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The Civilization Index

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Before one can speculate about a new world order and "a clash of civilizations," or "the end of history," it is necessary to develop an appropriate set of measures to compare human competition in world politics and economy. Components and the generic model of an autonomous civilization are defined for eight civilizations recognized at the beginning of the 21st century. Each component of contemporary civilizations is numerically estimated to construct the civilization index. A comparative analysis of eight civilizational indices is provided to define strategies for civilization development within three zones of encounters: clashes, modernization, and westernization. Two layers of world civilizations are defined and the dynamics of world civilization at the beginning of the 3rd Millennium are modeled. Based on these dynamics, challenges for civilizations and people are inevitable.

The Next Entity to Measure

The purpose of this study is to define energy levels of civilizations, particularly in respect to the role played by info-communication processes. Rapid changes in the world economy and social structure have brought into question traditional assumptions, prompting some intellectuals to speak of a "clash of civilizations" [Huntington 1993, 1996] or even "the end of history" [Fukuyama 1989]. Before one can speculate about a New World Order, it is necessary to develop an appropriate set of measures to compare human environments and a terminology to explain them. The environment described as a "civilization" by Toynbee [1995] and "world civilization" by Braudel [1993] has changed so drastically that these definitions are no longer sufficient.

The spectacular progress in technology and social life achieved at the beginning of the third millennium stimulates an extensive investigation into the human condition and the status of the world. Questions, like the following, need to be answered:

- What is the state of Western and other civilizations at the beginning of the 21st century?
• How can it be compared to other civilizations in terms of level of development?
• What criteria and measurements should be applied in evaluating and comparing civilizations?
• What is the relationship between a given civilization and world civilization?

This study falls into a category of encompassing comparisons of large structures and processes, leading to understanding how human entities behave in a certain way because of the consequences of the civilization system’s behavior as a whole [Tilly 1984].

Several attempts to measure the vitality of civilizations have been undertaken. Most of these studies were conducted at the level of centuries and regions throughout several millennia. Kroeber [1944] counted “geniuses,” which he defined as “superior individuals,” whose superiority was established by the consensus of encyclopedia and textbook authors. He counted them in seven disciplines: philosophy, science, grammar (philology), sculpture, painting, drama, and literature, through 49 centuries, from 4000 BC to 1900 AD. He found 5,323 geniuses; including 56% from Europe, 11% from Far East, 3% from India, 8% from Middle East, and 22% from non-Europe (America+). Hence, one can assume that about 78% of geniuses were “generated” by the Western Civilization (Europe plus America).

According to Kroeber, the Middle East provided the overwhelming majority of geniuses from 3000 to 800 BC, and later Europe took over the supply of geniuses until AD 500, followed by the Far East for a few centuries, then the Middle East prevailed for a few centuries only to pass the leadership to Europe since the 12th century. He stopped counting at AD 1900, so “geniuses” from the US in 20th century are not included, but certainly they received the most Nobel Prizes.

Sorokin [1937-41] provided a count of historic persons, scientific discoveries and technological inventions only in the scope of Europe and the rest of the world. Naroll et al [1971] assumed implicitly that creativeness and civilization were synonymous terms or at least indicative of each other [Eckhard 1995].

Taagepera [1978] measured empires in terms of square megameeters, covering 386,000 square miles. Until 600 BC, empires were small; later, when the Medes and Persians invented hierarchical bureaucracy, the size of empires grew, and they took another leap after AD 1600, influenced by the European trade-industrial-transportation-communication-
tions revolutions. The progress of empires in the world is meaningful. In the 6th century BC they covered 6% of the earth’s surface; in the 20th century their coverage grew to 95%.

Several researchers measured the number of wars (battles) and number of deaths caused by it. Measurement of battles reflects the intensity of wars and their art as a synonym of civilization. Dupuy and Dupuy [1985] recorded 4511 battles (29% in Europe) in the last 3500 years.

Eckhard [1995] correlated geniuses, civilizations, empires, and wars at the global and regional levels of analysis. He found that the more civilized we became, the larger was the area of the earth that came under imperial control. Empires were spreading civilization over larger territories (e.g. Poland, the largest state in 16th century Europe,civilizing the East in the 16-17th centuries, or United Kingdom civilizing its colonies in the second part of the second millennium AD).

