

## COMPARATIVE NATIONAL CULTURES

13 November 1957

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COLONEL CRYSTAL: Good morning.

We have the privilege this morning of welcoming back to this platform a friend of long standing. Until I met the Doctor this morning, I really was going to say "an old friend," because anybody who has done as much for as long a period as Dr. Quigley has for the Industrial College, I felt, must have a long gray beard. But in this age of DDT and penicillin he has preserved his facilities remarkably well.

I'd like to tell you a little bit about what his business is. He is a professional historian at the School of Foreign Service at Georgetown University. One of the methods they use there is "to help the student to form an idea of the process of social development by obtaining a broader perspective and understanding of the past of our civilization, the meaning of great movements in the past, with special emphasis on their effects on our present civilization." And he has been trying to do this for some years with us.

Evidence of it is contained in some of the documents which have been published by us and to which I strongly recommend you: The Pre-Revolutionary History of the Soviet Union, a brilliant presentation that lets you understand a little better where the Muscovites came from; The Development of the Soviet Economy--his lecture on this subject last year--and finally, and to me as a student, of even greater importance, is his bibliography on the economic potential of the Soviet Union and its satellites.

I'll give you one example of how a professional teacher helps students, because in an area which is difficult to find much about, labor in the Soviet Union, he has listed Deutscher, I., Soviet Trade Unions: Their Place in Soviet Labor Policy, an I. R. R. A. publication, and Hubbard, L. E., Soviet Labour and Industry. So in your research in this course of human resources don't neglect what the Doctor has already made available to us in our library.

He has also annotated it with critical comments on the biases of the authors, and this is that understanding perspective about which

professional historians probably know more than most people in other areas of dispute and contention. History is one of those areas.

In his biography you've probably read his latest contribution to scholarly work. I've not made arrangements with the magazine to get a specially reduced rate on the American Neptune for January, because I am one of those who is rather perplexed at exactly what The Origin and Diffusion of Oculi means. If any of you share my confusion, I want to admit that the amount of lexicographical research that I did last night only heightens my confusion, because I found the word "oculus" to mean, anatomically, an eye. In architecture, it's a circular hole in the middle of the western facade of most Gothic cathedrals. It is also the circular hole in the top of the dome of the Pantheon. In an astronomical manner it's the Corona Borealis. In botany it is a leaf-bud or an astringent plant. In chronology it's the third Sunday in Lent. In lapidology it's an opal, the oculus mundi. In zoology it can be called the crab's eye.

Well, without further ado, Doctor, you know you're among friends. We're very happy to have you here.

I am proud to present to the class Dr. Carroll Quigley.

DR. QUIGLEY: I think it's a shame to interrupt that. He speaks very well, and it's the most fascinating subject I've ever heard discussed. But he's not a good man with the dictionary. I guess he didn't get the right dictionary.

The oculi I am talking about are the eyes painted on the front of ships in Asia and the East Coast of Africa. They have eyes painted so the ship can see where it is going, according to some people. One of the arguments in my article is that it is not to provide the ship with a way of seeing where it's going, but something else. But don't rush out and buy the American Neptune, because they'll run out. I don't think they publish more than a handful of them.

Today I'm going to speak about the cultural development of two great areas. I don't expect to give you much new information. What, rather, I'd like to do is to define rather sharply some of the information you may have and above all to show the relationship between things that you already know.

I want to begin by pointing out that we have a world today consisting of three great parts. At the center is the Soviet bloc. Around that is the fringe of shattered cultures which I call the buffer fringe, running from the Islamic countries in the west through Afghanistan, India, Burma, and the rest of them to eastern Asia. I call that the buffer fringe. Outside of that we have our own Western bloc. Today I'm going to say nothing at all about the Soviet bloc except that I will say something about China, dealing with it as if it were a part of the buffer fringe, because as a historian I am always a decade or even centuries behind the times, and I'll be talking about China as it was a generation or more than a generation ago.

I'll speak, then, only of the buffer fringe and of our own Western civilization. What I'm going to do, very simply, is go through a series of developments in the order in which they appeared in our own Western civilization. Then I will examine the order in which these developments occurred in the buffer fringe and show you how the difference in order of occurrence is of major significance in creating the problems of the buffer fringe area.

Table 1. Development sequence in the Western World and the buffer fringe

The Western World	The Buffer Fringe
1. Western ideology	1. Weapons
2. Commercial revolution, 1440	2. Commercial crisis
3. Revolution in weapons (especially firearms), 1500	3. Transportation and communications
4. Agricultural revolution, 1720	4. Sanitation and medicine
5. Industrial Revolution, 1780	5. Demographic explosion
6. Revolution in sanitation, 1800	6. Industry
7. Demographic explosion, 1820	7. Agricultural revolution
8. Revolution in transportation and communications	8. Western ideology

On the left of Table 1 is shown the order in which they occurred in our civilization. When I speak of "our Western civilization" I am talking about that area of the globe which runs from Poland westward to

New Zealand. The civilization that I have reference to, our own Western civilization, began about 550 A. D. ; and thus it has existed for almost a thousand years and a half.

Now, the first occurrence in Western civilization, the first great development, is our ideology. It's something I could speak about endlessly, as you know. But I want simply to refer to certain basic things in the outlook of Western ideology, particularly in the first 1,000 years of its existence, because that 1,000 years of Western ideology became the foundation for many of these later developments.

When I speak of Western ideology I refer specifically to religion--Christianity--to such things as the scientific outlook; and to a third thing, which I will call the liberal outlook. It may not be clear to you as I speak, because in all of this I am oversimplifying most drastically; I hope you will understand that. But it would seem to me that there is a common element to all three of these--the Christian outlook, the scientific outlook, and the liberal outlook--and to sum it up, rather briefly the outlook is this:

All three believe that there is a truth somewhere. They all believe that it is worthwhile seeking that truth. They all believe that the process by which we seek that truth is a process in which we approach it in time; that is, truth is something which unfolds in time. Therefore we must constantly work and strive and discuss in order to get closer and closer and closer to the truth, which we perhaps never reach. This is why scientists don't stop work today in the smug idea that they have the truth; but they have to go on struggling, because what they have today is simply an approximation of the truth.

