

Table 3-8. Comparison of integrational infrastructures

Range	Degree of Advancement	Civilizations
7	Very Advanced	Western-West, Japanese, Western-Jewish
6	Advanced	
5	Very Good	
4	Good	Western-Central, Western-Latin, Islamic
3	Poor	Eastern, Chinese, Hindu
2	Very Poor	Buddhist
1	Chaotic	African

Source: The author's estimation and Hunter (2000).

- power systems are compared in Table 3-6
- logistic systems are compared in Table 3-7
- integrational infrastructures are compared in Table 3-8

THE CIVILIZATION INDEX

A summary of civilization systems is provided in the form of the Civilization Index in Table 9. The perfect Civilization Index has 77 points, since each of civilization systems has seven points at its highest level of development and is assessed by 11 criteria (5 for the Existence System) and six criteria for remaining systems ($11 \times 7 = 77$).

A comparison of civilizations at the end of the twentieth century permits us to draw the following conclusions:

1. The Western-West civilization is at the stage of "saturation," indicating that it is either ready to expand into other civilizations or to enter into social unrest. This civilization has an almost perfect Index: CI = 91%.
2. The Western-Jewish (CI = 87%) and Japanese civilizations (CI = 75%) are very well developed and will approach the "saturation" point in the near future.
3. The African civilization is either at the beginning of the developmental process or at the stage of disastrous development. Taking into account its very short and tumultuous history, both statements may be correct (CI = 18%).
4. The remaining civilizations have a good prospect for further development or redevelopment. This is presently taking place in the case of the Western-Central civilization after the collapse of the Soviet civilization. Civilization indexes of these civilizations vary from CI = 32% to 61%.

STRATEGIES OF CIVILIZATION DEVELOPMENT

At the beginning of the 21st century, eight civilizations are well established; the one exception is the African civilization. The developmental process of these civilizations should continue in the following ways:

- development based on internal forces within a civilization
- development based on external encounters between civilizations

Table 3-9. The Civilization Index (CI)

Civilization	Existence S.	Communica- tion S.	Knowledge S.	Guiding S.	Power S.	Logistic S.	Infrastruc- ture	Total	CI as % of Potential (77)	Rank- ing
Western- West	29	7	7	7	7	6	7	70	0.91	1
Western- Jewish	27	7	7	7	6	6	7	67	0.87	2
Japanese	21	6	6	7	5	6	7	58	0.75	3
Western- Central	20	5	4	6	5	3	4	47	0.61	4
Eastern	23	5	5	1	7	3	3	47	0.61	5
Western- Latin	15	4	4	6	3	2	4	40	0.52	6
Chinese	17	4	2	2	6	1	3	35	0.45	7
Islamic	13	3	2	4	4	3	4	33	0.43	8
Hindu	13	2	3	7	3	1	3	32	0.41	9
Buddhist	9	3	3	5	2	1	2	25	0.32	10
African	8	1	1	1	1	1	1	14	0.18	11

Of course, these processes are related and reinforced by the global civilizing process.

The development process triggered by internal forces should take place primarily among civilizations with a Civilization Index below the maturity level (CI = 75%). This category encompasses all but the Western-West and Japanese civilizations. The Chinese (CI = 45%) and Hindu (CI = 41%) civilizations have 3,500 and 2,600 years of experience, respectively, and know how to respond to challenges without threat to their future existence.

The Western civilization is divided into three sub-civilizations, of which the Western-West civilization (CI = 91%) has achieved its peak. Its further prosperous existence may be prolonged if the West-West engages the development of the Western-Central (CI = 61%) and Western-Latin (CI = 52%) civilizations. The formation of the North American Free Trade Agreement (NAFTA) sphere and the inclusion of Western-Central European States in NATO and the European Union indicate that the Western civilization is pursuing such a strategy very effectively at this time.

The developmental process based on encounters between civilizations takes place both in space and in time. Encounters in space take place between adjacent civilizations. For example, the Western-Central civilization blends with the Eastern civilization due to geographic proximity. Despite the higher Civilization Index of the former, the latter has the ambition to control the Western both militarily and politically. In fact, the Eastern civilization has the most space-related contacts with the Western-Central, Chinese, Buddhist, and Islamic civilizations, all of which are developing by gains from the fallen Soviet civilization.

