

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/306297619>

Globalization and variants of local adaptation: Theory and justification with symbolic logic

Article in *International Sociology* · August 2016

DOI: 10.1177/0268580916662384

CITATIONS

10

READS

126

2 authors, including:



Gabor Peli

Centre for Social Sciences Budapest

42 PUBLICATIONS 604 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



The Coevolution of the Firm and the Product Attribute Space [View project](#)

C. Boone – G. Péli

**Globalisation and variants of local adaptation:
Theory and justification with symbolic logic**

Abstract

An increasing body of evidence indicates that globalisation can trigger a variety of reactions from societies. The possible outcomes include blending, hybridisation, fault line formation or even an increased salience of local traditionalist value systems. An important task for the research field is developing systematic, comparative theories predicting which outcome is expected to emerge depending on the interplay between the global and the local. Drawing on the rich empirical literature on globalisation variants, the paper makes a further step in theory building proposing a typology with the four possible outcomes mentioned above. In order to make the model premises more transparent, we transcribe our arguments into symbolic logic sentences and derive the typology outcomes as theorems. This allows testing if the proposed model, indeed, implies the purported conclusions, and to see what consequences would, or would not, follow from a slightly modified premise set, that is, from a slightly modified globalisation theory.

Introduction

Since the Second World War our world has witnessed massive increases in cross-border flows of goods, money, people, information and culture. This process, which goes hand in hand with rising interdependence and mutual awareness among economic, political, and social actors in the world, is generally referred to as globalisation. Although research shows that globalisation is a pervasive empirical reality (Brady et al., 2007; Meyer, 2000), at the same time it 'is one of the most contested topics in the social sciences' (Guillén, 2001: 235). The debate and controversies in the literature relate to issues such as whether there is a global culture in the make, whether globalisation is always related to modernity and civilization and whether global convergence will ultimately undermine the authority of nation-states (Guillén, 2001; Schneiberg, 2006). Globalisation is without doubt a formidable blending force that blurs boundaries between different cultures (Robertson and Khonder, 1998). Through isomorphic processes common cultural models, values and practices organised in world discourse arise and penetrate social life worldwide in many areas of social life. For instance, numerous studies of the world-society research program of John Meyer and associates have demonstrated worldwide convergence of educational systems sharing a common rationalistic-scientific world culture stressing the importance of human rights and individual empowerment (Meyer et al., 1997, 2010; Bromley et al, 2011).

At the same time, however, a paradox of recent times emerges as such processes towards convergence often seem to go hand in hand with the growing importance of the particularities of local communities in shaping local cultural adaptations. More recent accounts, therefore, stress the dialectic tension between the global and the local arguing that global interdependence is not only a boundary-blurring force but may also demarcate boundaries between the global and the local even more sharply, for instance, when it represents a threat to local traditions (Marquis and Battilana, 2009: 284). Local actors and communities should not be portrayed as passive recipients of top-down institutional pressures and global values. Instead, this perspective underscores the importance of agency and contestation in whether actors are willing to adjust to these pressures (Divarci et al., 2015; Marquis and Battilana, 2009; Schneiberg, 2006). The result is that globalisation does not only homogenise cultures but involves the simultaneous operation of blending and segregating forces and 'the interpenetration of sameness and difference – or in somewhat different terms, the interpenetration of universalism and particularism.' (Robertson and

Khonder, 1998: 28). It should be understood as a complex process that simultaneously produces homogenization *and* heterogenisation (Brady et al., 2007: 317) and combines tendencies toward universalism *and* particularism.