Another characteristic of all three of these is that the unfolding of truth in time results from a cooperative effort. That is, it's a social effort. It arises from discussion, criticism, and so forth; and from that emerges a kind of consensus, which is closer to the truth than would be the point of view of any single individual. So thus we have that there is a truth. This is not a skeptical outlook. It is not a dogmatic outlook because nobody now has the truth. It puts great emphasis on chronological development. It puts great emphasis upon social cooperation.

Some of this may not seem convincing to you, and I imagine that the field in which it will not seem convincing is perhaps the field of religion. But the Christian religion basically does have this outlook.

It believes that religious truth has been unfolded in time. That is, we had a whole series of revelations and prophets. We have the Old Testament, that was not replaced but supplemented by the New Testament, and the New Testament has been interpreted and unfolded in the course of time to reveal additional truth. And the process of religious appreciation still goes on. Am I right?

Now, one other thing that I should emphasize about the Western ideology and particularly the Christian ideology is this: It is not a dualistic ideology. This is a point which many people, I think, misunderstand, because there has been a tendency, at least in the last 500 years, for the Christian or religious outlook to be dualistic. By that I mean that they oppose the material world to the spiritual world. But this was not fundamentally the point of view of the religious outlook of Western civilization for at least the first 1,000 years. During the first 1,000 years, they recognized the basic necessity of the material world. I could point this out in a number of ways. They made a distinction between what was necessary and what was important. Material things were necessary; spiritual things were important. But you could not achieve spiritual things except by working through the material world.

The Christians felt, for example, that we could not be saved except for the fact that God became man in a real body living in this world. We cannot be saved unless we supplement God's grace with good works in this world. So that the religious outlook is social. It is also materialistic. And in the first church council in 325, the Council of Nicaea, where the creed was first stated, they said most explicitly that they believed in the resurrection of the body, indicating their point of view, which is the really basic Christian point of view, that the body is not an evil or bad thing, but is indeed a good thing, made in the image and likeness of God, and a thing which is necessary to our salvation, because only with a body can we do good things to our neighbors in this world.

I have perhaps said too much about that, but the reason I'm emphasizing it is this: I feel very strongly that this point of view, which I am trying to describe here, which I will call the Western outlook, and which, as I showed you, appeared in religion, in the scientific outlook, and, I am sure you understand, in liberalism believes there is a truth, which can be reached by discussion, as a social achievement. Therefore there must be freedom of speech, freedom of discussion, and these other things. No one has the truth. Therefore no one has the

right to impose his "truth" upon others. Rather, as we talk around the truth, each of us gets a fragment of it; and by contributing our fragment to a common discussion, we will get a truth which is closer to the ultimate truth than would be the point of view of any one of us.

Now, this, it seems to me, this outlook, is the real explanation of why Western civilization has been so prosperous, so wealthy, and so powerful--because it has been the most wealthy and most powerful civilization that ever existed.

Now, I wish to go on to the next thing. But I must, before I speak of the commercial revolution, indicate the basic structure upon which the commercial revolution was imposed.

That basic structure you must be familiar with, I am sure. In the Middle Ages, about the year 1000, Western Europe was organized in a series of self-contained, self-sufficient economic units. We call them manors. Each manor tried to produce everything it needed, and over it was a fighting man, a knight.

The serfs on the manor did no fighting, and were not really expected to be fighters; but they produced goods from the soil. The feudal lords, on the other hand, were fighting specialists and were never expected to till the soil. Thus you got a rigid class structure of an upper class, 2 percent of the population, the feudal knights; and a lower class, the serfs, perhaps 97 percent of the population. The other odd percent is going to the clergy, who were really to a certain extent part of the upper class or part of the lower class depending upon whether they were upper clergy or lower clergy. This system was a system of a rigid class structure and above all with economic self-sufficiency of the unit. A manor was a self-sufficient agrarian unit supporting a fighting knight. There was almost no commerce.

Beginning about the year 1440, although it had begun hundreds of years earlier in a small way, we got this tremendous development that we call the commercial revolution. That is, there was an influx of money. We got a substitution of money arrangements for personal arrangements, and the whole development which we call the commercial revolution.

Now, this commercial revolution--the growth of commerce, the growth of a money economy--led ultimately to specialization, economic division of labor, increasing exchange, and a higher level of economic

efficiency. Manors could now specialize on those things that they could produce best and could exchange them for money, which could be used to command the products of other manors, other areas, or other social groups which were specializing on those things that they could best do. We call this the commercial revolution.

All right. That's obvious enough.

The next development is the revolution in weapons, particularly firearms. This is something with which you are certainly familiar--the arrival of gunpowder and the rest of it, the increasing efficiency of missile weapons.

But I wish to emphasize here one thing which some of you may never have thought of, and it is this: It seems to me, looking over the whole course of history, that the kinds of weapon a society possesses are a major factor in determining the structure of that society. To oversimplify once again a very complicated subject, I would like to divide weapons into two kinds--what I call amateur weapons on one side and what I call professional weapons or specialist weapons on the other hand. The distinction between these two is approximately this: Amateur weapons are cheap to obtain and easy to use. Specialist weapons are expensive to obtain and difficult to use.

To define those terms a little bit, when I say "cheap" and "easy" in reference to amateur weapons, I mean that an amateur weapon which can be obtained as a result of a few weeks or a few months of work I would call cheap. A weapon which could be used as the result of a few weeks or a few months of practice I would call easy to use. On the other hand, professional weapons can be so expensive that only a very small minority of the society can possess them. And now, as you well know, they can be so tremendously expensive that only very wealthy governments can possess them. So specialist weapons thus can be expensive, but they generally also are difficult to use, in the sense that they can be used only by trained personnel who have practiced at it not for weeks or months, but for years.

