



Munich Personal RePEc Archive

**Institutional matrices theory as a  
framework for both western and  
non-western people to understand the  
global village”**

Kirdina, Svetlana and Sandstrom, Gregory

XVII World Congress of Sociology

4 July 2010

Online at <https://mpra.ub.uni-muenchen.de/18642/>  
MPRA Paper No. 18642, posted 07 Aug 2010 21:27 UTC

# **“Institutional Matrices Theory as a Framework for both Western and Non-Western People to Understand the Global Village”**

*Draft*

Prof. Dr. Svetlana Kirdina  
Institute of Economics, Russian Academy of Sciences  
Moscow, Russia  
kirdina@bk.ru

PhD Gregory Sandstrom  
Autonomous National University of Mexico  
Institute for Applied Mathematics and Systems  
Mexico City, Mexico  
[gregsandstrom@yahoo.ca](mailto:gregsandstrom@yahoo.ca)

For Session:  
“Non-Western Challenges to Western Social Theory” (RC16)  
World Congress of Sociology  
International Sociological Association  
July 11-17, 2010  
Gothenburg, Sweden

*Please, contact the authors for references*

Neither criticising Western social theory nor constructing an alternative kind of social theory is currently being thought of as a creative and fruitful method for social theorizing around the world today. The development of a new theoretical framework for understanding and explaining social origins and processes, both in Western and non-Western countries is therefore a relevant challenge for human-social sciences. It is also a real contribution to confront the limits of the dominant Western-based social theories on the current global academic stage. The objective of this paper is to present such a new theoretical framework: Institutional Matrices Theory (IMT), or X- & Y-Theory (*Kirdina*, 2001, 2003, etc.), which attempts to answer this challenge.

## **1. Practical challenges and significant pre-ideas of IMT (or X- & Y-Theory)**

The main reason to create a new theoretical framework is provoked by the inadequacy of actual theoretical schemes for understanding and predicting modern-day Russian transformations.

The sociological theoretical mainstream is represented first of all by theories of the so-called “western mentality”. The founding fathers of sociology as a scientific and academic discipline were from Europe. Since then, scientists from Europe and the USA have contributed and are still contributing to many of the

basic ideas of the sociological theory. The ASA and the ESA are the largest sociological associations in the world.

The concepts, frameworks and methods of American (cf. USA vs. ‘western’) sociology work well as schemes for describing and explaining appropriate societies, i.e. the societies in which the theories are produced. Russia genuinely uses famous ‘western’ theories in analyzing various new phenomena, as far as they are relevant and effective. But these same theories are not so effective in analyzing long-term or special processes and tendencies in Russia’s development.

Therefore, Russia today needs new social theories to fill the gaps left by ‘western’ and ‘European’ ones, that have not satisfied the Russian ‘cultural’ or ‘natural’ mindset.

First of all, we have to acknowledge the most important intellectuals whose thoughts have formed the preconditions of IMT/X&YT. It develops the following people’s ideas:

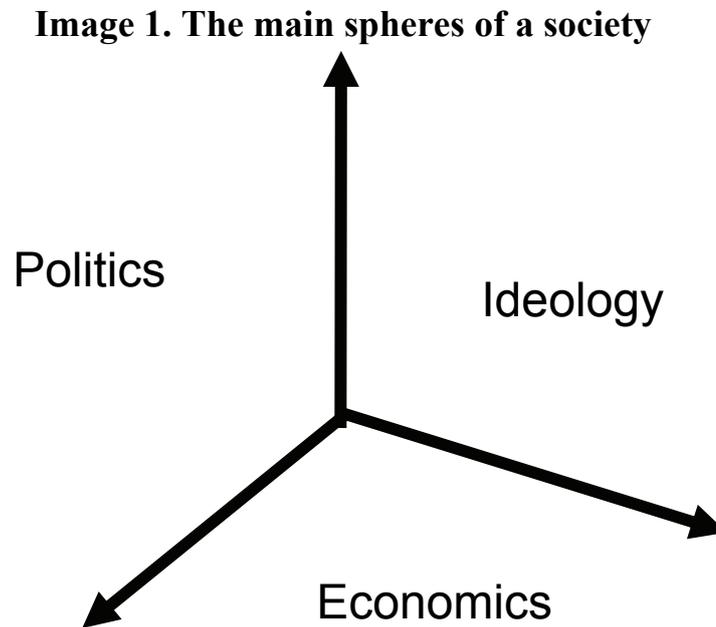
1. August Comte (1798-1857, French philosopher and social theorist) – statics and dynamics; coined the term ‘sociology’;
2. Karl Marx (1818-1883, German philosopher, sociologist, economist) – materialistic conception of history;
3. Emile Durkheim (1858-1917, French sociologist) – sociology as a science of institutions and the concept of a *sui generis* society;
4. Pitirim Sorokin (1889-1968, Russian-American sociologist) – the idea of social and cultural systems;
5. Talcott Parsons (1902-1979, American sociologist) – structural functionalism;
6. Karl Polanyi (1886-1964, Hungarian intellectual, forced to flee to Austria, USA and Canada) – economic anthropology and redistributive economy concept;
7. Douglass North (born 1920, USA, Economics Nobel Laureate “for having renewed research in economic history”) – coined the ‘institutional matrix’ term;
8. Marshall McLuhan (1911-1980, Canadian socio-cultural philosopher) – “global village” idea; and the notion of “human extensions”
9. Harvey Leibenstein (1922-1994, Ukrainian-born American economist) – first to use the idea of X-efficiency;
10. Olga Bessonova (born 1958, Russian sociologist) – “razdatok” economic theory;
11. Alexander Akhiezer (1929-2007, Russian philosopher) – socio-cultural evolution concept.

The last two people are both from Russia and are not so well-known in the international context. (By the way, a maternal grandfather of Polanyi was Russian, too).

This list of main 11 pre-ideas outlines some of the basic themes and methodological approaches of Institutional Matrices Theory, or X- and T Theory (IMT/X&Y-Theory).

## 2. Synopsis of Institutional matrices Theory, or X- and T Theory

Here is a scheme of our modeling what a society is (see image 1).



Human society is seen as a social system, as multiple inter-related social systems, with the main “sociological co-ordinates” being *economics*, *politics* and *ideology*. These value spheres are strongly interrelated morphologically as parts or sides or components of one complete whole. In this model:

- Economic interrelations are related to resources used for reproducing social entities;
- The political sphere has regular and organized social actions to achieve the defined objectives; and
- The ideological sub-system embodies important social ideas and values.

These spheres are strongly interrelated morphologically as parts or sides of one whole. It is impossible to change or reform only one sphere successfully, without those changes also influencing the other spheres.

We can observe that IMT/X&YT offers a simple and basic model – neither cultural nor social institutions like family, religion, or education are here. This absence of certain chosen institutions is an imperative point for constructing a theoretical model that can be successfully used for comparative studies of different countries. In this way we can narrow the number of our variables, thus constraining the realm of our potential results, but at the same time improving our scientific rigour.

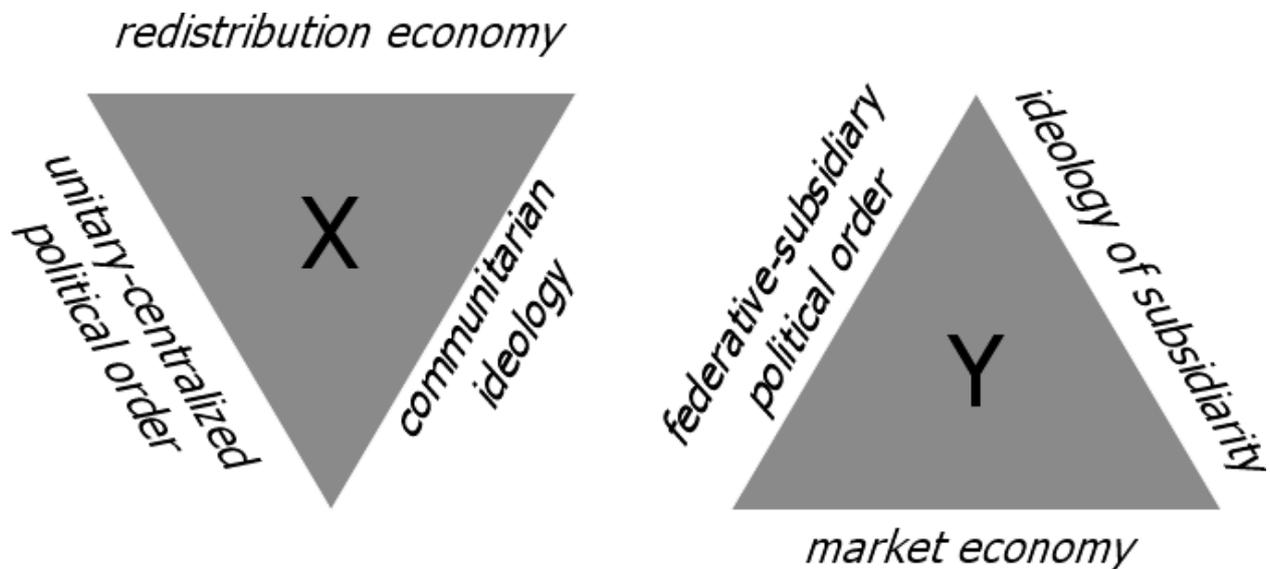
Basic human-social institutions are the subject of analysis. Institutions permanently reproduce the staples of social relations in different civilizations and