Encounters in time take place among all civilizations. However, the closest encounters take place among civilizations of the same or similar character. For example, history has proven that endodynamic civilizations like the Hindu, Buddhist and African ones have very close relationships. The Hindus play the same role in Africa as the Jews in Europe or America, being in charge of commerce and knowledge. One may notice the same close relations between the Western-West and the Japanese civilizations, which are both of a static character. There is a possibility that the Western-Central and Eastern civilizations (of the same exodynamic character) will collaborate closely when post-Soviet political relations are settled.

The Chinese civilization enters inter-civilization encounters in time rather than in space. This civilization challenges the Islamic and Japanese civilizations through its extensions in South Korea, Taiwan, Hong Kong, Singapore, Malaysia, and, to a certain degree, Indonesia and even the United States (where it was ready to "buy" political influence during the 1996 election). During the 1960s, the Chinese civilization established its presence in Africa as well.

The Chinese civilization expansion is counter-measured by the Japanese civilization in eastern and southern Asia, where Japan is aiming at an economic and eventually a political dominance. This space-time-oriented sphere will be witness

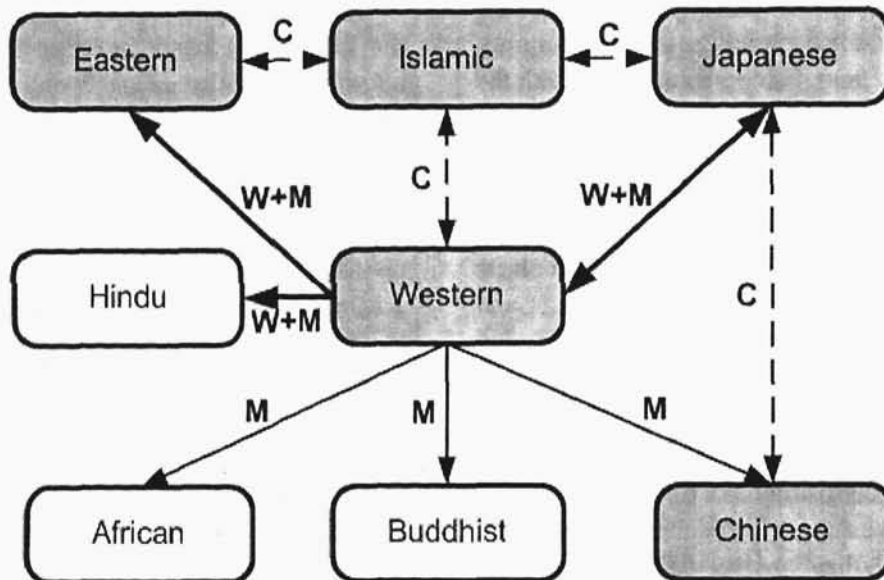
to eventual "clashes of civilizations" as predicted by Huntington.

The Islamic civilization at the beginning of the 21st century has an exodynamic character and strong civilization and coordination powers that will guide its expansionist ambitions against primarily the Western and Eastern civilizations. Its encounter with the Eastern civilization takes place in space and its battle with the Western civilization takes place in time. These clashes will continue as long as the Islamic civilization has at its disposal income from its vast oil reserves. Its Civilization Index is 2.1 times lower than the Western civilization's index and only 1.4 times lower than the Eastern civilization's index. As a result, the Islamic civilization has no chance to win "clashes" with the Western civilization, but it has some chance to "win" against the Eastern civilization. An example of the latter is the Russians' plight in the war with the Chechens between 1994 and 1996.

The Western civilization (as the most advanced and with the United States as its superpower) wants to play the coaching role to other civilizations. Its World View Value System is based on democracy, peace through free trade, and technology-driven infrastructures that seek an optimal solution for the entire world. Its message to other civilizations is westernization and modernization. Only two civilizations, Eastern and Hindu, are ready to accept this message, either directly or indirectly. The Chinese, Buddhist, and African civilizations accept the modernization message. The Islamic civilization generally rejects the western message, although the Malaysian and Indonesian cultures accept modernization to a degree.

The African civilization is the weakest and could be a target for some civilization to absorb. At the beginning of the 21st century it looks as if no one civilization aspires to incorporate the African civilization. The problem with this civilization has for many years been addressed through the North-South debate.