He concluded that the relations among civilizations, empires, and wars is such that these three interact in such a way that it promotes each other’s growth up to a point where surplus wealth diminishes and turns into a deficit. At this point, civilizations, empires, and wars cannot be afforded any more, and they fall, as did the Persian, Chinese or recent Soviet empires.

In conclusion, one can notice that measuring civilizations should lead to an answer as to why civilizations “rise” and “fall” and whether we can develop civilization without wars by reinventing our values.

The Architecture of a Civilization

Civilization is an “interface” that differentiates humans from animals in dealing with nature and creator (Big-Bang or God, according to various believers). In the general model on Figure 1, one can recognize the following components of a civilization [Targowski 2004]:

- Human Entity: an existence-driven community organized in the pursuit of civilization
- Culture: a value and symbols-driven, continuous process of developing patterned human behavior
- Infrastructure: a technology-driven, additive process of acquiring and applying material means.
All civilizations depend upon favorable geographic environments; more on how to define civilizations is provided by Targowski [2004]. According to accepted estimations, humans began living on Earth about 6-5 million years ago. The development of more skillful mankind began about 200,000-150,000 years ago, when homo sapiens were living in South-Eastern Africa and anatomically resembled modern humans. From this location homo sapiens began to move to South-Western Asia (100,000 years ago), Australia (50,000), Europe (40,000), New Guinea (30,000), Siberia (25,000), and North America (12,000) [Burenhult 2003].

Modern humans began to be more social first as hunter/gatherers, then when the Ice Age ended (-10,000) as a farmers and as a city dwellers (-9,000). The oldest recorded-historic civilization is about 6,000 years old [Burenhult 2003a] and is associated with the rise of Mesopotamian Civilization (includes Sumerian and Semitic people—4,000 BC), followed by Egyptian (3100 BC).

Human civilization began about 6,000 years ago (Figure 2), marked by the emergence of organized human entities, such as tribes or clans. These early info-material structures, or civilizations, were created by humans as a means of coping with themselves, nature, and their concept of the divine. During the next six millennia, humans developed about 27 civilizations [Toynbee 1995]; currently, at the beginning of the 21st century, one can discern eight well established religion-oriented civi-
The empirical model recognizes (in order of longest duration) the Chinese (3500 years), Hindu (2,600), Buddhist (1,400), Japanese (1,350), Western (1,200), Islamic (1400), Eastern (950), and African (150) civilizations.
A civilization is not a monolithic structure but is made up of many cultures and subcultures. The 27 recorded civilizations were comprised of about 76 cultures and perhaps 100-120 sub-cultures [Targowski 2004]. The existence of so many smaller components brings into question whether it is a civilization or a culture that determines the new world order. Certainly culture defines a mode of world exchanges that is currently based on skills of communicating widely.

A religion-oriented civilization is an autonomous structure, made up of numerous systems in support of its self-dependent existence. A general model of a civilization is shown in Figure 3 and reflects the following components:

The "brain" of a civilization is the guiding system, composed of:
- A common world view values set (WVVS)
- A strategizing culture, and
- An authority infrastructure.

The existence system is composed of:
- A human entity,
- An entertainment culture, and
- A foundational infrastructure.

The knowledge system is composed of:
- An enlightened culture and
- A knowledge infrastructure.

The logistic system is composed of:
- A management (strategizing culture) and
- An economic infrastructure.

The communication system is composed of:
- A diffusing culture and
- A communication infrastructure.

The power system is composed of:
- Politics (strategizing culture) and
- A military infrastructure.

The integrational infrastructure is composed of:
- A communication infrastructure,
- A transportation infrastructure, and
- An information infrastructure ("information superhighway").
A civilization is controlled by its guiding system, which identifies threats to the existence system and generates reflections that are transmitted to the knowledge system. The knowledge system creates awareness and returns the information to the guiding system, which in turn steers the existence system—closing a loop through which flow data, information, concepts, knowledge, and wisdom. This autonomous civilization interacts with other civilizations through its communication, logistic, and power systems. The entire civilizing process takes place through the channels of the integrational infrastructure. It is interesting to note the difference between a civilization and a state. The former is steered by its guiding system and the latter by its power system. The average citizen is caught between these two systems.