historical periods. Basic institutions integrate a society into one ‘whole’ that is developing, sometimes with conflicts and at other times with harmony, sometimes with competition and at other times with cooperation.

Institutions have a dual natural-artificial character. On the one hand, institutions manifest self-organizational principles in a society as a co-extensive natural-social system. On the other hand, institutions are the result of purposeful human-social reflection with regard to relevant laws and rules; they emerge and are shaped as ‘human-made’ entities.

Aggregations of interrelated basic economic, political and ideological institutions are defined as *institutional matrices*. Historical observations and empirical research as well as mathematical modelling and a broad philosophical approach provide a ground for our hypothesis about two particular types of institutional matrices existing around the world. Namely, we call the two types X-matrices and Y-matrices and compare the unique identities of each one (see image 2). This is the first fundamental hypothesis of IMT/X&Y-Theory.

**Image 2. Institutions of X- and Y- matrices**



An X-matrix is formed by institutions that centre on a *redistributive economy* (Karl Polanyi’s term, 1997), a *unitary political order* and a *communitarian ideology*, i.e. with priority placed on the “We” over the “I”. A Y-matrix is formed by institutions with a *market economy*, a *federative political order* and an *ideology of subsidiarity*, i.e. with priority on “I” over “We.”

The second fundamental hypothesis is that the institutional structure of each society can be represented as a combination of these two basic institutional matrices.

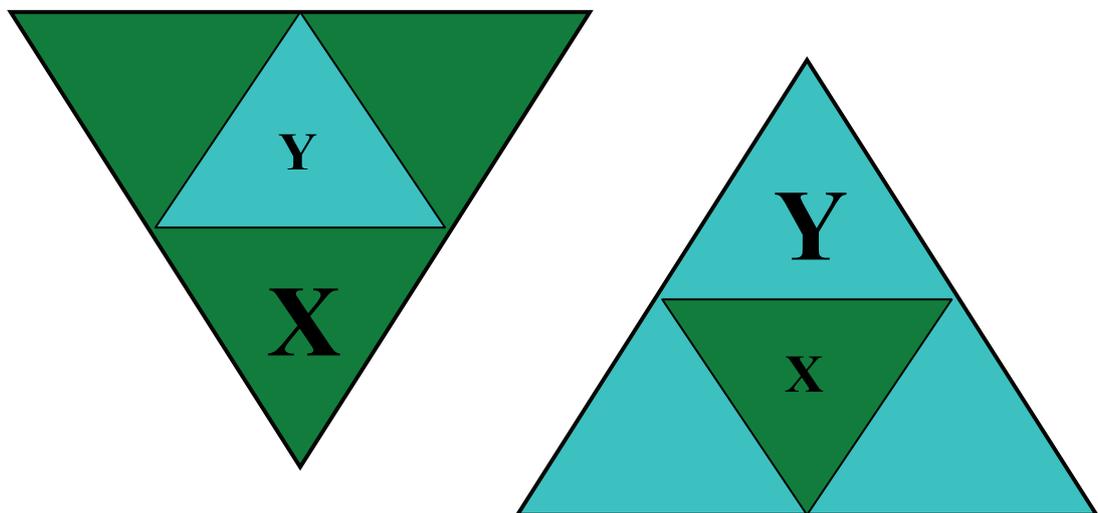
In real-life societies and nations, X- and Y-matrices interact, with one of them permanently prevailing. Nevertheless, the matrices are not entirely exclusive of each other, given that both X- and Y-matrices co-exist concurrently in a given

case. The dominant institutions of the prevailing matrix define a society or nation and serve as a performance framework for alternative/complementary institutions from the other matrix (see image 3).