Now, this distinction between amateur weapons and professional weapons is of tremendous significance in forming the structure of a society, in this sense: When you have amateur weapons as the best weapons available in a society, you have as the best weapon something which can be obtained by almost everyone and can be used by almost everyone. In such a society, where the amateur form of a weapon is

the best obtainable weapon, you would have a situation where people would be relatively equal in power, because each can have the best available weapon. In a society where people are in fact relatively equal in power, in a showdown the majority can compel the minority to yield. In such a situation you ultimately will get some kind of a legal expression of the fact that people are equal in power and that a majority can compel a minority to consent. This leads us to democracy. It seems to me that if you look at the history of any civilization or even the whole history of mankind, you will see that if we were to graph a cycle between amateur weapons and professional weapons, we would see that the periods in which professional weapons become supreme, going upward, let us say, are generally followed by periods in which authoritarian governments are established. On the other hand, periods in which amateur weapons are supreme are generally followed by periods, and very closely followed, within a mere couple of generations, by periods in which more democratic regimes are established.

Now, to look at this in the whole of human history would take us much too much time. I do it sometimes in my courses at the university, but here I simply wish to look at Western civilization.

In Western civilization at the beginning, let us say back in the year 1000, you had, as I pointed out a moment ago, a very rigid class structure, in which the minority had the best weapons. In the year 1000 there were two outstanding weapons available--the mounted knight on horseback and the stone castle. The stone castle was a defensive weapon. Here is a strange situation--a society with two supreme weapons which cannot defeat each other--because a mounted knight on horseback could not capture a stone castle and a stone castle could not destroy a mounted knight on horseback.

But in any case this was definitely a period of specialist weapons. A castle was obviously expensive, but a mounted knight was also a very expensive thing. The horse of a knight was, back in the year 1000, worth 60 oxen, and an ox was too expensive for the ordinary peasant to afford. Thus a horse was more expensive, 60 times more expensive, than what an ordinary peasant could afford. And a knight of this kind had to have two horses. He had to have armor and weapons, all of them very expensive. He had to have a long period of training. He started to train at least by the age of 10, and he was regarded as a trained knight not much before the age of 20. Thus it would take 10 years of training. So you had thus a specialist weapon. The peasants couldn't possibly cope with it. They had no weapons which could possibly deal with it.

Furthermore, if that knight had a castle, he had a supreme defensive weapon. If anyone gave him orders: "Do this!" or "Do that!" he could get in his castle and say, "Nuts" and no one could make him obey, because they could not capture the castle.

Now, I won't give you any reason for this except to say that a feudal knight such as I have described was expected to serve each year only 40 days or approximately that; and you could not capture a castle with feudal knights, even if you had a large number of them, because you couldn't starve a castle out in 40 days.

Well, now changes occurred. But here you had a political and military system where the defense was supreme. The defense was extremely decentralized--with each castle becoming a nucleus of resistance to authority, and where the weapons were expensive, specialized weapons. Thus you had an authoritarian, decentralized political system.

Now, as you know, that was replaced later by an authoritarian, centralized system. And it was replaced because of the appearance of gunpowder and cannon, because fewer people could have gunpowder and cannon than could have castles, and thus the nuclei of political organization became larger, organizing in each case around the center of whoever could afford cannon.

Now, those people who could afford cannon ultimately became kings. They took royal titles. They could knock down the castle of the knight. They could also raise more money with their weapons. They thus worked out a system whereby they hired knights. Hired knights could capture castles, because they could besiege them and starve them out, staying there as long as their pay continued to be paid.

It's a very complicated process, but what I am trying to show you here is that you shifted from a defensive weapon which was supreme and decentralized but specialist, the medieval knight with a castle, 300 or 400 years later to a system where you had a still very expensive specialized weapon, much more centralized because fewer people could afford it and have it, but which was not defensive. It was much more offensive. And as a result, political units which previously had been organized around castles now began to organize in much larger areas. Ultimately those large areas became great duchies, principalities, and kingdoms.

Now, as this process continued, weapons became cheaper and cheaper. By the year 1800 approximately the best available weapon, or

perhaps I should make it later, 1870, the best weapon available was cheap enough to be obtained by almost anyone. A rifle in 1860 or 1870 or a Colt revolver could be obtained from the work of a man over a period of a few weeks at most, and that was as good a weapon as employees of the government had. Thus you had a democratic amateur weapon. It could be widely dispersed, and in the political reflection of this military fact you got democratic regimes.

The last democratic uprising in this country, Dorr's Rebellion, in 1842, showed clearly, as earlier in Europe the French Revolution and other events had shown, that if the mass of the people have these weapons, they could not be compelled to obey by government troops who had the same weapons. Thus you got democracy.

Since then the trend in weapons has been definitely away from amateur weapons and toward specialist weapons, as you know. Today, a government certainly can have those weapons which are too expensive for people to have. Therefore governments today certainly can compel the people to obey. And unless in the future, as I hope but I am not certain--perhaps I hope in vain--there is some development in the effectiveness of guerrilla warfare, so that it becomes once again difficult for a government to compel obedience of groups which wish to refuse obedience, unless that occurs, it would seem to me almost inevitable that political development would follow along behind the military development; specifically that authoritarian governments must replace democratic governments in most places, just as specialist weapons have replaced or are replacing amateur weapons.

I would hope that perhaps sometime, as I say, guerrilla weapons and guerrilla methods of warfare will make it impossible to compel obedience with the very expensive weapons which governments will possess. I do see some vague indications in that direction; but, being a historian rather than a fortune teller, I will say no more about it.

Well, now, that will give us the revolution in weapons.

The next thing is the agricultural revolution. Here again is a very complicated subject, which I must go through quite rapidly.

I spoke about the medieval manor. In the year 1000 the medieval manor had a three-field rotation system, a fallow-rotation system. They planted each field 2 years. The third year it was left fallow, unplanted; and this would recoup, presumably, some of the nutrient elements in the soil, particularly nitrogen from the nitrogen in the air.

Now, this system was a wonderful system back in the year 600. But by the year 1600 a better system was beginning to appear. And that second stage in the development of agriculture, the first stage being the self-sufficient manor on a fallow-rotation system, began to appear as early as 1600. The date I have given you here is 1720, when it really systematically began to be applied in eastern England, particularly Norfolk. This second stage is the leguminous-rotation system, in which a leguminous crop, whose roots trap the nitrates from the air, was put in the fallow part of the cycle. So thus you could plant your crops every year and not have to leave fields fallow. Instead of leaving them fallow, you put in some such leguminous crop as clover or alfalfa or something of that kind. This immensely increased the nitrogen content of the soil for the subsequent year, in which you planted grain or some other food crop.