In a democracy, the power system is subordinated to the guiding system, whereas in other political entities the guiding system is usually subordinated to the power system.

**Characteristics of a Civilization**

The comparison of contemporary civilizations will be based on the model depicted in Figure 3. Since Western civilization is composed of
many cultures/states sharing the same WVVS but at different stages of development, it has been divided for comparison purposes into three member-components:

- The Western-West: Western Europe and Northern America
- The Western-Central: Poland, the Czech Republic, Slovakia, Hungary, Estonia, Latvia, Lithuania, Croatia, and Slovenia.
- The Western-Latin: Latin America's states.
- The Western-Jewish: a supranational community (very well developed diaspora in many countries), culture-wise it is integrated by Judaism and the politics of supporting those who return to the Biblical homeland, and infrastructure-wise it is based on global networks of mutual support organizations, media, music, and politics.

The characteristics of each civilization are rated on a scale from 1 to 7 and aggregated as a concept of a civilization. The existence system is characterized in Table 1.

### Table 1 The Comparison of the Existence System of Civilizations

<table>
<thead>
<tr>
<th>Civilization</th>
<th>Total Power</th>
<th>Working Power</th>
<th>Coordination Power</th>
<th>Idle Power</th>
<th>Human Entity</th>
<th>Total</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western-West</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>3</td>
<td>5</td>
<td>29</td>
<td>1</td>
</tr>
<tr>
<td>Western-Central</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>Western-Latin</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Western-Jewish</td>
<td>7</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>6</td>
<td>27</td>
<td>2</td>
</tr>
<tr>
<td>Japanese</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>Eastern</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>Hindu</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>Chinese</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>7</td>
<td>3</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>Islamic</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Buddhist</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>African</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: The author's estimation, Kurian [1999], Hunter [2000], and Maddison [2001].

The components of the existence system are measured as follows:

- Total power: energy consumption in kg/per capita/year
- Working power: average hours per week in manufacturing
- Coordination power: number of computers per 1000 people
- Idle power: number of cinema seats per 1000 people
- Human entity: degree of flexibility (Table 2).
### Table 2  Comparison of Flexibility of a Human Entity

<table>
<thead>
<tr>
<th>Range</th>
<th>Human Entity</th>
<th>Civilizations</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Spherical Community</td>
<td>Western-Jewish</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Supranational Community</td>
<td>Western-West</td>
<td>NATO, EU, NAFTA</td>
</tr>
<tr>
<td>5</td>
<td>Transnational Community</td>
<td>Western-West</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Political Society</td>
<td>Western-Central, Western-Latin, Japanese, Chinese, Buddhist, Hindu, Islamic, Eastern,</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Nation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Proto-nation</td>
<td>African</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>People</td>
<td>North Korea</td>
<td></td>
</tr>
</tbody>
</table>

Source: The author’s estimation and Honey and Barry [2000]

The remaining civilization systems of a general model of civilizations are compared in the following tables:
- Communication systems of civilizations are compared in Table 3,
- Knowledge systems are compared in Table 4,
- Guiding systems are compared in Table 5,
- Power systems are compared in Table 6,
- Logistic systems are compared in Table 7, and
- Integrational infrastructures are compared in Table 8.

### Table 3  The Comparison of the Communication System of Civilizations

<table>
<thead>
<tr>
<th>Range</th>
<th>TV sets per 1000 People</th>
<th>Internet Users/1K Habitants</th>
<th>Civilizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>over 700</td>
<td>338</td>
<td>Western-West, Western-Jewish</td>
</tr>
<tr>
<td>6</td>
<td>500-699</td>
<td>371</td>
<td>Japanese</td>
</tr>
<tr>
<td>5</td>
<td>300-499</td>
<td>20, na</td>
<td>Eastern, Western-Central</td>
</tr>
<tr>
<td>4</td>
<td>100-299</td>
<td>na, 18</td>
<td>Western-Latin, Chinese</td>
</tr>
<tr>
<td>3</td>
<td>70-100</td>
<td>10, 6</td>
<td>Islamic, Buddhist</td>
</tr>
<tr>
<td>2</td>
<td>50-69</td>
<td>5</td>
<td>Hindu</td>
</tr>
<tr>
<td>1</td>
<td>below 49</td>
<td>&lt;1</td>
<td>African</td>
</tr>
</tbody>
</table>