Figure 3-1. Main zones of civilization clashes and collaboration (C - Clash, M - Modernization, W - Westernization)



Based on the foregoing analysis, one can provide the following conclusions (Figure 3-1) about the scope and range of encounters among civilizations:

- The Clashes Zone I: Among the Islamic and Eastern, Western and Japanese Civilizations (in the area of Malaysia and Indonesia)
- The Clashes Zone II: Between the Chinese and Japanese civilizations
- The Collaboration Zone I: Among the Western, Hindu, Eastern and Japanese Civilizations
- The Collaboration Zone II: Among the Hindu, African, and Buddhist Civilizations

Encounters between Western and Eastern civilizations at the beginning of the 21st century may resemble clashes, since strong disagreements exist on the NATO expansion into parts of the world beyond the traditional area of Western Europe. This dispute, however, is influenced more by the

internal politics of Russia than by any real threat from NATO. In the meantime, the Western-West civilization is providing significant financing for the transformation of the post-Soviet civilization into Eastern civilization, based on the western message.

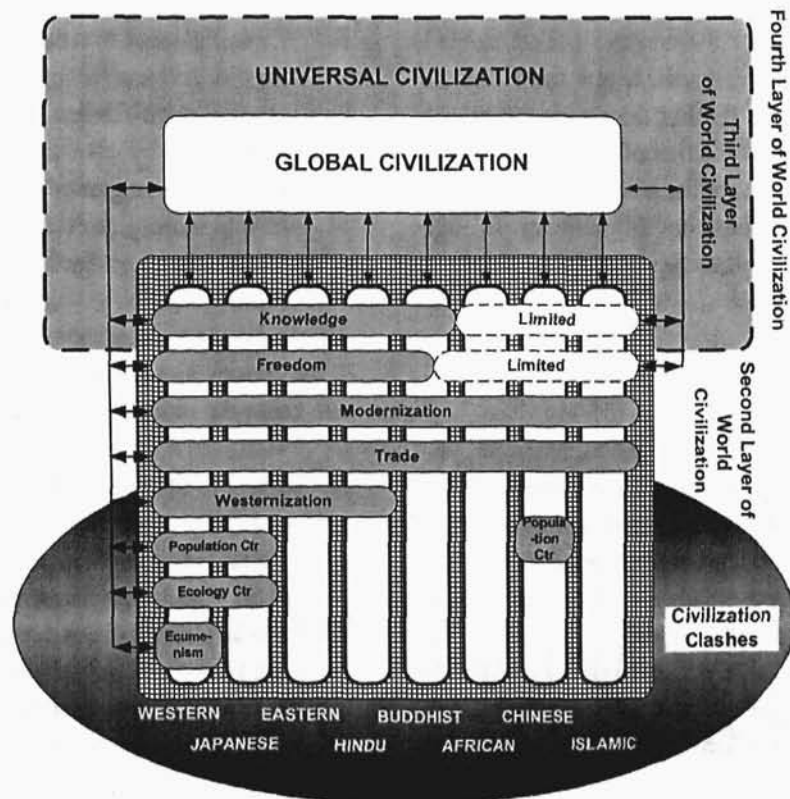
THE CHALLENGES FOR CIVILIZATIONS AND PEOPLE

Based on the encounters between civilizations, one may offer the following prospects for the further development of the world civilization (Figure 3-2), applying such criteria as knowledge, freedom (human and civil rights, international law), modernization⁵, westernization, trade, population control, ecology control, and ecumenism:

1. The modernization process is embracing all civilizations, leading to the development of an integrational infrastructure such as the global network of transportation and information exchanges (the Internet).

2. World trade is embracing all civilizations and creating stateless consortia that challenge the world's *modus operandi*.
3. The development of technological knowledge is taking place in all civilizations including African to certain degree. The development of knowledge in the social sciences is limited in the African, Chinese, and Islamic civilizations, mostly due to their authoritarian or quasi-totalitarian political systems.
4. The freedom movement is taking place in four civilizations, while the remaining civilizations are limited by their authoritarian and quasi-totalitarian political systems.
5. The westernization process is taking place in four civilizations—Western, Japanese, Eastern, and Hindu. Within the Western civilization, there is a clash between this civilization and other civilizations brought in by immigrants. It means that Western civilization is still “westernizing.”
6. Ecumenism takes place only within the Western civilization, while other civilizations are afraid of converging and tend to fall into fundamentalism.
7. All the above are contributing to the emergence of the global civilization, which creates the second level of the world civilization.
8. The development of the global civilization is exerting a strong influence upon the development of each autonomous civilization as well as upon the development and spread of knowledge, freedom, modernization, and perhaps westernization.