Notice that when you put a leguminous crop into this fallow part of the old three-field cycle, you are planting a crop which is not consumable by men. Clover and alfalfa are not foods, but they can be feeds. And thus the agricultural revolution, by putting a leguminous crop into the old cycle, was providing great stores of fodder for farm animals.

The results of this were revolutionary. In the Middle Ages farm animals had to go out and forage for themselves, looking for whatever hadn't been picked. Thus animals in the Middle Ages were excluded out from the arable field and had to shift for themselves outside. As a result of the agricultural revolution you now had lots of fodder, you had the fields all the time under crops each year, you could not permit the animals to range freely, so you included them in. You put fences around them; instead of, as in the Middle Ages, around the arable field, you now put the fence around the animal. And you could now feed him in a contained area with the leguminous crop to provide his fodder.

As a result of this, the slaughter weight of farm animals in Smithfield, England, approximately tripled in the space of 85 years. That is, from 1710-95 the slaughter weight of lambs, for example, went up from 18 pounds to more than 50 pounds. The sizes of all farm animals drastically increased. This is something that we don't generally think of, but in the Middle Ages animals were very small, and men were also quite small, which explains why modern man has such difficulty getting into medieval armor. If you had the armor of medieval horses, you would also discover that a modern horse couldn't get into it, because cattle and horses have all increased in size.

Now, that is the second stage in the agricultural revolution--the leguminous rotation.

About 1840 we got into a third stage. That was the chemical fertilizer stage. This chemical fertilizer had combined with it farm machinery. In Germany about 1840 a German chemist discovered or at least propagated the idea of putting a chemical fertilizer into the ground. And about the same time, as you know, in America and other places, McCormick and other people began to invent farm machinery, such as the famous invention of the reaper. This is the third stage--the chemical-machinery stage.

The fourth stage in the development of this agricultural revolution has occurred in the present century--the use of hybrid crops which give immensely greater output, plus the use of all kinds of sprays and chemicals.

Thus we have four stages, successively, in the agricultural revolution. But the importance of the whole thing is that one man can produce today immensely more food than one man could 800 or 900 years ago. I don't know exactly how true these figures are, but I have read somewhere that if you were to go back 500 years, it took approximately 17 men to produce enough food for 21. That would mean that if you had 17 people tilling the soil as a full-time job, you could allow only four people to go off and do something else--governing the country, fighting in armies, or making handicrafts or whatever it might be. Those figures have been more than reversed. Today four men, I would believe, under the best modern conditions could produce enough food approximately for close to a hundred people. What this means is that we have released by this tremendous agricultural revolution over the centuries enormous amounts of manpower for nonfood-producing activities.

All right. Now we go on to the next big development here, the Industrial Revolution. The Industrial Revolution is also something which goes through successive stages. I won't really annoy you with the stages, because you certainly must be familiar with them. I generally divide them at least into two--the external combustion engine--that's the steam engine--about the year 1780 or so; and then the internal combustion engine, about 120 or 125 years later. Then after that the revolution has continued, as you know.

Now, the Industrial Revolution allowed men to produce more and more and more nonfood products, industrial products, the craft products, with an hour of work. As you know, products per man-hour as a result of the Industrial Revolution greatly increased, because the essential feature of the Industrial Revolution is not the factory or the growth of cities or the use of capital or any of these other things which are so frequently mentioned, and should be mentioned; but the essential feature of the Industrial Revolution is the use of nonliving power for production--the power from nonliving sources, such as coal and ultimately oil, waterpower, and other sources. And we hope, I suppose, that ultimately we will have atomic sources.

Now, let me stop at this point very briefly to point out to you the wonderful sequence of events here. If we were to study the history of Europe, we would find in it, I am sure, much poverty, much hardship and misery--that is true--but the hardship and misery and poverty were more or less incidental in this process. They weren't intrinsic to the process. In order to demonstrate that I will simply ask: What is necessary for industrialism?

Well, for industrialism you need labor and food, which are approximately the same thing. You need capital. You need invention. These things are provided by the earlier stages here. Invention came out of this Western ideology and the whole urge to innovate and provide better ways of doing things. The capital which was necessary to finance the Industrial Revolution came out of the profits of earlier developments, out of the commercial revolution, where people made great fortunes, for example, in India and other places. The capital to a certain extent also came out of the agricultural revolution, where those people who first adopted the agricultural revolution were able to make extraordinary profits out of it, particularly in Norfolk, England, and other places. In spite of the fact that the soil of Norfolk is poor soil, the agricultural revolution gave a tremendous increase in output there, which gave large profits to the Coke family and other great families of that area.

The Industrial Revolution required food. The agricultural revolution provided the food. The agricultural revolution also provided the labor which was necessary, because if fewer people can produce more food, then you can release manpower to go into industry.

Thus we see that each stage here to a very considerable extent is built upon the preceding stages. And it happens in an order which is not the result of any cleverness on our part. It's very much, it seems

to me, the result of happy accident or the favor of God or something of that kind. It certainly wasn't, I think, any planning which gave us this.

Now, we turn to the next development--the revolution in sanitation. This development also I would like to divide into successive stages, going over them very rapidly.

The sanitation revolution began about the end of the 18th century. The first steps in it were such things as vaccination, which came in in the 1770's, and isolation--the discovery, for example, that diseases such as plague and so forth could be curtailed by isolation of the sick--but, above all, the discovery that smallpox could be controlled by vaccination. And by the year 1800 there were people who were frenziedly working in Europe to vaccinate Europe.

I remember in my doctorate dissertation I did research in the Archives in Milan and I came across a Dr. Sacco, who spent his whole life apparently 20 hours a day, year after year, trying to vaccinate people in northern Italy faster than people were being born in northern Italy. At that time Napoleon was the king of Italy, after 1805. Every year Sacco sent in a report and in the report he divided up Napoleon's northern Italy into departments. He took the number of people born and the number he had vaccinated in each department; and in any department where he hadn't vaccinated at least as many as were born, he had a word of apology and explanation as to why he couldn't do it--insufficient funds, insufficient time, insufficient assistance, and so forth. Well, this is what I mean by the first stage of this revolution in sanitation--the vaccination-isolation stage.