Table 4: Comparison of the Knowledge System of Civilizations

<table>
<thead>
<tr>
<th>Range</th>
<th>University Professors per 1000 People</th>
<th>Expected Years of Schooling, Males In 1992</th>
<th>Civilizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>3, 8</td>
<td>16</td>
<td>Western-West, Western-Jewish</td>
</tr>
<tr>
<td>6</td>
<td>1, 7</td>
<td>14</td>
<td>Japanese</td>
</tr>
<tr>
<td>5</td>
<td>1, 2</td>
<td>11</td>
<td>Eastern</td>
</tr>
<tr>
<td>4</td>
<td>0.7 - 0.86</td>
<td>12</td>
<td>Western-Central, Western-Latin</td>
</tr>
<tr>
<td>3</td>
<td>0.3 - 0.34</td>
<td>na</td>
<td>Buddhist-Hindu</td>
</tr>
<tr>
<td>2</td>
<td>0.26</td>
<td>na, 9</td>
<td>Chinese, Islamic</td>
</tr>
<tr>
<td>1</td>
<td>0.2</td>
<td>4</td>
<td>African</td>
</tr>
</tbody>
</table>


Table 5: Comparison of the Guiding System of Civilizations

<table>
<thead>
<tr>
<th>Range</th>
<th>Political System</th>
<th>Civilizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Democracy</td>
<td>Western-West, Japanese, Hindu, Western-Jewish</td>
</tr>
<tr>
<td>6</td>
<td>Quasi-Democratic</td>
<td>Western-Latin, Western-Central</td>
</tr>
<tr>
<td>5</td>
<td>Authoritarian</td>
<td>Buddhist</td>
</tr>
<tr>
<td>4</td>
<td>Authoritarian-Theocratic</td>
<td>Hanic</td>
</tr>
<tr>
<td>3</td>
<td>Dictatorship</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Quasi-Totalitarian</td>
<td>Chinese</td>
</tr>
<tr>
<td>1</td>
<td>Chaotic or Transition</td>
<td>African, Eastern</td>
</tr>
</tbody>
</table>

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

Table 6: Comparison of the Power System of Civilizations

<table>
<thead>
<tr>
<th>Range</th>
<th>Military Capability and Will</th>
<th>Civilizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Super Power</td>
<td>Western-West, Eastern</td>
</tr>
<tr>
<td>6</td>
<td>Strong Power</td>
<td>Chinese, Western-Jewish</td>
</tr>
<tr>
<td>5</td>
<td>Good Power</td>
<td>Japanese, West-Central</td>
</tr>
<tr>
<td>4</td>
<td>Terrorist Power</td>
<td>Hanic</td>
</tr>
<tr>
<td>3</td>
<td>Power</td>
<td>Hindu, West-Latin</td>
</tr>
<tr>
<td>2</td>
<td>Little Power</td>
<td>Buddhist</td>
</tr>
<tr>
<td>1</td>
<td>No power</td>
<td>African</td>
</tr>
</tbody>
</table>

Table 7. Comparison of Logistic Systems

<table>
<thead>
<tr>
<th>Range</th>
<th>$GNI$ per capita (Gross National Income in parity purchasing power)</th>
<th>Civilizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>35,500-45,000</td>
<td>Western-West, Japanese, Western-Jewish</td>
</tr>
<tr>
<td>6</td>
<td>20,001-35,000</td>
<td>Western-West, Japanese, Western-Jewish</td>
</tr>
<tr>
<td>5</td>
<td>15,001-20,000</td>
<td>Western-Central, Eastern, Islamic</td>
</tr>
<tr>
<td>4</td>
<td>10,001-15,000</td>
<td>Western-Latin</td>
</tr>
<tr>
<td>3</td>
<td>5,000-10,000</td>
<td>Western-Latin</td>
</tr>
<tr>
<td>2</td>
<td>1,001-4,999</td>
<td>Chinese, Hindu, African, Buddhist</td>
</tr>
<tr>
<td>1</td>
<td>below 1,000</td>
<td>Chinese, Hindu, African, Buddhist</td>
</tr>
</tbody>
</table>


