravi confederacy in 1480:50 years multiplied by \([.6(0,0,0) + .4(1,1,1)] = 20\) (30 years with no above-tribe rule, 20 years under consolidated domestic rule). The period 1480-1600 is valued (1,1,1) because of this consolidated domestic rule. The period 1601-1900 is valued (1,1,.75) as more kingdoms developed and ruled the area. The final period 1901-1950 is valued (1,.5,1) as Malawi became colonized by the British.

**Malaysia:** For reference see *Macropaedia* listing under “Southeast Asia”. Positive values begin in the period 201-250 and are (1,1,.5) as a number of small kingdoms and states, mostly along the eastern coast of the Malay peninsula, came to power during the 2nd and 3rd centuries (the year 201 is taken as the starting point). This valuation extends until the year 650. The period 651-1000 is valued (1,.75,.5) as a number of these states and kingdoms came under the loose control of Sumatra and Java-based empires. The period 1001-1400 is valued (1,.75,1) as these kingdoms grew to cover a greater part of what is now Malaysia. The period 1401-1500 is valued (1,1,1) as the area came under the control of the Malacca-based empire. The period 1501-1850 receives the value (1,.75,.75) because of mixed foreign and domestic control after the Malacca empire fell to the Portuguese. The period 1851-1950 is valued (1,.5,1) as Malaysia came under the control of the British and would not regain independence until 1957.

**Mali:** For reference see *Macropaedia* listing under “Western Africa”. Positive values begin in the period 751-800 and are (1,.75,.5) because of control of the southwestern portion of the area by the Ghana kingdom. This valuation extends until the year 1200. The period 1201-1600 is valued (1,1,.75) as the area came under the consolidated local control of, first, the Mali kingdom and, later, the Songhai kingdom. The period 1601-1750 is valued (1,.75,.75) as part of Mali fell under the foreign-based control of Moroccans. The period 1751-1850 is valued (1,1,.75) as the area again came under the control of multiple local kingdoms. The period 1851-1900 is valued (1,.75,.75) as part of the Mali area came under the foreign-based control of the French. The final period 1901-1950 is valued (1,.5,1) as Mali became a colony of France.
**Mauritania:** For reference see *Macropaedia* listing under “Western Africa”. Positive values begin in the period 751-800 and are (1,1,.3) because of the existence of the Koumbi Saleh-based Ghana kingdom in a part of the country. This valuation extends until the year 850. The period 851-1076 is valued (1,1,.5) as the Ghana kingdom expanded. The period 1051-1100 is a weighted average because of the capture of parts of the Ghana empire by the Morocco-based Almoravids in 1076:50 years multiplied by [.52(1,1,.5) + .48(1,.75,.75)] = 26.5 (26 years of domestically-based Ghana hegemony, 24 years of mixed Almoravid and Ghana rule). The values (1,.75,.75) continue to 1200. The period 1201-1450 is valued (1,.75,.5) as the Mali-based Mali empire emerged to control the area ; S2=.75 for this period as the Mali-empire was based in what is now Mali but needs to be distinguished from a colonial or occupational state. The period 1451-1500 is valued (1,1,.75) as the Mali-based Songhai kingdom came to replace the Mali empire in controlling the area. The period 1501-1900 is valued (1,.75,.75) as Mauritania experienced mixed local and foreign control as some European nations established settlements and fortresses in the area. The final period 1901-1950 is valued (1,.5,1) as most of the country became occupied by France and would not regain independence until 1960.

**Mauritius:** Positive values begin in the period 1701-1750 where they are a weighted average because of permanent French settlement beginning in 1721:50 years multiplied by [.42(0,0,0) + .58(1,.5,1)] = 14.5 (21 years with no above-tribe rule, 29 years as a French colony). The entire remaining period (and thus 1721-1950) is valued (1,.5,1) as Mauritius would continue as subject to European powers (the British after the French) and would not gain independence until 1968.

**Mexico:** Positive values begin in the initial period 1-50 and are (1,1,.5) because of the existence of the Maya empire in southern portions of the country, most substantially the Yucatan peninsula. This valuation extends until the year 900. The period 901-1200 is valued (1,1,.3) as the Maya empire collapsed and a few Classical era states persisted in pockets of the country. The period 1201-1525 is valued (1,1,.75) as the Aztec empire emerged to control a large portion of central Mexico. The period 1501-1550 is a weighted average because of the Spanish conquest that had dominated much of Mexico by 1525:50 years multiplied by [.5(1,1,.75) + .5(1,.5,1)] = 31.25 (half of the period with a substantial part of the area under the Aztec empire, half of the period with the bulk of Mexico under Spanish occupation). The period 1525-1821 is valued (1,1,.5) as Mexico continued as a Spanish colony. The period 1801-1850 is a weighted average as Mexico regained independence in 1821:50 years multiplied by [.42(1,.5,1) + .58(1,1,1)] = 39.5 (21 years under colonial rule, 29 years as independent). The remaining period 1851-1950 (and thus 1821-1950) is valued (1,1,1).

**Moldova:** Moldova was invaded by successive waves of barbarians with no organized government from 0-900. Positive values begin in 901 when the area came under the rule
of Kievan Rus. 901-1950 is coded (1,.5,1). 1241-1400, the area was vassal to the Tartars. 1401-1513, it became part of the principality of Moldavia. After 1513, it belonged to the Ottoman Empire. In 1812, Russia secured Turkey’s cession of Bessarabia (Moldova), with the Treaty of Bucharest. In 1918, Bessarabia united Romania. In 1940, Soviet forces occupied Bessarabia. A year later, 1941, Romania reoccupied the territory. In 1944, the province was reintegrated into the Soviet Union as the Moldavian SSR.

**Mongolia:** Positive values for Mongolia begin in 1206 when Genghis Kahn united the tribes of Mongolia to form the Mongol Empire. The period 1201-1250 is a weighted average of 50 multiplied by \[.12(0,0,0) + .88(1,1,1)\] = 44, and the years 1251-1750 are (1,1,1). In 1759 China’s Manchu dynasty, also known as the Ch’ing dynasty, took control of Mongolia. The period 1751-1800 is assigned a weighted average of 50 multiplied by \[.18(1,1,1) + .82(1,.5,1)\] = 29.5, and the years 1801-1900 are coded (1,.5,1). In 1911, the Manchu dynasty fell and an independent monarchy was established in Mongolia. In 1921 the Russians helped establish the People’s Republic of Mongolia and maintained a strong influence on Mongolia. This makes \(S_2 = .75\). The period 1901-1950 is a weighted average of 50 multiplied by \[.22(1,.5,1) + .2(1,1,1) + .58(1,.75,1)\] = 37.25.

**Morocco:** For reference see *Macropaedia* listing under “North Africa”. Positive values begin in the initial period 1-50 and are (1,1,.75) as a substantial portion of Morocco was under the control of the Roman empire. This valuation extends until the year 450 when the Roman empire was in a state of disintegration. The period 451-700 is valued (1,.75,.75) as the area came under the mixed control of local kingdoms and foreign Byzantines (also the Vandal tribe). The period 701-750 is valued (1,.5,1) as Morocco came under the foreign-based control of the Umayyad caliphate. The period 751-1050 is valued (1,1,.75) as the area came under the mixed local control of various states and dynasties. The period 1051-1133 is valued (1,1,.75) as Morocco came under the consolidated control of the Marrakech-based Almoravids (a confederation of tribes). The period 1101-1150 is a weighted average as the Almohads established their authority over a large part of Morocco (and thus came to compete with the Almoravids) in 1133:50 years multiplied by \[.66(1,1,1) + .34(1,1,.75)\] = 45.75 (33 years under unified domestic rule, 17 years under divided domestic rule). The period 1133-1500 is valued (1,1,1) as unified local rule of the area was established under the Almohads and then, later, the Marinids. The period 1501-1550 is valued (1,.75,.75) as part of the area fell under the control of the Portuguese. The period 1551-1600 is valued (1,1,1) as control of Morocco was consolidated by a local dynasty. The period 1601-1650 is valued (1,1,.75) as control of the area was divided amongst multiple local dynasties. The period 1651-1700 is valued (1,1,1) as control of the area was again consolidated under a local dynasty. The period 1701-1750 is valued (1,1,.75) as Morocco became divided by multiple claims to the throne. The period 1751-1912 is valued (1,1,1) as control over Morocco became
consolidated under the Alawite dynasty. The final period 1901-1950 is valued (1,.5,1) as Morocco came under French control.