Well, approximately 60 or 70 years later we got the second stage in the sanitation revolution; that is, the stage that we might call the antiseptic stage. We associate it with the work of Pasteur and Lord Lister, which showed very clearly that most disease is due to microbes, and by controlling the microbe you can control the disease. This was, of course, a tremendous step forward.

Now, again, later in our own century we have had tremendous revolutionary developments in sanitation and in general medicine associated with the antibiotics, chemistry, surgical techniques, artificial valves in hearts, and all kinds of such things. The result of this is that by the revolution in sanitation we have drastically reduced the death rate, leading to a birth increase in population.

That is a perfectly satisfactory thing, because if we increase the population as a result of item six, we have the food to feed them as the result of item four, and we have tasks for them to do as the result of item five. In other words, they follow along once again in a sequence which makes sense and which is helpful to any country or civilization which wishes to absorb it.

Now we come to the demographic explosion. The demographic explosion results from the revolution in sanitation, and I would like to look at table 2 at this point to show you.

Table 2. The Demographic Cycle

	Stage A	Stage B	Stage C	Stage D
Birth rate	High	High	Falling	Low
Death rate	High	Falling	Low	Rising
Numbers	Stable	Rising	Stable	Falling
Age distribution	Many young (below 18)	Many in prime (18- 45)	Many middle- aged (over 30)	Many old (over 50)

Demographers frequently divide changes in population into four successive stages which they call the demographic cycle. And those authorities in population here will bear with me if I simplify too much.

The first stage is stage A. It has four characteristics--a high birth rate; a high death rate; as a result of stable population, in which the population numbers remain approximately the same; and in that population numbers remain approximately the same; and in that population an age distribution in which there are many people who are young. In fact, half of the population would be perhaps considerably less than 18 years of age.

Now, the high birth rate means that you have many being born, but the high death rate means that at least a fifth of them, possibly a third of them, die in the first 2 years of their life. That means, of course, that those who survive are a pretty rugged bunch. They have met all

the germs, or almost all the germs, and conquered them; and they may live to a ripe old age. That, we call stage A.

Now, what happens is, apparently, that something in the society leads to a falling death rate. In most societies, as we look back over history, the falling death rate was caused originally, it would seem, by an increased output of food, conquering the problem of malnutrition. But at the same time the increased output of food allows more devotion to sanitation and health, more research in medicine, more thought about these matters, and so forth. Thus you begin to conquer the death rate for other reasons than the overcoming of malnutrition, namely, by the overcoming of diseases. Thus you get a falling death rate while the birth rate is still high, which will give you obviously a rising number of people, the third characteristic.

In that stage B you will have many people in the prime of life. By "many" I mean at least half of the population. A society which is in stage B is a society which, demographically speaking, is at its most healthy and most vigorous and most powerful stage, because many men, the majority of men, are in their productive years, and the majority of women are in their fertile years. Therefore you have a society which can remedy disasters to population, which can remedy disasters in production, by more activity of women, more activity of men, and more activity of the two together.

Now, that system, stage B, is followed by stage C, in which the birth rate begins to fall, the death rate remains low, and as a result you begin once again to approach a stable population, in which the population in numbers is not drastically increasing any more; the rate of increase is slowing up.

In that society you will have many middle-aged people. I am ashamed of myself for calling people over 30 middle-aged, particularly as last Saturday I had my 47th birthday myself, which makes me, you see, well over middle age. But what I mean here is that in this stage C, with a falling birth rate, low death rate, and stable numbers, you have at least half of your population over the age of 30 and possibly even over the age of 35.

Now, these three stages, A, B, and C, are based largely upon observation of what has happened. Stage D is hypothetical, because I don't know of any culture where we can say for sure that stage D has happened. But it would seem that if you had A, B, and C and the process

continues, you will reach D. In D you would have many old people, because of the decline in the death rate, perhaps half the population over 45 years of age, you are going to have a low birth rate, but you are also going to have a rising death rate, because where we have conquered the diseases of youth, we have not yet conquered the diseases of old age, such as cardiac disease, cancer, and other diseases associated with old age. Thus in stage D you will get a situation where the population presumably would be falling.

In our Western civilization this cycle has been experienced, at least through the first three stages, and we will presume that the fourth is about due to come up, if it hasn't already begun to knock at the door.

In table 3, the letters A, B, C, and D refer to the four stages of the demographic cycle. The table shows which stage would be found at the dates listed on the left in the four geographic areas mentioned at the top.

Table 3. Diffusion of the Demographic Cycle

	Western Europe	Central Europe	Eastern Europe	Asia
1700	A	A	A	A
1800	B	A	A	A
1850	B	B	A	A
1900	C	B	B	A
1950	C	C	B	B
2000	D	D	C	B

Anglo-French pressure, about 1850

Germanic-Italian pressure, about 1900

Slavic pressure, about 1950

Asiatic pressure, about 2000

From the table it is clear that the demographic cycle is not simultaneous everywhere. On the contrary, it began in Western Europe and has spread outward to other areas. As you can see all four areas that I have here--three in Europe and one in Asia--by "Asia" meaning the buffer fringe--all four areas were presumably in stage A in the year 1700. But Western Europe came out of it and got into stage B, passed into C, and I suppose that by the year 2000 will be in D. Central Europe is a little bit

later in the phases. So they don't get to stage B until 1850 and they don't get to stage C until 1950, and so forth. They were a little bit late.

Eastern Europe is even later. For example, in 1938 in Bulgaria the death rate of infant mortality in the first year of life, was over 20 percent--something which would be regarded as absolutely unacceptable in Western Europe or central Europe in the year 1938.

And thus we have that in Eastern Europe the cycle appears a little later, so that by the year 2000 they are still presumably in C. But in the buffer fringe, in Ceylon, India, and areas such as that, we find that the whole cycle is considerably later, so that by the end of this century they would still be in stage B.

Now, stage B, I call the demographic explosion. To indicate the demographic explosion I have a dotted line in table 3, page 17, which we might call the explosive line. It gets later and later as we move further away from Western Europe. And as a result population pressure occurs later as we go outward from Western Europe.