Table 8. Comparison of an Integrational Infrastructure

<table>
<thead>
<tr>
<th>Range</th>
<th>Degree of Advancement</th>
<th>Civilizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Very Advanced</td>
<td>Western-West, Japanese, Western-Jewish</td>
</tr>
<tr>
<td>6</td>
<td>Advanced</td>
<td>Western-Central, Western-Latin, Islamic</td>
</tr>
<tr>
<td>5</td>
<td>Very Good</td>
<td>Western-Central, Western-Latin, Islamic</td>
</tr>
<tr>
<td>4</td>
<td>Good</td>
<td>Eastern, Chinese, Hindu</td>
</tr>
<tr>
<td>3</td>
<td>Poor</td>
<td>Buddhist</td>
</tr>
<tr>
<td>2</td>
<td>Very Poor</td>
<td>African</td>
</tr>
<tr>
<td>1</td>
<td>Chaotic</td>
<td></td>
</tr>
</tbody>
</table>

Source: The author’s estimation and Hunter [2000].

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 seven civilization systems has seven points at its highest level of development.
<table>
<thead>
<tr>
<th>Civilization</th>
<th>Existence S.</th>
<th>Communication S.</th>
<th>Knowledge S.</th>
<th>Guiding S.</th>
<th>Power S.</th>
<th>Logistic S.</th>
<th>Infrastructure S.</th>
<th>Total</th>
<th>CI as % of Potential (77)</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western-West</td>
<td>29</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>7</td>
<td>70</td>
<td>0.91</td>
<td>1</td>
</tr>
<tr>
<td>Western-Jewish</td>
<td>27</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>67</td>
<td>0.87</td>
<td>2</td>
</tr>
<tr>
<td>Japanese</td>
<td>21</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>58</td>
<td>0.75</td>
<td>3</td>
</tr>
<tr>
<td>Western-Central</td>
<td>20</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>47</td>
<td>0.61</td>
<td>4</td>
</tr>
<tr>
<td>Eastern</td>
<td>23</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>47</td>
<td>0.61</td>
<td>5</td>
</tr>
<tr>
<td>Western-Latin</td>
<td>15</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>40</td>
<td>0.52</td>
<td>6</td>
</tr>
<tr>
<td>Chinese</td>
<td>17</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>35</td>
<td>0.45</td>
<td>7</td>
</tr>
<tr>
<td>Islamic</td>
<td>13</td>
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<td>2</td>
<td>4</td>
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<td>3</td>
<td>4</td>
<td>33</td>
<td>0.43</td>
<td>8</td>
</tr>
<tr>
<td>Hindu</td>
<td>13</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>32</td>
<td>0.41</td>
<td>9</td>
</tr>
<tr>
<td>Buddhist</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>25</td>
<td>0.32</td>
<td>10</td>
</tr>
<tr>
<td>African</td>
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<td>1</td>
<td>1</td>
<td>14</td>
<td>0.18</td>
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</table>

Table 9: Civilization Index

https://scholarsarchive.byu.edu/ccr/vol57/iss57/9
A comparison of civilizations at the end of the 20th century permits us to draw the following conclusions:

- 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%.
- Western-Jewish (CI=87%) and Japanese civilizations (CI = 75%) are very well developed and will approach the "saturation" point in the near future.
- 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%).
- 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 among civilizations.

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

The developmental 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 3500 and 2600 years of experience respectively and know how to respond to challenges without threat to their future existence.

Western civilization is divided into three sub-civilizations, of which Western-West civilization (CI=91%) has achieved its peak. Its further prosperous existence may be prolonged if the Western-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 among civilizations takes place both in space and 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 the gains from the fallen Soviet civilization in 1991.