In some societies X-matrix institutions prevail, while Y-institutions help them. We contend this is true for Russia, China and most Asian, Latin America, some other countries and maybe India.

At the same time, in other societies Y-matrix institutions predominate, whereas X-matrix institutions are complementary and additional, as, for example, in most western European countries and the USA.

**Image 3. Combinations of X- and Y-matrices**



The main task of social and economic policy in each country is to support the optimal combination of predominant and alternative/complementary institutions. For example, economic policy has to find the best proportion between market and redistributive institutions as well as modernizing their forms.

The third fundamental hypothesis is that the material and technological environments in a society are key historical determinants of whether either an X-matrix or a Y-matrix prevails. Along with culture and personality, these make up the main factors in our institutional model. The human-social environment can be a *communal* indivisible system, wherein removing some elements can lead to disintegration of the whole system or it can be *non-communal*, with possibilities for functional technological dissociation (Bessonova, Kirdina, O'Sullivan, 1996:17-18).

*Communality* denotes the features of a material and technological environment that assumes it exists as a unified, further indivisible system, parts of

which cannot be taken out without threatening its disintegration. A communal environment can function only with public goods and cannot be divided into consumption units and sold in parts. Accordingly, coordinated communal efforts by a considerable part of the population, along with a unified centralized government are normative. Therefore, the institutional content of a nation developing within a communal environment is, eventually, determined by the tasks of coordinating joint efforts towards effective use. Thus, X-matrices are formed under communal conditions, with Y-institutions constituting a minority in the field.

*Non-communality* signifies technological dissociation, with the possibility of atomizing core elements of the material infrastructure, as well as independent functioning and private usage. A non-communal environment is divisible into separate, disconnected elements; it is able to disperse and can exist as an aggregate of dissociated, independent technological objects. In this case, an individual or group of people (e.g. families) can involve parts of the non-communal environment in their economy, maintain their effectiveness, and use the results obtained on their own, not necessarily cooperating with other members of the society. If this is the case, the main function of such human-social institutions is to assure interaction between atomized economic and social agents. Y-matrix institutions are thus shaped in a non-communal environment.

To be more accurate, in a communal environment X-matrix institutions are dominant and Y-matrix institutions are complementary (e.g. in Russia, China, India, most Asian and Latin American countries). In a non-communal environment (e.g. in the USA and Europe) the institutional situation is *vice versa*.

Structures and functions of basic institutions in X- and Y-matrices are briefly presented in Tables 1-3 (see in details: Kirdina, 2001, 2003).

**Table 1. Economic institutions**

<b>Functions of institutions</b>	<b>Institutions of redistributive economy in X-matrix</b>	<b>Institutions of market economy in Y-matrix</b>
Fixing of goods (property rights system)	Supreme conditional ownership	Private ownership
Transfer of goods	Redistribution (accumulation-coordination-distribution)	Exchange (buying-selling)
Interactions between economic agents	Cooperation	Competition
Labour system	Employment (unlimited-term) labour	Contract (short- and medium-term) labour
Feed-back (effectiveness indices)	Cost limitation (X-efficiency)	Profit maximization (Y-efficiency)

We can see that the same economic functions are enacted by specific institutions in different matrices. All X- and Y-institutions coexist in actual national and local economies in different combinations and are embodied in many institutional forms. Thus, though we are outlining the general features of X- and Y-

matrix economic institutions, in real-life situations the extreme cases are never fully demonstrated this way.

The basic political institutions of X- and Y-matrices are presented in Table 2. The X-political order represents a top-down model of society. Therefore, the Y-political order characterizes a bottom-up model. (Please note: this means that top-down has an X-triangle shape – □ – and bottom-up has a Y-triangle shape – □ –, which seems counter-intuitive).