**Mozambique:** For reference see *Macropaedia* listing under “Southern Africa”. Positive values begin in the period 1501-1900 and are (1,.75,.75) as the area experienced divided domestic and foreign (Portuguese) control. The final period 1901-1950 is valued (1,.5,1) as the Portuguese consolidated their control of the area and Mozambique would not regain independence until 1975.

**Myanmar:** For reference see *Macropaedia* listing under “Southeast Asia”. Positive values begin in the initial period 1-50 and are (1,1,.75) due to the shared occupation of the Myanmar area by the Pyu and Mon civilizations. This value continues until the year 1050. The period 1051-1250 is valued (1,1,1) because of the consolidation of the area under the Pagan kingdom. The period 1251-1350 is valued (1,1,.75) as the Pagan kingdom disintegrated and the area was ruled by multiple domestic powers. The period 1351-1527 is valued (1,1,1) as power became consolidated under the dynasties of Ava. The period 1501-1550 is a weighted average as the Ava dynasty was sacked by the Shan in 1527:50 years multiplied by [.54(1,1,1) + .46(1,1,.75)] = 44.25 (27 years under the consolidated rule of Ava, 23 years under multiple domestic powers). The valuation of (1,.75) extends from 1527-1613 as the Shan, Burmans, and Mon ruled Myanmar during this period. The period 1601-1650 is valued (1,1,1) as power was again consolidated under the second Ava dynasty. The valuation of (1,1,1) extends until 1750 as the second Ava dynasty would collapse in 1752. The period 1751-1885 is valued (1,.75,.75) as the Shan, Burmans, Siamese, and British would assume control of parts of Myanmar after the collapse of the Ava dynasty. The period 1851-1900 is a weighted average as the British would assume control of Myanmar in 1885:50 years multiplied by [.7(1,.75,.75) + .3(1,.5,1)] = 27.188 (35 years of multiple power (foreign and domestic) rule, 15 years under the British). The final period 1901-1950 is valued (1,.5,1) as the area continued under British colonial rule.

**Namibia**
Positive values begin in 1884 when Germany established colonial rule over the area and called it South-West Africa. The period 1851-1900 is assigned a weighted average of 50 multiplied by [.68(0,0,0) + .32(1,.5,1)] = 8. In 1920, the area was mandated to South Africa by the League of Nations following WWI, but the variables do not change. The period 1901-1950 is scored (1,.5,1).

**Nepal:** Positive values begin in the period 401-450 and are (1,1,1) because of the rule of Nepal by the local Licchavi dynasty (this dynasty began in the 4th or 5th century – the year 401 is taken as the starting point). This valuation extends until the year 1450. The period 1451-1769 is valued (1,1,.75) as the area came under the control of multiple domestic principalities. The period 1751-1800 is a weighted average as control of Nepal again
became consolidated in 1769: 50 years multiplied by \[.38(1,.75) + .62(1,1,1)\] = 45.25 (19 years under divided local rule, 31 years under consolidated local rule). The entire remaining period (and thus 1769-1950) is valued (1,1,1) as consolidated domestic rule continued under the Shah family.

**Netherlands:** Positive values begin in the initial period 1-50 and are (1,.5,.75) because of Roman occupation of the southern portions of the country. This valuation extends until the year 400. The period 401-750 is valued (1,1,1) as the area was ruled by a local Frisian kingdom. The period 751-850 is valued (1,.75,1) as the Gaul-based Frankish kingdom extended its rule over the country; S2=.75 for this period because of the existence of locally-based aristocracy which held significant power. The period 851-1600 is valued (1,.75,.75) as the area evolved into a number of virtually independent principalities which had feudal relationships with, first, the Holy Roman Empire and, later, the France-based Burgundians and the Spanish-Austrian Habsburgs. The period 1601-1950 is valued (1,1,1) as The Netherlands gained independence and began to assume its current governmental structure after the Union of Utrecht.

**New Zealand:** Positive values begin in the period 1851-1900 and are (1,.5,1) as New Zealand became a British colony. The final period 1901-1950 is valued (1,.75,1) as New Zealand gained some greater local autonomy from Britain.

**Nicaragua:** For reference see Macropaedia listing under “Central America”. Positive values begin in the period 1501-1550 where they are a weighted average because of permanent Spanish colonization in 1524: 50 years multiplied by \[.48(0,0,0) + .52(1,.5,1)\] = 13 (24 years with no above-tribe rule, 26 years under Spanish colonial rule). The value (1,.5,1) extends from the year 1524 until the year 1800 as Nicaragua would remain under the colonial rule of the Spanish and, later, the British. The period 1801-1900 is valued (1,.75,.75) as Nicaragua experienced divided foreign and domestic control between European colonizers and local centers of power. The final period 1901-1950 is valued (1,1,1) as the country achieved independence.

**Niger:** For reference see Macropaedia listing under “Western Africa”. Positive values begin in the period 1301-1350 and are (1,1,.75) because of the existence of multiple domestic kingdoms in the area. This valuation extends until the year 1922 when the French occupied the area. The final period 1901-1950 is thus a weighted average: 50 years multiplied by \[.44(1,1,.75) + .56(1,.5,1)\] = 30.5 (22 years of divided domestic rule, 28 years of French colonial rule).

**Nigeria:** For reference see Macropaedia listing under “Western Africa”. Positive values begin in the period 751-800 and are (1,1,.5) because of the existence of the Kanem-Bornu empire in northeastern Nigeria. This valuation extends until the year 1050. The period
1051-1850 is valued (1,1,.75) as multiple domestic states emerged to rule the area. The period 1851-1900 is valued (1,.75,.75) as the British extended some colonial control over the country. The final period 1901-1950 is valued (1,.5,1) as the British consolidated their control of the area and Nigeria would not regain independence until 1960.

**Norway:** Positive values begin in the period 801-850 and are (.75,1,.75) as a number of regional tings (essentially assemblies between tribes) developed to settle disputes and issues of governance. This valuation extends until the year 900. The period 901-1130 is valued (1,1,1) as Norway became a consolidated kingdom under (first) Harald I and subsequent kings. The period 1101-1150 is a weighted average as a civil war divided the country in 1130:50 years multiplied by [.6(1,1,1) + .4(1,1,.75)] = 45 (30 years under consolidated domestic rule, 20 years of civil war). The period 1151-1200 also receives the value (1,1,.75) as this civil war continued. The period 1201-1250 receives a weighted average as the civil war would continue until 1217 at which point the country would become unified again under Haakon IV:50 years multiplied by [.34(1,1,.75) + .66(1,1,1)] = 45.75 (17 years of continued civil war, 33 years under unified domestic rule). The valuation of (1,1,1) extends from 1217 until the year 1400 as unified local rule would persist. The period 1401-1814 is valued (1,.5,1) as Norway entered into union with Denmark ; (.5) is given for S2 because of Norway’s weak position in this union as local government had little power and the country was governed from Copenhagen. The period 1801-1850 is valued (1,.75,1) as Norway entered into a more advantageous union with Sweden in 1814 ; S2 is (.75) for this period as Norway enjoyed far more local autonomy in its union with Sweden than it had with Denmark, although it was not fully independent. The valuation of (1,.75,1) extends until the year 1900 as the union was dissolved in 1905. The final period 1901-1950 is valued (1,1,1) as Norway spent most of this period as independent.