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 such as Hindu, Buddhist and African have very close relationships. The Hindus play the same role in Africa as the Jews in Europe or America, as leaders of commerce and knowledge. One can notice the same close relations between Western-West and Japanese civilizations, both of which are static. 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.

Chinese civilization enters inter-civilization encounters in time rather than in space. This civilization challenges Islamic and Japanese civilizations through its extensions into 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, Chinese civilization established its presence in Africa as well.

Chinese civilization expansion is counter-measured by the Japanese civilization in eastern-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.
Islamic civilization at the beginning of the 21st century has an exo-
dynamic character and strong civilization and coordination powers that
will guide its expansionist ambitions against primarily the Western and
eastern civilizations. Its encounter with Eastern civilization takes place
in space; its battle with Western civilization, in time. These clashes will
continue as long as 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 lower than the Eastern
Civilization’s index.

As a result, 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 Russia’s plight in the
war with the Chechynans in 1994-1996.

Western civilization (as the most advanced and with the United
States as its superpower) wants to play the coaching role to other civi-
lizations. 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 indirect-
ly. Chinese, Buddhist, and African civilizations accept the moderniza-
tion message. Islamic civilization generally rejects the western mes-
sage, although the Malaysian and Indonesian cultures accept some
aspects of modernization.

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

Based on the foregoing analysis, one can provide the following
conclusions (Figure 4) about the scope and range of encounters among
civilizations:

- Clash Zone I: Among the Islamic and Eastern, Western and
  Japanese Civilizations (in the area of Malaysia and Indonesia).
- Clash Zone II: Between the Chinese and Japanese civilizations.
- Collaboration Zone I: Among the Western, Hindu, Eastern and
  Japanese Civilizations.
- 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 other 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 by NATO. In the meantime, 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 can offer the following prospects for the further development of the world civilization (Figure 5), applying such criteria as knowledge, freedom (human and civil rights, international law), modernization, westernization, trade, population control, ecology control, and ecumenism. The difference between “modernization” and “westernization” lies in applying by modernization processes “modern tools” without western values.
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).

- World trade is embracing all civilizations and creating stateless consortia that challenge the world’s *modus operandi*.

- The development of technological knowledge is taking place in most civilizations. 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.

- The freedom movement is taking place in four civilizations, while the remaining civilizations are limited by their authoritarian and quasi-totalitarian political systems.

- The westernization process is taking place in four civilizations — Western, Japanese, Eastern, and Hindu.
• Ecumenism takes place only within the Western Civilization, while other civilizations are afraid of converging and tend to fall into fundamentalism.

• All the above are contributing to the emergence of the global civilization, which creates the second layer of the world civilization.

• 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.

• Control over the environment is limited to the Western-West, Western-Jewish, and Japanese civilizations and this control is determining their higher quality of life.

• 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, civilization dynamics allows for the following conclusion:

• Western-West Civilization is in the state of saturation and must look for external expansion that is happening under the form of globalism, Europeanism, and a preemptive defense doctrine securing the extension of the reach.

• Islamic Civilization, having almost unlimited resources from the sales of oil, wants to quickly change its unfavorable situation.

• The remaining civilizations have yet the space for the further development, which depends on the education of their citizens, on capital accumulation, and on capable if not phenomenon leadership. These conditions vary through these civilizations.

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 its participants.

However, Global Civilization is under strong criticism that it cannot be based only on the market forces and must be regulated by the Global Society (Soros 2002, 2003). Perhaps, the latter may lead to the rise of a Universal Civilization, which will be less infrastructural and more cultural, taking the best values from all civilizations (Targowski 2004c).

Endnotes

1 Although the Jewish Civilization is not based on Catholicism and Protestantism, it belongs to the Western Civilization on the same premise as Greece, which is Orthodox, belongs to the Western Civilization, because both contributed enormously to the development of the Western Civilization.

2 List of civilizations is provided by the order applied in Table 9.

3 More on this type of a system in Targowski (2004a)

References


Andrew Targowski


Targowski, A. (2004c). From Global To Universal Civilization,