**Table 2. Political institutions**

<b>Functions of institutions</b>	<b>Institutions of unitary political order in X-matrix</b>	<b>Institutions federative political order in Y- matrix</b>
Territorial administrative organization of the nation	Administrative division (unitarity)	Federative structure (federation)
Governance system (flow of decision making)	Vertical hierarchical authority with Centre on the top	Self-government and subsidiarity
Type of interaction in the order of decision making	General assembly and unanimity	Multi-party system and democratic majority
Filling of governing positions	Appointment	Election
Feed-back	Appeals to higher levels of hierarchical authority	Law suits

We distinguish 5 basic economic and political institutions in each matrix. Also, we consider 5 pairs of ideological institutions in X- and Y-matrices (Table 3).

**Table 3. Ideological institutions**

<b>Functions of institutions</b>	<b>X-institutions of communitarian ideology</b>	<b>Y-institutions of subsidiary ideology</b>
Driver of social actions	Collectivism	Individualism
Normative understanding of social structure	Egalitarianism	Stratification
Prevailing social values	Order	Freedom
Labor attitudes	Money-oriented	Well-being-oriented
Principles of academic and social priority	Generalizing /Holistic/Holism	Specializing /Atomistic/Reductionism

Ideological institutions express a majority or minority social consensus on the main rules and norms that regulate social actions and indicate what is fair and just according to mass opinion. The ideology of a people, nation-state, community, folk, etc. is less quantifiable, but in many ways more powerful than the political and economic institutions in representing an inward and outward attitude and in establishing the ways that individuals communicate with themselves and in groups.

The IMT/X&YT approach accepts two models as suitable for a nation's characteristics. It contends that trying to force an institutional framework ('lock-in') on a society that does not inherently accept the same institutional values is liable to lead to unsuccessful and potentially damaging results;

IMT/X&YT suggests that even if the 'wrong' institutional structures are artificially or externally constructed in a nation-state, in the long-run those institutions will fail (or will "lock-in by predominant institutional matrix") and ultimately revert back to their appropriate institutional model. "Institutional matrices make institutional changes overwhelmingly incremental and path dependent" (North, 1993).

### 3. Using Institutional Matrices Theory or X&Y-Theory

The source of information in this analysis was articles in journals, books and textbooks on Sociology and Economics, including curricula, theses and monographs with reference to Institutional Matrices Theory (IMT), which were written in 2000-2010 on the Russian Internet and in e-mails. 206 items were studied. The following three main areas, which deal with this theory, were analyzed: IMT/X&YT application in thematic social research as a methodology and as a framework for interpreting empirical data results.

The structures of Research Networks of ESA and of ISA Research Committees were used to classify thematic social research published by Russian (and some non-Russian) scientists. Table 4 presents the results.

**Table 4. Classification of papers using IMT/X&YT, by thematic topics, %, 2000-2010 (206 items)**

<b>Thematic research areas</b>	<b>% of papers</b>
Economy & Society	17
Political Sociology	14
Social Transformation & Change	14
Environment & Society	11
Sociology of Culture	10
Logic & Methodology in Sociology	9
Other topics	25
Total	100

IMT/X&YT is broadly applied in different sociological topics. The main sociological research areas, in which the theory is used more actively, are Economy and Society (16%), Social Transformation and Social Change (14%), Political Sociology (14%), Environment and Society (11%) and Sociology of Culture (11%). These topics constitute two thirds (66%) of all application areas.

The domination of these topics as research areas is explained by the possibilities that IMT/X&YT gives for understanding and revealing modern social changes in different spheres of Russian society. This is evident in the titles and contents of the following published works within the above thematic areas:

- Economy and Society: many works are devoted to analysing institutions, for example “Forms of ownership and institutional changes in banking” or “Path dependency in the evolution of ownership institutions”. Authors remark that “economic effectiveness is the factor of choice of ownership forms. The probability of fixing for definite form is higher if it encourages expenses reduction and enhancement of result”<sup>1</sup> (Volchik V., 2001). Therefore, increasing economic X-matrix institutions is more advantageous for transforming Russia;