**Pakistan:** For reference see *Macropaedia* listing under “India”. Positive values begin in the initial period 1-50 and are (1,1,1) because of the rule of the Saka dynasty. The valuation (1,1,1) extends until the year 250 because of the rule of the Peshawar-based Kusana kingdom after the Saka collapsed. The period 251-300 is valued (1,.75,.75) as the Persian Sassanids conquered the area and controlled it along with some remaining Kushan kingdoms. The period 301-1000 is valued (1,1,.75) as Persian rule disintegrated and Pakistan was ruled by a number of local states and kingdoms. The period 1001-1200 is valued (1,1,1) as local rule was consolidated by the Ghazvanids. The period 1201-1750 is valued (1,.75,1) as Pakistan was absorbed by India-based empires (most notably those controlled by the Slave Dynasty and the Mughals) but still retained a good deal of independence. The period 1751-1850 is valued (1,1,1) as Pakistan became independent under the Abdali kingdom and then, later, a Sikh kingdom. The period 1851-1950 is valued (1,.5,1) as Pakistan came under British control and would not regain independence until the late 1940’s.
**Panama:** For reference see *Macropaedia* listing under “Central America”. Positive values begin in the period 1501-1550 and are (1,.5,1) as the area was settled by the Spanish. This valuation extends until the year 1821 when Panama declared independence from Spain and entered into the Gran Colombia union. The period 1801-1850 is a weighted average because of this change in status: 50 years multiplied by [.42(1,.5,1) + .58(1,.75,1)] = 32.25 (21 years under Spanish colonial rule, 29 years with some greater local autonomy under the Gran Colombia union). The value (1,.75,1) extends from the year 1821 to the year 1900. The final period 1901-1950 is valued (1,1,1) as Panama became independent.

**Papua New Guinea:** For reference see *Macropaedia* listing under “Pacific Islands”. Positive values exist only for the period 1901-1950 and are (1,.5,.75) as the area was occupied by multiple European powers (namely the British, Germans, and Dutch).

**Paraguay:** Positive values begin in the period 1551-1600 and are (1,.5,1) because of Spanish settlement of the area. This valuation extends until the year 1800. The period 1801-1950 is valued (1,1,1) as Paraguay gained independence in 1811.

**Peru:** For reference on the Huari and Inca empires see *Macropaedia* listing under “Pre-Columbian Civilizations”. Positive values begin in the period 601-650 and are (1,1,.5) because of the existence of the Huari state in a southern portion of the area. This valuation extends until the year 700. The period 701-800 is valued (1,1,1) as Huari expanded to become an empire and controlled a significant portion of Peru. The period 801-1450 is valued (1,1,.75) as Huari collapsed and the area came under the control of a number of small states. The period 1451-1532 is valued (1,1,1) as the Inca empire emerged to control the entire area. The period 1501-1550 is a weighted average because of the Spanish conquering the Inca empire in 1532: 50 years multiplied by [.64(1,1,1) + .36(1,5,1)] = 41 (32 years of Inca control, 18 years of Spanish colonial rule). The valuation of (1,.5,1) extends from the year 1532 until 1821. The period 1801-1850 is a weighted average because of Peruvian independence in 1821: 50 years multiplied by [.42(1,.5,1) + .58(1,1,1)] = 39.5 (21 years of Spanish colonial rule, 29 years of independence). The valuation of (1,1,1) extends from the year 1821 until the final year 1950.

**Philippines:** Positive values begin in the period 1501-1550 and are (1,.75,.75) as two local Islamic sultanates controlled the area. The period 1551-1600 is valued (1,.75,.75) as control of the area was divided between foreign (Spanish) and local powers. The period 1601-1900 is valued (1,.5,1) as the Spanish consolidated their control of the Philippines. The final period 1901-1950 is valued (1,.75,1) as the country gained some local autonomy but was also controlled to a substantial degree by the United States.
Poland: There was no governing body in Poland until 963, when Mieszko established the first Polish state, which resembled the present country in size. In 1138, Boleslaw III divided the state among his sons. The period 951-1000 is thus given a weighted average of 50 multiplied by \([.26(0,0,0) + .74(1,1,1)] = 37\), while 1001-1100 is scored (1,1,1). The period 1101-1150 is a weighted average of 50 multiplied by \([.76(1,1,1) + .24(1,1,.75)] = 47\) and the values (1,1,.75) continue to 1300, reflecting Poland’s division. In 1300, Wenceslas II became the King of Poland while already ruling as the King of Bohemia. In 1320, Wladyslaw I became King of Poland alone, so local rule was restored. The period 1301-1350 is thus assigned a weighted average of 50 multiplied by \([.40(1,.5,1) + .60(1,1,1)] = 40\). 1351-1700 is scored (1,1,1). In 1704 Charles XII of Sweden placed Stanislaw Leszynski on the throne after invading Poland. In 1709 Russia restored Augustus II to the throne but Poland was now under heavy Russian influence. The period 1701-1750 is given a weighted average of 50 multiplied by \([.08(1,1,1) + .10(1,.5,1) + .82(1,.75,1)] = 37.25\). In 1795 Stanislaw abdicated the throne, and Poland’s land was distributed among Russia, Prussia, and Austria. The period 1751-1800 is a weighted average of 50 multiplied by \([.90(1,.75,1) + .10(1,.5,.75)] = 35.625\). S3 remains .75 until 1918 because of continued Prussian and Austrian control of present-day Poland. In 1815, Tsar Alexander I controlled the newly created Kingdom of Poland under a constitution that allowed for Poland’s own administration, legislature, and army. In 1831, Tsar Nicholas I replaced the constitutional government with military dictatorship. The period 1801-1850 is assigned a weighted average of 50 multiplied by \([.68(1,.5,.75) + .32(1,.75,.75)] = 21.75\). 1851-1900 is coded (1,.5,.75). In 1918, Poland regained independence under Jozef Pilsudski, who served as chief of state and commander in chief. In 1939, the Soviets and Germans invaded from both sides. After their expulsion of the Germans in 1945, the Soviets retained influence in Poland. The period 1901-1950 is a weighted average of 50 multiplied by \([.36(1,.5,.75) + .42(1,1,1) + .12(1,.5,1) + .10(1,.75,1)] = 34.5\).

Portugal: Positive values begin in the initial period 1-50 and are (1,.5,1) because of Roman control of the area. This valuation extends until the year 400. The period 401-450 is valued (1,1,1) as control of the area was consolidated under a Suebic dynasty. The period 451-550 is valued (1,1,.75) as control of the area was divided between the Suebi and the Visigoths. The period 551-700 is valued (1,1,1) as a Suebic dynasty again consolidated control of the area. The period 701-900 is valued (1,.5,1) as Muslim Berbers invaded and occupied Portugal. The period 901-1250 is valued (1,.75,.75) as control over the area was divided between domestic and foreign (Spanish, Berbers) powers. The period 1251-1580 is valued (1,1,1) as control over Portugal was consolidated under local dynasties. The period 1551-1600 is a weighted average as Portugal was occupied by Spain in 1580: 50 years multiplied by \([.6(1,1,1) + .4(1,.5,1)] = 40\) (30 years under independent domestic rule, 20 years under Spanish occupation). The period 1601-1650 is valued (1,.5,1) as Spanish occupation continued. The period 1651-1950 is valued (1,1,1) as Portugal regained and maintained its independent status.
Romania: Positive values begin in year 1 as there was a Geto-Dacian state under Decebalus. 1-100 is (1,1,1). In 101 the Romans invaded under Trajan, only to withdraw in 275. 101-250 is (1.5,1). In 275 Dacia was overrun by Visigoths, Huns, Germanic Gepidae, Avars, and Slavs, leading to the absence of centralized government for the next 520 years. The period 251-300 is assigned a weighted average of 50 multiplied by \[.5(1,1,1) + .5(0,0,0)] = 12.5, while the years 301-750 are scored (0,0,0). In 796 the Bulgarian empire extended control over Dacia, which continued until 1330. 751-800 is assigned a weighted average of 50 multiplied by \[.92(0,0,0) + .08(1,1,1)] = 2, and 801-1300 is coded (1,5,1). In 1330 Walachia in the south became an independent principality, while Transylvania in the north became part of the Hungarian kingdom, a situation that prevailed until 1359, when Moldavia in the east became an independent principality. The period 1301-1350 is assigned a weighted average of 50 multiplied by \[.60(1,5,1)+.40(1,75,.75)]=26.25, while 1351-1700 is coded (1,75,.75), reflecting the continued division and partial Hungarian control of what is now Romania. In 1746 the Ottoman Empire curtailed independence in the principalities by replacing native princes with Greek or Hellenized families from the Phanar district of Constantinople. The period 1701-1750 is assigned a weighted average of 50 multiplied by \[.92(1,75,.75) + .08(1,5,.75)] = 27.375, and the values (1,5,.75) remain in place during 1751-1800. In 1829 the Ottomans restored the native Romanian princes, changing S2 back to .75. The period 1801-1850 is a weighted average of 50 multiplied by \[.58(1,5,.75) + .42(1,75,.75)] = 22.6875. In 1918, the principalities, which had united in 1859, united with Transylvania to form a kingdom, making S3 = 1. 1851-1900 is coded (1,75,.75). In 1940 Hungary retook Transylvania. After Romania’s 1944 occupation by the Soviets, the country remained largely influenced by the Soviet Union. In 1947, Transylvania was returned to Romania in a peace treaty. The period 1901-1950 is a weighted average of 50 multiplied by \[.48(1,75,.75) + .44(1,1,1) + .02(1,5,.75) + .06(1,75,1)] = 38.125.