Figure 3-2. The dynamics of the world civilization at the beginning of the 21st century (The first layer of civilization is not shown)



9. Control over the environment is limited to the Western-West and Japanese civilizations and this control is determining their higher quality of life.
10. Population control is limited to the Western-West, Japanese, and Chinese civilizations, and this control determines their higher quality of life. However, in the case of the Chinese civilization this influence may be felt only over a long-term perspective.

In a broad historic context, the civilization dynamics allow for the following conclusion:

1. The Western-West Civilization is in a state of saturation and must look for external expansion, which is happening under the form of globalism, europeism and pre-emptive defense doctrine, which secure the extension of its reach.
2. The Islamic civilization, having almost unlimited resources from the sales of oil, wants to change its unfavorable situation quickly.
3. The remaining civilizations have yet the space for the further development, which depends on their citizens' education, capital accumulation, and capable if not phenomenal leadership. These conditions vary through these civilizations.

CONCLUSION

At the beginning of the third millennium, the emergence of the global civilization is setting new standards in business communications, international travel, world products, and international behavior based upon a common "taste" in fashion, food, pop music, and movies.

Thus, a citizen of any civilization must cope with two challenges: that of his/her own civilization and that of the global civilization. The global

civilization need not replace an autonomous civilization, as many leaders of "invaded" civilizations fear. On the contrary, it is necessary to develop behavior which can cope simultaneously with these two challenges. The emergence of the global civilization creates a second layer, superimposed upon each autonomous civilization. This second layer increases the complexity of the world civilization, creating new challenges for each individual civilization and their participants.

However, the global civilization is under strong criticism that it cannot be based only on market forces and must be regulated by the global society (Soros, 2002; 2003). Perhaps the latter may lead to the rise of the universal civilization, which will be less infrastructural and more cultural, taking the best values from all civilizations (Targowski, 2004b).

A. Further Research Directions

- Define civilization index by applying different configurations of key indicators
- Develop consistent sets of a few key indicators, which can be generalized and applied throughout different scientific and practical disciplines
- Evaluate strategies of different civilizations' development processes and eventually apply them to the current issues of civilizations' development.
- Investigation of more challenges for civilizations and people and offer some recommendations how to respond to them

B. Research Opportunities

- Include the civilization index among the most popular key indicators of national and world statistics in order to trace the state of the Earth

C. Additional Ideas

- Apply the civilization index as the measurement of the civilization's "health" and opportunity for updating human strategy in politics, science, technology, medicine, education and so forth

D. Rationale

- The civilization index makes a compelling case for rethinking what constitutes success or failure of a civilization as a supra-structure of nations and peoples with similar mind-sets. Early in the 20th century, economists helped devise standards for measuring our economic progress and developing indicators to help create fiscal policy. One must now argue that it is time to make the goal of meaningful and timely measures of our civilization one of the top priorities of political, ecological, social, and technological sciences. The arrival of post-industrial society at the end of the 20th century and global society at the beginning of the 21st century have transformed traditional power, and thus methods used to measure the relative power of nations should be reassessed as well, particularly at a higher level than the nation, at the level of a civilization. Needless to say, in the present century, a war between nations may transform into a war between civilizations. The civilization index approach can be treated as some kind of quantitative approach to civilization history in a *longue-duree* cycle. Mathematical expressions of these processes help to make the implicit assumptions explicit, their consequences deduced, absurd implications deleted, and disputable statements pinpointed (Richardson, 1960; Wilkinson, 1980). Understandably, most academic historians are skeptical of this approach, limiting models to the "explanatory"

capability of various philosophical ideas, which are meaningless for academic historians. At least the civilization index is not about history per se, but about the "explanatory" relations among civilizations, which are shaped by the *longue-duree* history.

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ENDNOTES

- ¹ More on civilization definition is provided by Targowski (2004c).
- ² Although the Jewish civilization is not based on Catholicism and Protestantism, it belongs to the Western civilization on the same premise as Greece (Hellenic), which is Orthodox, belongs to the Western civilization, because both contributed enormously to the development of the Western civilization.
- ³ A sequence of civilizations is provided by using a criterion from Table 9, where the sorting is given by the Civilization Index value.
- ⁴ More on this type of system in Targowski (2004a; 2004c).
- ⁵ The difference between "modernization" and "westernization" lies in applying as a modernization process "modern tools" without western values.