So we have an Anglo-French pressure spreading outward about 1850. We have a Germanic-Italian pressure in central Europe about the beginning of this century and continuing into the 20th century. We have a Slavic pressure at the present time. And the presumption, I imagine, would be that in 50 or more years from now we will have an Asiatic pressure. Thus the pressure moves outward.

All right. That is what I call the demographic explosion.

Now, to get back to table 1, page 3, the last point in the development of our Western experience has been this revolution in transportation and communication. You are perfectly familiar with it. About 1750 or so we got canals and stagecoaches and turnpikes, macadamized roads, where Mr. Macadam told us how to make a road. And then going on, about 1830 we got the steam engine and about 1900 we got automobiles and then airplanes and all the rest of it. I will not have to go into those. It's perfectly obvious. The telegraph came in with the railroads. Electronic communications came along with the airplane, and so forth.

Let's now look at the buffer fringe. When you turn to the buffer fringe, the order in which things happened is entirely different. Where this order (Western World) was almost the way you would have desired it if you had planned it, nothing could be more disastrous than this order (buffer fringe).

Once again in the buffer fringe let me start with the situation before Western civilization came in contact with it. In Western civilization at the beginning you had the self-sufficient manor, isolated. In Asia you did not have that. In Asia you had a peasant society in which there was superimposed upon the peasant a very large ruling group, which I frequently call "the quartet," made up of government officials and their bureaucracies, military personnel--armies--bankers and financiers, and, lastly, landlords. And this group of the ruling class cooperated together. They cooperated together to exploit those who were producing food.

Furthermore, the system by which food was being produced here was a system, especially in China, that put tremendous pressure on the soil, and it didn't possess that reserve which at the beginning of our system was to be found in the fallow year. At the beginning of our system one-third of the land was always untilled under the fallow system. But in the buffer fringe, particularly in China, the land is tilled generally every year. Instead of trying to replace the nutritive elements in the soil by a fallow or even by a leguminous crop, which they do to some extent, they replace the nutritive elements in the soil with human excrement spread upon the ground. But this puts them to the margin where to make their agricultural system produce more requires a major revolutionary change.

But they didn't get that. Instead, they got Western weapons, because when we came in, we came in with weapons and it was because of weapons that we were able to come in. We said to China: "We wish to come in." For 50 or 60 or more years they said "No." Finally the British in the opium wars of 1842 and in other struggles crashed open the door to China with our weapons. When Perry went to Japan, just a little over a century ago, he appeared there with black ships and with guns; and the Japanese, although they did not wish to do so, were forced to open their doors.

Now, seeing that, the upper ruling groups wanted our weapons. They began to buy our weapons. But the weapons which we gave them, even when they became what I call amateur weapons to us, were really specialist weapons to them, because a rifle or a revolver, which in 1880 was cheap in America, was still too expensive for a peasant in most of Asia. He didn't have the margin. On the other hand, the government could buy it.

So the first event which occurred there intensified the authoritarian character of their society. Furthermore, it intensified the ability of the

ruling group to exploit and take from the peasant larger fractions of what he was producing.

Bankers were offering credit to peasants, very reluctantly, at 40 percent interest per year. The tax collectors were demanding more and more from the peasant because of the weapons which they wished to buy, and so forth.

Now, in this system the peasants still managed to survive until the commercial crisis came along, which destroyed their ability to survive. This is a very difficult problem. Let me try to explain it.

The ruling group in Asia, particularly in eastern Asia, but above all in China, were taking from the peasant at the end of the 19th century so much of what the peasant produced that there wasn't enough left for him for subsistence. In other words, he was forced below the subsistence level by the contributions he had to make to the ruling quartet.

How did he manage to survive? Because obviously he did. He managed to survive by handicraft. In their system agricultural peasantry were idle much of the year. They had two seasons of the year when they were very busy, but for about 5 months or even 6 months of the year they were largely idle. We call this "agrarian underemployment," which is still very noticeable in the buffer fringe.

Now, in this period of so much underemployment the peasants made basketry out of the withes, hats out of straw, leatherwork, and various other things; and these things they sold to the cities, to the ruling group. And in return they got credit back on the food that they had to give to this group. Thus the peasants were able at the end of the 19th century to bring themselves above the subsistence level by selling handicraft products to the cities.

This was destroyed when Europe came into Asia with mass-production industrial goods, which the ruling class preferred to the peasant handicraft products that they had been buying. Apparently the ruling group, while still demanding the same amount and even more from the peasantry, now ceased to buy the craft products of the peasantry and, instead, were buying the products of the industrial cities of Europe. And this put the peasantry below the subsistence level.

What did they do about it? Not a thing, because the ruling group had the weapons. But then something happened. The pressure of our system

upon Asia gradually impelled the ruling group to arm their peasantry. Above all, the fact that Japan adopted our system fairly successfully meant that if Japan were going to be stopped in exploiting the rest of the buffer fringe, she must be resisted with mass armies. Mass armies could be obtained only if the ruling group armed their own peasantry. But once they armed their own peasantry, then they couldn't keep them down below the subsistence level. It was this which destroyed the ruling group--that they armed the peasantry to resist Japan, and their peasants used this weapon against the ruling group. This is really the key to what has happened in China in the last 60 years, and is threatening in other areas.

Now, the commercial crisis, which I have carried down to a much later date, was followed by the transportation revolution. One of the first things that Asia began to demand was railroads and telegraphs. By 1880 they were building railroads and telegraph systems.

One other thing I should point out. The commercial crisis was made much more intense in all of Asia by the fact that when Westerners came in with guns, they made the native governments sign agreements not to raise their import tariff over 5 percent and in one case 8 percent. Japan didn't get free from that tariff until the 20th century. In China and in the Ottoman Empire they didn't get rid of it until well in the 20th century. And this 5 percent tariff made it impossible for them to keep European industrial goods out and preserve the handicraft of their own peasantry.

Well, now, the transportation and communication revolution requires capital. Where are they going to get it? There is no development ahead of it which would provide it. It requires labor. Where are they going to get that? Their economic system, their agricultural system, is already producing hardly enough.

Well, the way they got these skilled technologists, where they got these inventions, where they got the capital was, of course, from Europe, generally by borrowing it and building railroads and so forth. But they were not paying for it themselves.