Russia: Russia was occupied by various tribes from 0-862. Positive values begin in 862 as the Varangarians (Norsemen) sent Rurik to rule. Kievan Rus was formed and operated from Kiev. It contained Kiev, Novgorod, and Smolensk. The period 851-900 is assigned a weighted average of 50 multiplied by \[.24(0,0,0) + .76(1,5,.3)] = 5.7. 862-1240 is coded (1,5,.3). In 1240, Batu, son of Genghis Kahn conquered Kievan Rus and formed the Golden Horde. But, the Tartars never took Novgorod. The period 1201-1250 is assigned a weighted average of 50 multiplied by \[.80(1,5,.3) + .20(1,75,.3)] = 8.25. 1240-1480 is coded (1,75,.3). In 1480, the Tartars withdrew, and Ivan the Great combined Moscow and Novgorod and spread Muscovy rule to the Arctic. The period 1451-1500 is assigned a weighted average of 50 multiplied by \[.60(1,75,.3) + .40(1,1,5)] = 16.75. 1480-1580 is coded (1,1,5). In 1580, Ivan IV the Terrible pushed Muscovy rule into Siberia. The period 1551-1600 is assigned a weighted average of 50 multiplied by \[.60(1,1,5) + .40(1,1,1)] = 35. 1580-1950 is coded (1,1,1). In 1922, the Bolsheviks established the Union of Soviet Socialist Republics.
Rwanda: For reference see *Macropaedia* listing under “Central Africa”. Positive values begin in the period 1551-1600 and are (1,1,1) because of the rule of one kingdom in the central portion of the country. This valuation extends until the year 1900. The final period 1901-1950 is valued (1,.5,1) as Rwanda became a colony of, first, Germany and, later, Belgium and would not regain independence until the 1960’s.

Sao Tome and Principe: The islands had no central government until 1480, when Portugal colonized them, sending out “New Christians” to live there after the Inquisition and employing African slaves to grow sugar. The period 1451-1500 is assigned a weighted average of 50 multiplied by \([.60(0,0,0) + .40(1,.5,1)] = 10\). The country remained a Portuguese colony until 1975, so the period 1501-1950 is coded (1,.5,1).

Saudi Arabia: Positive values begin in year 1 with Nabatean influence from Jordan stretching into Arabian Dedan. The value (1,.5,.3) is assigned for the first century. The Nabatean kingdom is annexed by the Roman empire in 111 C.E. and the Kindah, Bedouin tribal kingdoms where kings, described as ruling by personal prestige over several tribes rather than having settled authority over all tribes in a territory, first appeared around the dawn of the second century. Since government was closer to a paramount chiefdom the question of government (S1) receives a .75 while foreign and local influence cause S2 = .75 and the vague organization of the Bedouin tribes bringing significantly more land under the umbrella of multiple governments’ areas of control make S3 = .75, so the era has values of (.75,.75,.75) or 21.098 for each half century until 300 C.E. Sassanid Persians began to have a serious influence over the area in the late 3rd century. The more organized Lakhmid bedouin dynasty seemed to have formed around 300 C.E., and the rival Byzantine-allied Ghassanids formed later, changing S1 to 1, hence overall value (1,.75,.75) or 28.125 per half century. A new group, the Quraysh, consolidated an alliance of tribes centered in Mecca around 500 C.E. changing the value to (1,1,.75). Around 600 C.E. Quraysh began to expand its influence and simultaneously the Sassanian Persians and the Byzantine frontier began to collapse in Arabia, and the rival Lakhmid and Ghassanid Bedouin dynasties disintegrated. The power vacuum left in their wake in addition to the advent of Islam in Medina and Mecca marks the switch to full independent organized government (1,1,1) in 600 C.E.. In 661, Mu'awiyah of the Ummayid Caliphate moved the Arab/Islamic empire's center of government from Mecca to Damascus in Syria. Thus 651-700 is given the weighted average of 50 multiplied by \([.22(1,1,1) + .78(1,.75,1)] = 40.25\). Encyclopedia Britannica states that the political center of Islam and the various caliphate empires left the Arabian peninsula never to return. The holy city, remaining the spiritual capital, maintained some independence while being heavily influenced by foreign groups whose caliphates contained Mecca at various times, such as the Ummayids in Damascus, replaced by the Abbasids in Baghdad, followed by Mamluks of Egypt and Ottoman Turks. The continuous mixture of rising and falling foreign influence that persisted under the ever-present semi-independent Sharifs of Mecca assigns the period of 701-1806 C.E. the value (1,.75,1). In 1806 the Wahabi sect under the Sa'ud family besieged and took Mecca, establishing a revolutionary and fully independent new local government (1,1,.75). Conquest by the
Egyptians in 1813, establishing full control over the area, changes values to (1,.5,1) until 1823. In 1824 the Sa'ud took Riyadh and reestablished their government while the Egyptians remained in Mecca (1,1,.75). 1840 saw the Ottomans replace the Egyptians in Mecca, not yet changing values (1,1,.75), and then proceed to over-run the local Saudis who fled to Kuwait in 1871 (1,.5,1). The time period 1801-1850 is assigned the weighted value 50 multiplied by [.12(1,.75,1) + .14(1,1,.75) + .22(1,.5,1) + .52(1,1,.75)] = 34.75 and the time period of 1851-1900 is assigned [.42(1,1,.75) + .58(1,.5,1)] = 30.25. 1902 marked the re-conquest of Riyadh by the Saudis (1,.75,1) and 1924 marked the consolidation of the independent Sa'ud Family (1,1,1) and modern Saudi Arabia. 1901-1950 is assigned 50 multiplied by [.04(1,.5,1) + .44(1,1,.75) + .52(1,1,1)] = 43.5.

**Senegal:** For reference see *Macropaedia* listing under “Western Africa”. Positive values begin in the period 1051-1100 and are (1,.75,.75) as the area came under the control of the Morocco-based Almoravid empire ; S2=.75 for this period because, although the Almoravids were centered in North Africa, their rule was partially local and should be differentiated from a purely colonial or occupational state. This valuation extends until the year 1150. The period 1151-1450 is valued (1,1,1) as the local Jolof kingdom emerged to control the area. The period 1451-1850 is valued (1,.75,.75) as control over the area became divided between multiple domestic states and multiple European powers. The period 1851-1950 is valued (1,.5,1) as the French consolidated their colonial control of the area and Senegal would not regain independence until 1960.