- Political Sociology: the author of one article, “The territorial organization of Russia as a problem of the role of government” (Anokhin M., 2002), appeals to IMT and proclaims: “At present we are not dealing with the substitutions of unitarity for federalism rather we are dealing with the modification of unitarity according to new conditions of state development”;

- Social Transformation and Social Change: the IMT is used as a framework for explaining the essence of social transformation. With a ‘Western’ bias, the latter is often presented as a process of Y-matrix institutional implementation instead of developing improved X-matrix institutions (Dublikash T., 2001; Zgonnick L., 2005; Kara-Murza S., 2008 etc);

- Environment and Society: “institutional matrices theory is used as the methodology for analysis and decision making for qualitative transformation of land-developing industry” in modern Russia (Asaul N., 2004);

- Sociology of Culture: there are “speak for themselves” titles, for example, “Peculiarities of Russian economic mentality” (Balabanova E., 2001), and “Social-cultural aspects of modernization process in Russia” (Gavrov S., 2004);

- Sociology of Law: in the thesis “Methodological background of sociology of law in West-European sociology in XIX-XX” the author states that “the effectiveness of legal and law institutions can exist if they are adequate to the in-depth parameters of the dominant institutional matrix” (Glazyrin V., 2006). It explains the limits and prospects for implementation of borrowing ‘western’ institutions.

More and more IMT is applied as a methodology for investigations (73%) rather than as a framework for interpreting empirical data (27%). This shows that

---

<sup>1</sup> All references in this paragraph are given according to the list (in Russian) on <http://kirdina.ru/links2.shtml>

IMT/X&YT has considerable advantages in terms of understanding a wide range of social processes (Table 5).

**Table 5. Classification of papers using IMT/X&YT for different purposes, %, 2000-2010**

<b>As methodology for theoretical and empirical social research</b>	<b>As framework for interpretation of empirical data results</b>	<b>Total</b>
<b>73</b>	<b>27</b>	<b>100</b>

The regional geography of IMT/X&YT application is gradually enlarging (~80% in Russia, ~10% in Former Soviet Countries and about 10% in other foreign countries)

Besides that fact that the IMT/X&YT serves as the methodology in thematic social research, it is often considered as the special subject for the analysis itself (Table 6).

**Table 6. Attitudes of other scientists toward institutional matrices theory, publications and mass-media, 2000-01.08.2008**

<b>Active supporters</b>	<b>Neutral analysis</b>	<b>In disagreement</b>	<b>Total</b>
<b>2</b>	<b>8</b>	<b>6</b>	<b>16</b>

Discussions about the structure of the IMT/X&YT, its terminology as well as its comparison with other concepts were presented in 16 publications (2002-2008 data). The scientists, who analyzed the Institutional Matrices Theory, can be divided into three groups – active supporters, neutrals and those who are in disagreement.

#### **4. The need for ‘non-western’ contributions to global social theory**

The Russian-born IMT, or X-and Y-Theory is a “non-western” contribution to global social theory. Russia has both accepted and resisted ‘westernizing’ in its 1000+ years. This gives it an unusual position from a geo-philosophical standpoint.

One example of a ‘non-western’ economics is the Soviet theories of Extensive and Intensive Growth (EIG), which is being updated by Sandstrom since 2003 (ongoing). Another example is Ha-Joon Chang, a Korean-born professor of economics at Cambridge University, who represents ‘heterodox’ economics in the face of what he sees as historical revisionist policies that help maintain the most

developed (western) countries on top of the development ‘ladder’<sup>2</sup> (Chang, 2002). These ‘alternative’ or ‘non-western’ ideas are now being raised in dialogue about world recovery from the global economic recession of 2008-2009 and the new configurations in world inter-relations such as the G20 meetings suggest.

Indeed, what the 21<sup>st</sup> century conversation seems to require is a view of ‘development’ and ‘transition’ that is ‘non-western,’ i.e. to move beyond some of the theories in and about Russia put forward by western scientists, scholars and economic advisors in the early years after the breakup of the Soviet Union. By acknowledging that nations around the world, especially those from outside of the ‘Western’ sphere of influence, may choose their own (non-Y-, i.e. X-matrices) pathways of production/consumption and development is a liberating notion for those who feel institutionally pressured by their opposites. This is a perception of development that allows for different nations to define it in different ways.