Obviously, the complex interaction between the global and the local also implies that the outcomes of globalisation are hard to predict. Local cultures may adapt or resist global phenomena, or might respond by mixing the global and the local resulting in hybrid adaptations to deal with globalisation pressures (Marquis and Battilana, 2009). In order to understand which local outcomes are likely to emerge in response to globalisation it is, therefore, essential to chart the local characteristics that moderate the impact of globalisation (Divarci et al., 2015). Surprisingly, however, there is not much systematic research on the implications of the interplay between the global and the local. What exactly are the outcomes of this interplay? When and how, for instance, is tension resolved between the local and the global? Under which conditions do hybrid and partial ways of value adoption occur? Which conditions facilitate or maintain deep ditches between adherents of local and global values? When do local particularities become salient as a result of globalisation? What features of the global and the local are important in determining the specific outcomes of the globalisation process?

In order to answer such questions, multi-level institutional research is needed that explicitly emphasises local variation and the multiplicity of alternatives which is unfortunately scarce in the literature. The complexity of globalisation requires further theory development that bridges the macro-micro gap, and combines levels of analysis ranging from the world-system to the nation-state and local community (Guillén, 2001). Our aim is contributing to theory building by addressing an array of these issues systematically. By doing so we respond to Guillén's plea (2009: 235) 'for a comparative sociology of globalisation that is sensitive to local variations and to how agency, interest, and resistance mediate in the relationship between globalisation causes and outcomes.'

A next step in theorizing can be searching more order in these set of intriguing ideas. This can decrease the ambiguity of the arguments, which latter is a side effect of natural language theorizing. Some ambiguity is good – may argue many – as it keeps the door open for unforeseen ideas and interpretations. But conceptual vagueness is also bad – may add others –, because the halo of unspecified meaning associations around key concepts

hinders scientific information exchange, and lets discourse getting down ‘in a sea of chewing gum’ (Masuch and Lapotin, 1996). Clearly, there is a trade-off concerning the desirable degree of sharpness of theoretical concepts. As a theory develops, the optimum-point along this trade-off might move towards disambiguation. We believe that current globalisation theory has been reaching the state when systematization yields substantial benefits by offering a solid, though certainly not unchangeable, foundation for further conceptual work and empirical testing. Drawing on the insights of globalisation research, we identify different patterns of local cultural adaptation emerging as a result of the globalisation process. We also identify a parsimonious set of underlying conditions that lead to these patterns. Doing so, we propose a globalisation typology based on two dichotomic variables reflecting the local-global interplay.

As a first step, we describe the typology in natural language. Then, we apply symbolic logic to build a transparent framework for the theoretical model. Logic is a powerful formal tool that supports qualitative theory development (Bruggeman and Vermeulen, 2002; Péli, 2016). Still, logic does not replace intuition; it does not tell the researcher what the important insights are. Logical modelling helps systematizing insights. Logic also facilitates arriving to new insights by exploring unforeseen consequences of the theoretical choices had been made. The pertaining arguments of the theory are one by one coupled to corresponding symbolic logic statements in a transparent and motivated manner, so that the theoretically oriented reader can evaluate the proposed globalisation model without being an expert in logic. The qualitative model we are going to propose can also guide future empirical research by predicting specific consequences of the tension between the global and the local aspects of globalisation.

The rest of the article is organised as follows. We begin with a *State of the art* section reflecting extant research on forces of divergence and convergence that shape globalisation. Then drawing on this knowledge, we describe the main ideas behind the globalisation typology we are going to propose. After this phase, we translate this natural language rendering into logical formulae and derive the typology outcomes as theorems; to each we add interpretation, again, in natural language. Finally, we conclude.