**Serbia and Montenegro:** The period 1-9 is coded (0,0,0). Positive values begin in year 9 when the Romans conquered native tribal groups. In 395, Byzantium took control. The period 9-1185 is coded (1,.5,1). The years 1-50 are assigned a weight average of 50 multiplied by [.18(0,0,0) + .82(1,.5,1)] = 20.5. In 1185, Stefan Nemanja stopped recognizing the supremacy of Byzantium, creating the first Serbian state. 1185-1459 is coded (1,1,1). The period 1151-1200 is assigned a weighted average of 50 multiplied by [.70(1,.5,1) + .30(1,1,1)] = 32.5. The period 1459-1815 is coded (1,.5,1). In 1459, the Ottoman Empire took control of Serbia with the fall of Smederevo. The years 1451-1500 are assigned a weight average of 50 multiplied by [.18(1,1,1)+.82(1,.5,1)]=29.5. In 1815, the Ottoman Empire made several concessions to the Serbs including retention of their arms, considerable power of local administration, and the right to hold their own assembly, but the region remained a Turkish principality. These concessions make S2 = .75. The period 1815-1830 is coded (1,.75,1). In 1830, following the Russo-Turkish War, the Ottoman government granted full autonomy to the Serbian principality. The years 1830-1941 are coded (1,1,1). The period 1801-1850 is assigned a weighted average of 50 multiplied by [.30(1,.5,1) + .30(1,1,1) + .40(1,1,1)] = 38.75. In 1918, Serbia and Montenegro were united with Croatia, Slovenia, Macedonia, and Bosnia and Herzegovina in a state that was renamed the Kingdom of Yugoslavia in 1929. Serbia was the center of this state. In 1941, Germany held most of Serbia under military occupation. The years 1941-1945 are coded (1,.5,1). In 1945, Communist Josip Broz Tito recreated Yugoslavia as a Communist federation, again with Serbia as its center. The period 1901-1950 is assigned a weighted average of 50 multiplied by [.92(1,1,1)+.08(1,.5,1)]=48.
**Seychelles:** The islands had no central government until 1756, when they were formally annexed to France. The period 1751-1800 is a weighted average of 50 multiplied by \([.12(0,0,0) + .88(1,5,1)] = 22\). The archipelago was surrendered to Great Britain in 1810 and self-government was not granted until 1975. The period 1801-1950 is coded (1,5,1).

**Sierra Leone:** Prior to 1787, this country had no government above the tribal level. In 1787, British opponents of slavery helped freed slaves establish the settlement Freetown. Because so little of the region was controlled by this group, \(S_3 = .3\). The period 1751-1800 is assigned a weighted average of 50 multiplied by \([.74(0,0,0) + .26(1,75,3)] = 2.925\). In 1808, the settlement became a British colony. The period 1801-1850 is assigned a weighted average of 50 multiplied by \([.16(1,75,3) + .84(1,5,3)] = 8.1\). In 1896, the rest of the territory became a British protectorate, making \(S_3 = 1\). The period 1851-1900 is assigned a weighted average of 50 multiplied by \([.92(1,5,3) + .08(1,5,1)] = 8.9\). The period 1896-1950 is coded (1,5,1).

**Singapore:** For reference see *Macropaedia* listing under “Southeast Asia”. Positive values begin in the period 1351-1400 and are (1,75,1) because of rule of Singapore by the Java-based Majapahit empire and, later, a prince from Palembang; \(S_2 = .75\) for this period because, although rule was from abroad, it was not entirely (or perhaps at all) “foreign” and should be distinguished from a colonial or occupational state. This valuation extends until the year 1824 as Singapore continued to be ruled from the near-abroad (Malacca and then Johor). The period 1801-1850 is assigned a weighted average because of British possession of Singapore beginning in 1824:50 years multiplied by \([.48(1,75,1) + .52(1,5,1)] = 31\) (24 years of quasi-local rule, 26 years of British colonial rule). The valuation of (1,5,1) extends from 1824 until the final year 1950 as Singapore would not gain independence until after 1950.

**Slovakia:** Up to 800 the land was inhabited by various tribes. Positive values begin in 818 when the Empire of Great Moravia was formed under Prince Mojmir. It included all of Bohemia, Slovakia, the southern part of Poland, and the western part of Hungary. Because it was not centered in Slovakia, \(S_2 = .5\). The period 801-850 is assigned a weighted average of 50 multiplied by \([.36(0,0,0) + .64(1,5,1)] = 16\). 818-1918 is coded (1,5,1). In 906, the Magyars of Hungary destroyed Great Moravia, and Slovakia remained under Hungarian rule. In 1526, Slovakia fell into the hands of the Austrian Hapsburgs. In 1867, Hapsburg domains fell under the control of the dual monarchy of Austria-Hungary. In 1918, Slovakia was incorporated into Czechoslovakia. The Slovaks were outnumbered by the Czechs, less educated, and less experienced with self-government. Also, the capital, Prague, was not in Slovakia. These factors make \(S_2 = .75\) because there was partial independence, but Slovakia was still dominated by the Czechs.
1918-1939 is coded (1,.75,1). In 1939, the Germans occupied Slovakia. 1939-1945 is coded (1,.5,1). In 1945, the USSR liberated Czechoslovakia, and Communists gained control of the country in 1948. 1945-1950 is coded (1,.75,1). The period 1901-1950 is assigned a weighted average of 50 multiplied by [.48(1,.5,1)+.52(1,.75,1)]=31.5.

**Slovenia:** The period 1-9 is coded (0,0,0). Positive values being in year 9 when the Romans conquered native tribal groups. The period 1-50 is assigned a weight average of 50 multiplied by [.18(0,0,0) + .82(1,.5,1)] = 20.5, and 9-500 is coded (1,.5,1). In 501, Roman power declined and the ancestors of the Slovenes settled in the region. The period 501-623 is coded (0,0,0). In 623, the area formed part of a Slavic kingdom under Samo. The period 601-650 is assigned a weight average of 50 multiplied by [.46(0,0,0) + .64(1,1,1)] = 32. and the years 651-700 are coded (1,1,1). In 748, the kingdom came under Frankish rule. After the partitioning of the Frankish Empire, the area was assigned to the German kingdom. Finally in the 14th Century, it fell under Hapsburg rule. The period 748-1945 is coded (1,.5,1). The period 701-750 is assigned a weighted average of 50 multiplied by [.96(1,1,1) + .04(1,.5,1)] = 49. In 1918, Slovenia joined the Kingdom of Serbs, Croats, and Slovenes, renamed Yugoslavia in 1929, which was centered in Serbia. In 1941, Slovenia was divided between Germany, Italy, and Hungary. In 1945, Yugoslavia was reestablished, this time under Communist Josip Broz Tito. The state was more decentralized under this arrangement so S2=.75. The period 1901-1950 is assigned a weighted average of 50 multiplied by [.90(1,.5,1) + .10(1,.75,1)] = 26.25.

**Somalia:** Positive values begin in year 1 as the northern and eastern coasts were part of what was known to the Egyptians as the Kingdom of Punt. Punt lasted until 600. The period 1-600 is coded (1,1,1). Beginning in 601, immigrant Arabs and Persians began establishing trading posts along the Gulf of Aden and the Indian Ocean. Muslim sultanates grew out of these posts. The period 601-1850 is coded (1,1,.75). S3 becomes .75 because of the different sultanates. The situation lasted until 1884, when the British set up a protectorate in the north known as British Somaliland. Following the establishment of the British protectorate, the Italians began controlling the south in 1889 and created Italian Somaliland. Between the years 1884-1889 S2 is .75 because of half local control and half foreign, the British. After 1889 S2 is .5 because of complete foreign control. After 1884 S3 is .75 because of multiple governments. The period 1851-1900 is a weighted average of 50 multiplied by [.68(1,1,1) + .10(1,.75,.75) + .22(1,.5,.75)] = 40.938. Between 1910 and 1920 British Somaliland briefly gained independence after a revolt led by Maxamed Cabdulle Xasan. This makes S2 = .75 again because of some local control. British power was reestablished in 1920 and Somalia did not regain independence until 1960 when Italian and British Somaliland were united. The period 1901-1950 is assigned a weighted average of 50 multiplied by [.80(1,.5,.75) + .2(1,.75,.75)] = 20.625.

**South Africa:** For reference see *Macropaedia* listing under “Southern Africa”. Positive values begin in the period 1701-1750 and are (1,.5,.5) because of partial Dutch settlement
of the area. The period 1751-1800 is valued \(1,.75,.75\) as Dutch settlement combined with emerging local kingdoms to divide the area between foreign and domestic state rule. This valuation extends until the year 1850. The period 1851-1900 is valued \((1,.5,1)\) as the area became consolidated as a British colony. The final period 1901-1950 is valued \((1,.75,1)\) as the country gained greater local autonomy from Britain.

**Spain:** Positive values begin in the initial period 1-50 and are \((1,.5,1)\) because of Roman occupation of the area. This valuation extends until the year 400. The period 401-500 is valued \((1,1,.75)\) as multiple “barbarian” kingdoms arose in the area. The period 501-700 is valued \((1,.75,.75)\) as part of the area came under Byzantine control. This valuation extends until the year 1500 as Spain continued to be ruled by multiple local kingdoms in addition to foreign powers (North African Muslims in addition to the Byzantines). The remaining period 1501-1950 is valued \((1,1,1)\) as rule over Spain was consolidated under Ferdinand and Isabella (although significant differences and conflicts between Castile and Aragon persisted long thereafter) and the country would continue to maintain consolidated domestic rule.