The next thing which occurred is sanitation and medicine. I must say this good word for the British: When the British went into China, went into India, or wherever they went, they did not at once try to clean the place up. That was a good thing. When Americans go in, we start DDT-ing and delousing everyone in sight. We do it to protect our own people; but by doing it we are reducing the death rate in those areas and

thus we are forcing them into the demographic revolution before they have the food to sustain it. So the sanitation and medical revolutions arrive.

Then comes the demographic revolution. That is followed by their attempts to industrialize. They feel they must industrialize to resist the pressure of the West, to resist the pressure of their own areas which have industrialized, like Japan, or perhaps even to resist the pressure of the bloc that we're not talking about today, the Soviet bloc.

And if they are going to industrialize, again, how can they do it? One way it can be done is by borrowing from Europe, which is now no longer feasible and becomes less and less feasible. Furthermore, it represents a continuation, an increase, of colonialism, and they wish to get away from colonialism. Instead, they wish, if possible, to avoid borrowing. So the way in which it must be done, it would seem, would be to squeeze more out of their own peasantry.

That is exactly what is being done in Soviet Russia. Soviet Russia is industrializing by increasing the pressure on their own peasantry when they really haven't got the agricultural revolution.

Now, to this point I have been describing what has happened. In Asia, in the buffer fringe, and in the Soviet bloc as well, they have not yet got seven and they have not yet got eight and I doubt very much if they will ever get eight. But the whole thing creates a tremendously dangerous situation. And before I stop, as I reach the end of my time, I would like to point out this:

When I speak of the agricultural revolution in Asia, what can they do? Well, they could adopt the second stage in our agricultural revolution, that is, the leguminous-rotation system, which would be a big help. But they probably cannot adopt the American stages which should go right along with that--the farm machinery stage, the fertilizer and chemical stages, and the gasoline power stage--because these things are much too expensive for them and represent buying things, such as chemicals, gasoline, and so forth, which they don't have.

Notice a very drastic difference between American agriculture and European agriculture. To put it briefly, it is this: In Europe they have a limited supply of land and in Asia they have a limited supply of land and a surplus of labor. In America we have always historically had a plentiful supply of land and a lack of labor. Therefore our agricultural development has worked toward increasing the output per man-hour. In Europe and in Asia they must work in the direction of increased output per acre or per unit of ground.

These are absolutely antithetical things, it seems to me. Our output per acre is notoriously poor compared, for instance, to Europe's; but our output per man-hour is fantastically high. Therefore for us to go to the people of Asia and say: "You need the agricultural revolution--that means you need tractors, you need DDT, you need chemical fertilizers." All of these things is offering them something which they do not need or want. What they need are much simpler things, and I will end up with a story which illustrates it.

An American from our State Department, I believe, went to Afghanistan to work on some kind of a farm program. Since he had come from Iowa and knew good farming when he saw it, good American farming, he was utterly horrified at the Afghan farming, because it was so poor. So he wrote back to America and he wanted certain things, notably hoes. He couldn't get hoes. The answer came: "We have no hoes, but we have lots of tractors."

But tractors to these people are worthless. So he wrote to his 4-H Club in Iowa and said, "I need hoes." They got 300 of them together and shipped them to him. In his own little garden he increased output per unit of ground so fantastically that all of the neighbors began to say, "How do you do this?" He said, "Simply with a hoe."

In Europe you could increase output simply by ploughing 6 inches deeper, because in most of Europe they plough only the upper few inches. That is exhausted, but down a few inches further is fertile soil which hasn't been used for centuries.

All right. We'll stop now. I have gone over my time. I apologize.

COLONEL COOPER: Gentlemen, Dr. Quigley is ready for questions.

QUESTION: Sir, if I may be so impertinent as to say this, your stylized presentation that you made, as compared to the increase of knowledge, may change the time cycle as shown on your chart. I am leading to the knowledge you seem to have of the efforts in birth control and their effect on this demographic explosion. Will this increased knowledge change and compress the time cycle so that it can be done in appreciably less time than in past history.

DR. QUIGLEY: Being a historian and thus acquainted with the past rather than a fortune teller who can look into the future, I really cannot answer that question. It is true that many of these nations are trying--

India and others, particularly Japan--to use birth control methods in order to reduce the impact of the demographic explosion. But that will alleviate, I think rather than change the order of things; and it will still leave many other problems of a major character, namely, for example, where do they get capital? They still have to get it out of their agricultural system.

So you can by such things as birth control and many other techniques alleviate this problem. I don't think, though I don't know this, that you can make any major rearrangement of the sequence. I hope you can. I don't want to be pessimistic. I think there is a solution for Asia.

Last year, when I talked on this, I made a point which I neglected to make today. That is that in Asia they have a choice right now between using the method which the Russians are using, that is, to take it out of the hides of the peasantry, or adopt some new method, which is not the American method. The American way of life is not exportable to these people, it seems to me, because of this sequence of the arrangement.

They have in Asia today the example of China, which is copying the Russian method, and the example of India, which is fumbling around trying to find the third way. And I think this is the most critical problem of that whole area: Will China or will India, by conclusively demonstrating that it is superior, lead to a kind of panic to adopt and follow their procedures? If China wins out, I think we will be in a very serious situation with the whole buffer fringe that may go to the Communist bloc simply because they have to adopt the Communist method if it works.

QUESTION: On this chart of the demographic cycle I was interested in Asia, where you said the demographic explosion is yet to come. Is this a sort of second cycle? Was that earlier invasion of Europe by the Mongol hordes an expression of another demographic explosion in earlier years?

DR. QUIGLEY: No. These things don't happen over the weekend. They don't even happen in a year's time. The demographic explosion in Asia has definitely already started, but it is going to get worse. But I simply divided this up into 50-year periods, and I don't want to put it at 1950, because the real impact is in the future. So I made it the year 2000. But the one that has begun now is the same one which will hit in a real blow some time in the future.

QUESTION: Is this a repeat cycle from the old cycle of the hordes that came over to Europe?

DR. QUIGLEY: No. They were forced out not by a rise in population, but by the drying up of Asia. In other words, when the desert areas of Asia dried, the Desert of Gobi became larger, and that forced pastoral peoples outward. They either went down into China, as the Huns did in the year 300, or they came westward toward Europe. That was climate rather than population.