“Development,” says Chang, “is something centered around a process of transformation in the productive sphere” (2010: 2). We can recognize the focus on production that Marx also supported, and yet at the same time acknowledge that the transformative aspect of the call to action in the socio-economic sphere suggests that development economics based on an evolutionary theory modeled on biology is likely not the best way forward. Let us recall that the Russian Academy of Sciences hosted its celebration of Darwin events, including an international conference (Sept. 2009), yet kept the door open for post-Darwinian and non-Darwinian views of ‘change,’ including in the human-social sciences.

We are waiting for more contemporary examples that will help to verify Russia’s rightful sovereignty as an ‘X’-matrix modern nation-state as well as cooperative and contributing member of the international community. We are asking for examples of transition and transformation in the institutional matrices of multiple countries, which will help us to work on our global modelling.

The result of our proposal is a ‘non-western’ contribution; it is based on ideas formulated and/or elaborated in Russia, which is not an entirely ‘western’ nation.

In international relations, IMT/X&YT can serve as an example of a non-western approach that validates the institutions that those countries construct. This protects them against being forced into an inappropriate framework by others from ‘outside.’ The research made using IMT therefore operates with both identification strategies and with a comparative method, which serves to distinguish the institutional structures and systems present in various places, made by people around the world.

---

<sup>2</sup> “Are the developed countries trying to ‘kick away the ladder’ by which they have climbed up to the top, by preventing developing countries from adopting policies and institutions that they themselves used?” (2002: 10)

## 5. Conclusions

S. Arjomand wrote that “real changes in the world have always formed social theories” (*Arjomand*, 2004). The Institutional Matrices Theory, or X&Y-Theory confirms this statement. This social theory is being developed in Russia in a period of dramatic social transformations, with a view to re-establishing the basis for its sovereignty and uniqueness-in-community in the global village.

This new theory is actively being used in a variety of sociological disciplines as well as in thematic social research. The regional geography of its networked application is gradually enlarging

The main practical conclusions of IMT/X&YT are as follows:

- The ‘natural’ institutions of a society’s institutional matrix dominate over alternative/complementary institutions
- The latter serve as auxiliary or additional, providing stability in national institutional environments, depending on the dynamic and/or static relationship between the two types of institutional matrices.
- Balancing development in the public sphere requires purposeful efforts by social agents. Finding an optimal balance of predominant and alternative/complementary institutions is a crucial challenge for today’s nation-states, including politicians and civil society.

## REFERENCES

*Arjomand S.A.* (2004). The Changing Role of the Social Sciences. An Action-Theoretical Perspective. Symposium of Social Theory. Preface. / *International Sociology*, 2004, № 3, p. 299.

*Bessonova O., Kirdina S., O'Sullivan R.* (1996). Market Experiment in the Housing Economy of Russia. Novosibirsk.

*Ha-Joon Chang* (2002). Kicking Away the Ladder: Development Strategy in Historical Perspective. London: Anthem Press.

*Kirdina S.G.* (2001). Institutional Matrices and Russia Development. 2-d ed. Novosibirsk, 2001. Summary in English

<http://kirdina.ru/public/summary/index.shtml>

*Kirdina S.* (2003). Institutional Matrices and Development of Russia. Proceedings of Hawaii International Conference on Social Sciences, June 12 - 15, 2003. (<http://www.hicsocial.org/Social2003Proceedings/Svetlana%20Kirdina.pdf>).

*Kirdina S.* Fundamental Difference in the Transformation Process between Russia and East European Countries // *Berliner Osteuropa Info*, № 16/2001.

*Liebenstein, H.* (1996). Allocative Efficiency vs. X-Efficiency, *American Economic Review*, 1966, Vol. 56, № 3. June. P. 392-415.

*Leibenstein H.* (1978). General X-efficiency theory and economic development. N.Y. etc: Oxford Univ. Press.

*Marx K.* Capital, Vol. 2, Chapter 20, section 10.

*North, D.C.* (1993). Five Propositions about institutional change. Washington University, St. Louis. <http://129.3.20.41/eps/eh/papers/9309/9309001.pdf>

*Polanyi K.* (1977). The Livelihood of Man. N.Y. Academic Press, Inc.