**Sri Lanka:** Positive values begin in the initial period 1-50 and are \((1,1,1)\) because of the existence of a domestic kingdom in the area. This valuation extends until the year 950 as the area would continue to be ruled by a local dynasty. The period 951-1017 is valued \((1,1,.75)\) as the area came under divided domestic control. The period 1001-1050 is a weighted average as domestic rule by the Sinhalese would again become consolidated in 1017: 50 years multiplied by \([.34(1,1,.75) + .66(1,1,1)] = 45.75\) (17 years of divided domestic rule, 33 years of consolidated domestic rule). The valuation \((1,1,1)\) extends from 1017 to 1200. The period 1201-1550 is valued \((1,.75)\) as domestic rule was again divided by a number of dynastic feuds and a weak central government. The period 1551-1600 is valued \((1,.75,.75)\) as the Portuguese gained partial control of Sri Lanka. The entire remaining period 1601-1950 is valued \((1,.5,1)\) as Sri Lanka came under the full control\(^3\) of colonizing powers (first the Portuguese, then the Dutch and, finally, the British) and would not regain independence until 1948.

**Sudan:** Positive values begin in year 1, as the northern area of Sudan was part of the Kingdom of Kush. 1-350 is coded \((1,1,.75)\). Kush ended with the destruction of its capital Meroe. From 351-550, the area was inhabited by people called Nobatae and by nomadic Blemmyes. There was no government above the tribal level, so this period is coded \((0,0,0)\). By 551, the country was the home of three Christian kingdoms in the north: Nobatia, Maqurrah, and ‘Alwah. 551-1300 is coded \((1,1,.75)\). In 1301, Arab tribes conquered the kingdoms, and two resulting sultanates consolidated their control over northern Sudan. The period 1301-1821 is also coded \((1,.75)\). In 1821, the sultanates fell under the control of the Ottoman Empire, and the province was extended southward. The period 1801-1850 is assigned a weighted average of 50 multiplied by

\(^3\) The kingdom of Kandy retained its independence but covered such a small area that it is not being considered for the purposes of this index.
Sudan: In 1885, Sudan’s Muslims revolted under Muhammad Ahmad, who became the country’s ruler. 1885-1898 is coded (1,1,1). This independence was short-lived because in 1898, British forces conquered the territory. The period 1851-1900 is assigned a weighted average of 50 multiplied by [.74(1,5,1) + .26(1,1,1)] = 31.5. Following that invasion, the British and Egyptians ruled the region jointly as Anglo-Egyptian Sudan. 1898-1950 is coded (1,5,1).

Swaziland: For reference see Macropaedia listing under “Southern Africa”. Positive values begin in the period 1751-1800 where they are a weighted average because of the emergence of the local Dlamini kingdom around 1770:50 years multiplied by [.4(0,0,0) + .6(1,1,1)] = 30 (20 years with no above-tribe rule, 30 years with a local kingdom). The valuation of (1,1,1) extends until the year 1850. The period 1851-1900 is valued (1,75,75) as control of the area became divided between the Dlamini and encroaching European colonists. The final period 1901-1950 is valued (1,5,1) as the country became a British colony and would not regain independence until 1968.

Sweden: Positive values begin in the period 1151-1200 and are (1,1,.75) because of a weak Swedish monarchy with multiple claims to the throne. This valuation extends until the year 1250. The period 1251-1400 is valued (1,1,1) as the monarchy was consolidated. The period 1401-1450 is valued (1,75,1) as Sweden entered into the Kalmar Union with Denmark and Norway (S2 for the Kalmar period is .75 as Denmark dominated the Union). The period 1451-1523 is valued (1,75,75) as Sweden experienced civil war and other serious internal division while remaining a member of the Kalmar Union. The period 1501-1550 is a weighted average as the Kalmar Union would be dissolved in 1523:50 years multiplied by [.46(1,.75,1) + .54(1,1,1)] = 39.938 (23 years under divided internal and partial foreign rule, 27 years as independent and unified). The entire remaining period (and thus 1523 to 1950) is valued (1,1,1).

Switzerland: Positive values begin in the initial period 1-50 and are (1,.5,1) because of Roman settlement in the Switzerland area. This valuation extends until the year 400 when Germanic tribes forced the Romans to exit the area. The period 401-500 receives no positive value because of the domination of Germanic tribes with no discernable government above the tribal level. Positive values begin again in 501 and are (1,75,1) which reflects the rule of the Frankish kingdom over the Switzerland area; this value of (1,75,1) continues until 850. After the Treaty of Verdun in 843 the Switzerland area was broken up and divided amongst grandsons of Charlemagne: thus the value (1,1,75) for 851-900 which reflects this divided rule. This value of (1,75,1) extends until the year 1000. Beginning in the period 1001-1050 and continuing until the year 1200 a value of (1,75,1) is assigned which designates a renewed loyalty in Switzerland to the Holy Roman Empire. For 1201-1500 the valuation changes back to (1,1,75), reflecting a lengthy power struggle between the Habsburg dynasty and the free Swiss population over control of the area. In the year 1499 Switzerland earned _de facto_ independence: the value
of (1,1,1) is thus assigned for the next period, 1501-1550, and this valuation remains until the year 1801. The period 1801-1850 is a weighted average because of Napoleon’s incursion into Swiss politics and Switzerland’s status as a vassal state to France (this situation effectively ended in 1815). Thus the period is weighted: 50 years multiplied by .3(1,.75,1) + .7(1,1,1) = 46.25, reflecting 15 years of subservience to Napoleon and 35 years of independence after the Napoleonic Wars had ended. The remainder of Switzerland’s history, 1851-1950, is independent and valued at (1,1,1).

**Syria:** Positive values begin in the initial period 1-50 and are (1,.5,1) because of Roman occupation of the area. This valuation extends until 650 as the area would continue to be ruled from abroad (the Byzantines and Arabian Muslim caliphate after the Romans). The period 651-750 is valued (1,1,1) as the area was ruled by the Damascus-based Umayyad caliphate. The period 751-950 is valued (1,.5,1) as Syria was governed from abroad by the Abbasids of Baghdad and, later, the Tulunids of Egypt. The period 951-1000 is valued (1,.75,.75) as the area was ruled by a local dynasty in addition to the Tulunids. The period 1001-1100 is valued (1,.5,1) as the area was again ruled entirely from Egypt. The period 1101-1200 is valued (1,.75,.75) as Syria was ruled from abroad by Turks and locally by Crusaders. This valuation extends until the year 1516 as Syria continued to experience divided domestic and foreign rule. The period 1501-1550 is a weighted average as the Ottomans would consolidate control of the area in 1516: 50 years multiplied by [.32(1,.75,.75) + .68(1,.5,1)] = 26 (16 years of divided local and foreign rule, 34 years of occupation). The valuation of (1,.5,1) extends from 1516 to the year 1700. The period 1701-1850 is valued (1,.75,1) as Syria enjoyed some greater local autonomy under the Ottomans. The period 1851-1950 is valued (1,.5,1) as Syria came under the consolidated control of foreign powers – the Ottomans, then the British, then the French – and would not regain independence until 1946.

**Taiwan:** Positive values begin in the period 1601-1650 and are (1,.5,.75) because of Spanish and Dutch settlement. The period 1651-1900 is valued (1,1,1) as Taiwan became a part of China after the European colonizers were expelled from Taiwan. The final period 1901-1950 is valued (1,.5,1) as Taiwan was controlled by Japan.