QUESTION: Do you foresee any possibility of these buffer states to have enough room to increase productivity on existing land as they come to the agricultural revolution ahead of the Industrial Revolution and therefore provide the capital and manpower to do the job in the future?

DR. QUIGLEY: I feel pretty strongly that they must get the agricultural revolution before the Industrial Revolution if they are going to do it in a non-Communist way.

Now, the situation is diverse. In China there isn't available land. In India there is a large quantity of available land. In the Near East, in the Arabic countries, there really isn't much land. But there are ways in which they can increase it, because there are many of those areas, for example, the Islamic countries, which have rather low food productivity now, but which had much higher food productivity 2,000 years ago. Simply copying what the Romans found when they went there would be a very helpful thing. The people of Israel are trying to do that, as you know, in Neguib and the southern desert and other places.

So the problem differs from area to area. On the whole, except for India and Ceylon, I wouldn't say that there's much spare land, but that does not mean that the problem is insoluble.

QUESTION: In your chart that you put on the screen, the development sequence of the Western group as against the buffer fringe seemed to be somewhat different in terms of timing. Could you relate the principal development of those two together in terms of approximate times? I realize that the last two in the buffer fringe--

DR. QUIGLEY: You mean I didn't date the ones in the buffer fringe?

QUESTION: Yes. I was trying to tie the two together.

DR. QUIGLEY: Well, the reason I didn't date them was because they are all in the last 150 years. In other words, the Empress of China went in to open up China in 1794, Perry went to Japan in 1854, and so forth.

So it's all the last 150 years or at least the last 200 years for the developments in the buffer fringe. And when you look at that diagram, please be aware that this is a rigid, much oversimplified thing. If I have to talk about it in only 50 or 60 minutes, I have to oversimplify it.

QUESTION: You stated that stage D of the demographic cycle was theoretically based on extrapolations from the previous stages. Don't we have a preview of that in Ireland? From what I have read about it, they have a low birth rate and--

DR. QUIGLEY: Yes. In other words, Western Europe seems already to be approaching this. You may remember that the French General Staff has been worried for more than 50 years, going back to 1910 or even earlier, over the fact that the birth rate in France was falling while the birth rate in Germany didn't seem to be falling. So there were bound to be many more Germans in the future and many fewer Frenchmen.

It is quite true that in the extreme western edges of Western Europe we already see it. We don't see it just in Ireland. It's also true in Brittany, and it's probably true in places like Galicia and Spain. Why it is true on the western edges I don't know. But you can observe the beginnings of it there.

QUESTION: You say on the one hand that the American way of life is not exportable. At the same time we as a Nation seem to be encouraging our private capital to go abroad, to make investments in these foreign countries, these underdeveloped countries. Presumably the export of our capital, our dollars, carries with it some strings which could tend to impose on these countries some measure of the American way of life. Are these two situations compatible, or fundamentally is it possible that the export of our capital may not be as wise as it sounds?

DR. QUIGLEY: This once again is the result of oversimplification. American capital can go abroad, but it isn't really used in the American way. To give you an example: If American capital goes abroad and goes into mining or goes into industry, the whole ways in which it is used are not the ways it is used here. For example, in the mines, let us say, of southern Africa you bring the natives on a 3-, or 4-, or 5-year contract, lock them up in a compound, feed them, and take entire care of them. That's the method adopted by Cecil Rhodes some 50 or 60 years ago, you see. That isn't the American way of doing mining, even though they are using American capital, as they must use capital if they are going to industrialize.

Or again in other parts of the buffer fringe you will get a great deal of part-time labor. Even where people come to work in industry, as in India, they do not leave the farm. They are still peasants. They take off in the harvest season. They take off in the planting season. They come back to work. You never know whether you have them or not.

So the whole labor problem, the whole technology problem, and many other things are quite different from what they are in America. And when I say that the American way of life isn't exportable, what I mean is that when we go abroad, let's look at what is there, see what their problems are, see what solutions are feasible in terms of what is available, and do not go out there, as so many Americas do, saying: "We've got to make nice little Americans out of them"; getting out at the 5-o'clock whistle and rushing home to look at TV or something like that. That's what I meant really by that.

**QUESTION:** You mentioned that the overthrow of the ruling group in China was a result of the mass arming of the peasants, as opposed to what is taking place in western Asia. Do you have in mind primarily our military aid programs? If so, are we in fact contributing to the creation of revolution rather than maintaining stability, as intended by these programs?

**DR. QUIGLEY:** No. I was referring to something earlier than this. You notice that in the buffer fringe sequence the first one here is weapons. I was referring rather to the fact that the Chinese Government armed its own peasantry not with a modern, specialized weapon so much as they did with the earlier amateur weapons, simply the rifle.

Now, if a government begins to get the modern, specialized weapons, then it will again be in a position to oppress its own people and thus adopt the Russian system, which is that the Russian ruling group, with specialized weapons, can force the peasantry to give up most of what they produce, to pay a 60 percent or larger turnover tax on the consumer goods they buy, and so forth.

Now, this process of giving weapons into the hands of the lower classes, which leads to the overthrow of the upper class, was true in the Far East. It was true in much of the Malay area. It has not yet been true in India. There are very peculiar reasons there--Ghandi and so forth. It certainly has not been true in the Near East, where the Arab governments still have the weapons and the Arab peasants do not have them and cannot get them. And when the government finally does get armored cars

and tanks and these other things, some of which they do have, I don't see how the peasant will be able to resist them if he is able to get, let us say, a revolver. It depends on the guerrilla thing.

The ability of the guerrillas in southeast Asia and Morocco to withstand modern specialized weapons is to me most reassuring in terms of the future of democracy, although it may seem to most of you as military men a very bad situation, because as military men you would prefer a situation where the military could impose their will upon the people. But I, as a defender of liberty, prefer a situation where the ordinary individual can tell any government, "I won't." "No" is a beautiful word except when it's from the lips of a beautiful woman.

COLONEL COOPER: Dr. Quigley, I will not attempt to pull a Tom Crystal act here. I'd just like to say that you have shown a great depth of knowledge of your subject, which has been presented in a most excellent manner. Thank you very much.

(14 Apr 1958--4, 100)B/ljt, sgh