State of the art¹

The question whether globalization leads to convergence among countries or not has dominated the globalization literature for decades (Berry et al., 2013). Many scholars have claimed that strong globalization mechanisms including competition, mimicry, emulation and coercion will eventually wipe out differences between countries, homogenizing political, economic and social institutions (e.g., Dobbin et al., 2007). This convergence thesis has been challenged by several other streams in the literature starting from the premise that “globalization is a fragmented, incomplete, discontinuous, contingent and in many ways contradictory and puzzling process” (Berry et al., 2013: 388; see also Giddens, 1990). Globalization in these accounts does not necessarily lead to convergence because, for instance, it is often incomplete not affecting all parts of the world uniformly (Ghemawat, 2003), the path dependent nature of countries’ institutions and inertia result in persistence of differences between countries (Katzenstein, 1985) and globalization sometimes even spurs resistance (Zelner et al., 2009). World society scholars also argue that convergence is not complete as it confined to formal structures of nation states that adopt rationalized world models (Myer et al., 1997). At the same time, however, structural similarity is decoupled from purpose and intention that are still shaped by local identity (Meyer, 2000). Finally, world-system theorists stress that globalization facilitates exploitative trade relationships between developing and developed countries ultimately leading to cleavage between rich core, and poor peripheral countries (e.g., Bruton, 1998).

[W1] megjegyzést írt: Can you add the cited new titles to References?

To settle this debate a large number of empirical studies have been performed to look for evidence of convergence on several dimensions such as demographic, economic, financial, and political. “Most of these empirical studies find fragmentation and continuing heterogeneity, that is, little evidence of convergence across countries over time” (Berry et al., 2009: 388). This lack of evidence of convergence ‘on average’ is consistent with the perspective that globalization is a fragmented and contingent process, the outcome of which depends on the complex interplay between the global and the local (Marquis et al., 2009; Robertson and Khonder, 1998). The model we present in the next section builds on this insight by specifying contingencies that affect when and where the globalization process leads to convergence or divergence.

[W2] megjegyzést írt: More ‘modest’ without definite article, I guess.

The model in natural language

Consider a society exposed to the modernizing influence of globalisation. The local culture is predominantly traditional before globalisation arrives. Still, the modernisation ideas associated to globalisation have also followers. We are going to refer to the two groups representing, respectively, traditional and globalisation values as the traditionalist and moderniser fractions of society. There are normally other important groups in societies; even our two fractions can be seen as aggregates of different sub-groups. Operating with these two broad fractions is a model constraint that allows spelling out our typology in a simple way, without excluding the possibility of later refinements on the basis of this baseline model. The traditionalist and moderniser fractions have oppositional stance to each other, the degree of which may change as events unfold. Following the arguments in the Introduction, we propose two dimensions that influence globalisation's outcome: the cultural distance between the modernizing ideas and the local traditionalist ideas; and the extent of contestation in society between adherents of local and global values. These dichotomic dimensions produce four types of cultural reactions to globalisation (Table 1).

The first dimension, cultural distance, reflects the content of globalisation, i.e., the type of universal ideas globalisation brings about. Specifically, some are cognitive/instrumental whereas others are more normative/ideological (Kern, 2010; Meyer, 2000). The cultural distance between global ideas and local traditionalist culture is substantially lower in the first case than in the second. This is because cognitive/instrumental ideas have a rational, scientific nature, as they tend to provide concrete solutions to particular problems. It is therefore easier to translate such ideas to local conditions and assimilate them in the local traditional culture compared to normative/ideological ideas that are inherently value-laden and so subject to controversy. As Meyer observes (2000: 245): 'globalization of instrumental culture is a striking empirical feature of the modern system, as models of proper actor hood for national states, individuals and organizations spread around the world'. Indeed, scientific and instrumental rationality is so widespread because of their cognitive persuasiveness (Kern, 2010). In contrast, uniqueness and local identity therefore often legitimately relates to issues of expressive culture, such as art, clothing and food, instead of rational actor hood, such as the identifying features of national educational systems.

Table 1. Different local outcomes of the globalisation process.

	Low within-community contestation	High within-community contestation
<p>Low distance of global ideas with local traditional culture</p> <p>Cognitive/instrumental ideas</p>	<p>1. Accommodation or blending.</p> <p>Reconciling local with global. Local adoption of universalism via translation to local conditions.</p>	<p>2. Hybridization.</p> <p>Combining specific features of instrumental universalism with local tradition.</p>
<p>High distance of global ideas with local traditional culture</p> <p>Normative/ideological ideas</p>	<p>3. Saliency of the local.</p> <p>Opposition against global (out-group distancing). Sharpening boundaries between global and local.</p>	<p>4. Ideological partitioning.</p> <p>Strong polarization and distancing between adherents of the local and the global.</p>

[W3] megjegyzést írt: I suggest using systematically the same wording all over the text.