**Tajikistan:** Positive values begin in 0 because the land was part of the ancient countries of Khwarezm and Bactria. 0-600 is coded (1,.5,.75). In 601, the Arab conquest brought Islam to the region. 601-819 is coded (1,1,1). In 819, the rise of the Samanids brought the Tajiks under the rule of the Iranian dynasty. 819-1950 is coded (1,.5,1). The period 801-850 is assigned a weighted average of 50 multiplied by [.38(1,1,1) + .62(1,.5,1)] = 34.5. In 999, Turkic invaders seized the region. In 1751, Afghans conquered the lands. In 1868, Bukhara, which was made up of most of present day Tajikistan, became a Russian protectorate. In 1920, the Bukharan People’s Soviet Republic was established. In 1924, the Tadzhik Autonomous SSR was created.
Tanzania
Positive values begin in 1503 when the Portuguese took control of the coastal region and the island of Zanzibar. $S_3 = .3$ because the land occupied was less than 10%. The period 1501-1550 is assigned a weighted average of 50 multiplied by $[.06(0,0,0) + .94(1,.5,.3)] = 7.05$. The period 1551-1700 is coded (1,.5,.3). In 1701, Arab rulers from Oman took control of the former Portuguese land. The period 1701-1800 is still coded (1,.5,.3). In 1830, the Oman ruler began ruling from Zanzibar, making $S_2 = 1$. The period 1801-1850 is assigned a weighted average of 50 multiplied by $[.60(1,.5,.3) + .40(1,1,.3)] = 10.5$. In 1885, as the Oman dynasty died out, Germany took control of mainland Tanzania, known as Tanganyika, and combined it with Rwanda and Burundi to form German East Africa. In 1890, Zanzibar became a British protectorate. This makes $S_3 = .75$ because of multiple powers ruling the area. The period 1851-1900 is assigned a weighted average of 50 multiplied by $[.70(1,1,.3) + .30(1,.5,.75)] = 16.125$. In 1919, Britain took control of Tanganyika, making $S_3 = 1$. The period 1901-1950 is assigned a weighted average of 50 multiplied by $[.38(1,.5,.75) + .62(1,.5,1)] = 22.625$.

Thailand: For reference see *Macropaedia* listing under “Southeast Asia”. Positive values begin in the period 551-600 and are (1,.75) because of the emergence of multiple local kingdoms in the area. This valuation extends until the year 850. The period 851-1300 is valued (1,.75,.75) as control over the area was divided between multiple local kingdoms as well as the Angkor (Cambodia)–based Khmer empire. The period 1301-1450 is valued (1,1,.75) as control of the area was divided between two domestic kingdoms. The period 1451-1950 is valued (1,1,1) as control over Thailand (Siam) would be consolidated by a series of local dynasties beginning with the Ayutthaya kingdom, and the area (though restricted by agreements with European powers) would remain uncolonized and independent.

Togo: For reference see *Macropaedia* listing under “Western Africa”. Positive values begin in the period 1751-1800 and are (1,.5,1) because of Danish control of the area. The period 1801-1950 is valued (1,.5,.75) as Togo would come under the control of multiple European powers (Germany, Britain, and France after Denmark) and would not gain independence until 1960.

Trinidad and Tobago: For reference see *Macropaedia* listing under “West Indies”. Positive values begin in the period 1601-1650 and are (1,.5,1) because of Spanish settlement of the area. This valuation extends until 1950 as the area would remain a colony (later under the British) and would not gain independence until 1962.

Tunisia: For reference see *Macropaedia* listing under “North Africa”. Positive values begin in the initial period 1-50 and are (1,.5,1) because of Roman occupation of the area. This valuation extends until the year 450. The period 451-700 is valued (1,.75,.75) as the area came under the mixed control of local kingdoms, the Byzantines, and the Vandals.
The period 701-800 is valued (1,1,1) as Tunisia came under the control of foreign-based Muslim caliphates. The period 801-900 is valued (1,75,1) as the area gained greater local autonomy under the Aghlabids. The period 901-1015 is valued (1,1,1) as the area came under the control of the locally-based Fatimids. The period 1001-1050 is a weighted average because of the disintegration of Fatimid consolidation in 1015:50 years multiplied by \([.3(1,1,1) + .7(1,1,.75)] = 41.25\) (15 years of consolidated domestic rule, 35 years of divided domestic rule). The valuation of (1,1,.75) extends from 1015 to 1250. The period 1251-1500 is valued (1,1,1) as control of the area was consolidated by the Hafsid dynasty. The period 1501-1574 is valued (1,.75,1) as the Spanish established some garrisons along the Tunisian coast and the Hafsids were under Spanish protection. The period 1551-1600 is a weighted average as the Ottomans conquered the area in 1574:50 years multiplied by \([.48(1,.75,1) + .52(1,.5,1)] = 31\) (24 years of some Spanish protection, 26 years under Ottoman rule). The period 1601-1881 is valued (1,.75,1) as Tunisia gained some greater local autonomy from the Ottomans under dey rule. The period 1851-1900 is a weighted average as Tunisia fell to the French in 1881:50 years multiplied by \([.62(1,.75,1) + .38(1,.5,1)] = 32.75\) (31 years with some local autonomy under the deys, 19 years under French occupation). The entire remaining period (and thus 1881 to 1950) is valued (1,.5,1).

**Turkey:** For reference see Macropaedia listing under “Turkey and Ancient Anatolia”. Positive values begin in the initial period 1-50 and are (1,.5,1) because of Roman rule of the area. This valuation extends until the year 450. The period 451-1071 is valued (1,1,1) as the Byzantines from Constantinople ruled the area locally. The period 1051-1100 is assigned a weighted average because of the Battle of Manzikert in 1071 after which rule of the area became divided between the Byzantines and the Seljuqs:50 years multiplied by \([.42(1,1,1) + .58(1,1,.75)] = 42.75\) (21 years of consolidated domestic rule, 29 years of divided domestic rule). The valuation of (1,1,.75) extends from the year 1071 until the year 1500. The period 1501-1950 is valued (1,1,1) as Turkey came under the consolidated control of the Ottomans and remained independent thereafter (save a brief occupation).

**Turkmenistan:** Positive values begin in year 0 as the land formed part of the Parthian Empire. 0-1300 is coded (1,.5,1). In 301, Sasanian conquest put it under Persian control. In 601, Arabs conquered it and brought Islam to the region. In 1201, the Mongol invasions occurred. In 1301, the Turkmens ruled without political unity. Organization was exclusively tribal. 1301-1881 is coded (0,0,0). In 1881, the Transcaspian province was created and all of present day Turkmenistan was made part of the Russian Empire. The period 1851-1900 is assigned a weighted average of 50 multiplied by \([.62(0,0,0) + .38(1,.5,1)] = 9.5\). 1881-1950 is coded (1,.5,1). In 1924, Turkmenistan became the Turkmen Soviet Socialist Republic and a year later an official republic of the Soviet Union.
**Uganda:** For reference see *Macropaedia* listing under “Eastern Africa”. Positive values begin in the period 1551-1600 and are (1,.75,.75) as the Uganda area was under the local control of the Bunyoro and Buganda kingdoms. This value extends until the year 1900 as Uganda continued to be ruled domestically by these kingdoms. The final period 1901-1950 is valued (1,.5,1) as Uganda became occupied by the British.

**Ukraine:** Various nomadic tribes overran the region from 0-850. Positive values begin in 851 with the formation of Kievan Rus, using the help of the Varangians (Norsemen). Kievan Rus was a loose aggregation of principalities. 851-1340 is coded (1,.75,.75). In 1240, Mongols conquered Kievan Rus, but the principality of Galicia-Volhynia was able to preserve autonomy until 1340. In 1340, the territory was under the rule of the Golden Horde, the Grand Duchy of Lithuania, and the Kingdom of Poland. The period 1301-1350 is assigned a weighted average of 50 multiplied by [.80(1,.75,.75) + .20(1,.5,.75)] = 26.25. 1340-1569 is coded (1,.5,.75). In 1569, Poland took over most of the present day country with the Union of Lublin, which formed the Polish-Lithuanian Commonwealth. The period 1551-1600 is assigned a weighted average of 50 multiplied by [.38(1,.5,.75) + .62(1,.5,1)] = 22.625. 1569-1667 is coded (1,.5,1). In 1667, the Treaty of Andrusovo split the territory, east of the Dnieper went to Muscovy, while the west went to Poland. The Muscovy region gave the Cossacks a lot of autonomy that was not curtailed until 1764, under Catherine. 1651-1700 is assigned a weighted average of 50 multiplied by [.34(1,.5,1) + .66(1,.75,.75)] = 27.063. 1667-1764 is coded (1,.75,.75). 1764-1795 is coded (1,.5,.75). In 1795, Russia received most of the country’s land under the Third Partition of Poland. The period 1751-1800 is assigned a weighted average of 50 multiplied by [.28(1,.75,.75) + .62(1,.5,.75) + .10(1,.5,1)] = 22. 1795-1950 is coded (1,.5,1). In 1922, the Ukrainian SSR joined the USSR.

**United Kingdom:** Positive values begin in the period 51-100 and are (1,.5,1) because of Roman occupation of the area (extending to Hadrian’s Wall). This valuation extends until the year 400. The period 401-1700 is valued (1,.75,.75) because of the existence of multiple kingdoms in the area. Initially, these multiple kingdoms existed within the constituent states of the United Kingdom and later, because of consolidation, essentially were the constituent states – most notably England and Scotland. The period 1701-1950 is valued (1,1,1) as England and Scotland achieved union and the area began to assume its current governmental structure.

**United States:** Positive values begin in the period 1601-1650 and are (1,.5,.75) because of sparse European settlement by the British, French, Dutch, and Spanish. This valuation extends until the year 1776. The period 1751-1800 is a weighted average because of U.S. independence in 1776:50 years multiplied by [.52(1,.5,.75) + .48(1,.75,.75)] = 23.25 (26 years of British and Spanish colonial rule, 24 years of U.S. independence with Spanish and French colonial rule). The valuation (1,.75,.75) extends from 1776 until 1850. The
period 1851-1950 is valued (1,1,1) as the United States annexed more territory after the Mexican-American War and came close to approximating its current size.

**Uruguay:** Positive values begin in the period 1701-1750 and are (1,.5,1) because of Spanish and Portuguese settlement. This valuation extends until the year 1828. The period 1801-1850 is a weighted average because of Uruguay’s independence in 1828:50 years multiplied by \[.56(1,.5,1) + .44(1,1,1)\] = 36 (28 years of colonial rule, 22 years of independence. The valuation (1,1,1) extends from 1828 to 1950.

**Uzbekistan:** Positive values begin in year 0 as the area formed parts of the states of Bactria, Khwarezm, and Sogdiana. 0-700 is coded (1,.75,.75). S2=.75 because Sogdiana was centered in the country while the other two were not. In 701, Arab invaders conquered the region and brought the Islamic religion. 701-1200 is coded (1,1,1). In 1201, Mongols swept over the land. 1201-1495 is coded (1,.5,1). In 1495, Uzbek tribesmen conquered Transoxania, modern day Uzbekistan. Muhammad Shaybani Khan became ruler and began the Shaybanid dynasty. The period 1451-1500 is assigned a weighted average of 50 multiplied by [.90(1,.5,1) + .10(1,1,1)] = 27.5. 1495-1785 is coded (1,1,1). In 1785, the land fell under three khanates, Bukhara, Khiva, and Kokand. The period 1751-1800 is assigned a weighted average of 50 multiplied by \[.70(1,1,1)+.30(1,.5,1)\] = 46.25. 1785-1873 is coded (1,1,.75). By 1873, both Bukhara and Khiva had become Russian protectorates. Kokand would soon follow suit. The period 1851-1900 is assigned a weighted average of 50 multiplied by \[.46(1,1,1) + .54(1,.5,1)\] = 30.75. 1873-1950 is coded (1,1,1). In 1924, the Uzbek SSR was formed and became part of the USSR as a constituent republic.

**Venezuela:** Positive values begin in the period 1501-1550 and are (1,.5,.5) because of partial Spanish settlement. The period 1551-1829 is valued (1,.5,1) as Spain consolidated its colonial control over Venezuela. The period 1801-1850 is a weighted average as Venezuela achieved independence in 1819:50 years multiplied by \[.38(1,1,1) + .62(1,1,.75)\] = 40.5 (19 years of Spanish colonial rule, 31 years of independence). The valuation (1,1,1) extends from 1819 to 1950.

**Vietnam:** Positive values begin with year 1 as Vietnam was under Chinese control that weakened with the T’ang dynasty. The years 1-150 are coded (1,.5,1). In 192, with the creation of Champa, China lost control of much of central and southern Vietnam. S3 becomes .75. The period 151-200 is a weighted average of 50 multiplied by \[.84(1,1,1) + .16(1,.5,1)\] = 24, and the values (1,.5,1) continue during 201-900. In 939 the first Vietnamese state was formed. It was called Dai Viet. Dai Viet controlled only the northern part of Vietnam so S3 remains .75. 901-950 is assigned a weighted average of 50 multiplied by \[.78(1,.5,1) + .22(1,1,.75)\] = 22.875. 951-1400 is coded (1,1,.75). In 1407, the Ming dynasty invaded and set up another Chinese administration. In 1418, Le Loi overthrew the Chinese and set up another Vietnamese dynasty. The period 1401-1450 is assigned a weighted average of 50 multiplied by \[.78(1,1,.75) + .22(1,.5,.75)\] =
In 1471, Champa was conquered under the leadership of Le Thanh Tong. This makes \( S_3 = 1 \). The period 1451-1500 is assigned a weighted average of 50 multiplied by \( 0.42(1,1,1) + 0.58(1,1,1) \) = 44.75. In 1620 Vietnam was split with Nguyen family ruling the south and the Trinh family governing the north. The period 1601-1650 is assigned a weighted average of 50 multiplied by \( 0.40(1,1,1) + 0.60(1,1,1) \) = 45. The country was reunited under Gia Long in 1802. 1651-1800 is coded \( (1,1,1) \). In 1867, the French formed the colony Cochinchina in the south. In 1883, the French added the north and central, Tonkin and Annam, as protectorates, and Vietnam lost all local control. The period 1851-1900 is assigned a weighted average of 50 multiplied by \( 0.34(1,1,1) + 0.32(1,0.75,1) + 0.34(1,0.5,1) \) = 34.5. During WWII, the Japanese controlled Vietnam, but after 1946 the French controlled the noncommunist south, while the Viet Minh controlled the communist north. 1901-1950 is a weighted average of 50 multiplied by \( 0.92(1,0.5,1) + 0.08(1,0.75,1) \) = 25.25.

**Yemen:** Positive values begin in year 1 as the country was under the control of Himyarite Empire. This lasted until 525, so the years 1-500 are coded \( (1,1,1) \). From 525-575 the country was under the control of the Aksumites, Ethiopians. The period 501-550 is assigned a weighted average of 50 multiplied by \( 0.5(1,1,1) + 0.5(1,0.5,1) \) = 37.5. In 575 the Persians came to expel the Aksumites and took control of Yemen. After 628 Yemen was controlled by foreign Islamic sects. The years 551-900 are coded \( (1,1,1) \). Beginning in 901 with the advent of Zaydi Shi’ites, Yemen had a mixture of factional, local, and imperial rulers. In the 16th century the Ottoman Empire took over parts of Yemen including Aden only to be expelled in the 17th century. In 1839 the British took over Aden and expanded their rule throughout the South. For the entire period from 901-1850, the values \( (1,0.75,1) \) are assigned. In 1851 the Ottoman Empire entered North Yemen, and Yemen became completely subject to foreign powers, the Ottoman Empire in the north and England in the south, so the years 1851-1900 are \( (1,0.5,1) \). Finally, Ottoman Yemen collapsed in 1918 and the Muslim imam of the Zaydis, Yahya ibn Muhammad, became the ruler of North Yemen, representing some local control. Britain remained in control of the South through 1950. The period 1901-1950 is assigned a weighted average of 50 multiplied by \( 0.36(1,0.5,1) + 0.64(1,0.75,1) \) = 24.75.

**Zambia:** For reference see *Macropaedia* listing under “Southern Africa”. Positive values begin in the period 1801-1850 and are \( (1,1,1) \) because of the emergence of multiple local kingdoms which ruled the area. This valuation extends until the year 1900. The final period 1901-1950 is valued \( (1,0.5,1) \) as the country became a British colony and would not regain independence until 1964.

**Zimbabwe:** For reference see *Macropaedia* listing under “Southern Africa”. Positive values begin in the period 1851-1900 and are \( (1,1,1) \) because of the emergence of the local Ndebele kingdom. The final period 1901-1950 is valued \( (1,0.5,1) \) as the country became a British colony and would not regain independence until 1980.