The second dimension, the level of within-community contestation, relates to society's heterogeneity with respect to the values, global versus local, that are espoused. When a community is homogenous with respect to espoused ideas, then the contestation level is low. However, value heterogeneity is a necessary but not sufficient condition for experiencing a high contestation level in society. When such heterogeneity does not couple with the presence of two or more significant oppositional fractions around these values, then observed contestation level is still low; not because of ideological consensus but because of the lack of strong and visible representatives of the differing ideas. But when a community is heterogeneous and significant groups take oppositional stance along global and local values, these together form sufficient conditions for a high level of societal contestation. So while cultural distance is about the size of the gap between local and global, the second dimension stands for the intensity of actual contestation between adherents of local and global values. A large cultural gap can coexist with low observed contestation, for example, in lack of strong representatives of the opposing positions. Conversely, a relatively small cultural gap can lead to intense contestation if opponents strongly emphasize the differences along ideological issues. The two dimensions yield four possible outcomes concerning the impact of the globalisation process (Table 1). All references to rows, columns and cells below concern this table in the rest of the paper.

If there is no strong rivalry within the community, ideological contestation about which ideas to adopt and to diffuse is low (first column). When the diffusing global ideas are also cognitive/instrumental (first row), most local carriers of ideas, be they individuals or organisations, will be persuaded to adopt these ideas (cell 1). These ideas will be translated for the locality, by taking into account the particularities of the local context, without much contestation. The outcome is a form of local adaptation as a result of which cultural distance between fractions decreases through adoption and learning. One way of decreasing distance is that fractions mutually adopt from each other. This can take place when the culturally different groups lack oppositional attitudes, letting them compromise and reconcile different viewpoints, and so *blending* the local with the global. Alternatively, cultural distance may decrease asymmetrically. This is the case when an initial oppositional stance between traditionalist and moderniser fractions hinders voluntary and mutual value adoption. When globalisation is not dominated by ideological values but rather by instrumental knowledge transmission (upper row), a strong modernisation fraction may impose globalisation values upon a weak, local traditional fraction even without resorting

to brute force. In that case, the traditionalist fraction *accommodates* to globalisation values. Blending and accommodation both involves cultural translation, with which genuinely new cultural ideas can be created. But unlike blending, accommodation does not imply that the moderniser side also adopts from traditionalists. In lack of reciprocation, accommodation is an asymmetric, one-sided form of local adaptation. The outcomes in cell 1 are those that are typically described by the world society perspective: by local blending and, especially, accommodation worldwide convergence and structural isomorphism emerges (Meyer et al, 1997). A case in point for accommodation is the development of post-war Japanese education. The tension between nationalism and cosmopolitanism in education caused by globalisation was solved by creating new educational solutions and categories such as the ‘cosmopolitan Japanese’ that reconciled the two institutional logics (Saito, 2011). Being defeated in war, the traditional society accepted an externally imposed Westernizing cultural impact, which was then definitely rather technical, modernisation-oriented than ideology-driven. As a result of these, the Japanese educational system could adopt not only from the instrumental/technical, but also from the (non-aggressive) ideology aspects of the external influence. Accommodation does not necessary involve being defeated by the globalisation agents; think of the successful modernisation of South-Korea in the second half of the 20th century.

[PG4] megjegyzést írt: They asked for more examples. Agree?

Next, we address the other case with low contestation in Table 1 (cell 3). Now, global cultural ideas are very distant from local traditions (second row); they are normative and ideology-laden such as rights for gay people, or the issue of euthanasia. But in spite of the unbridgeable ideological differences, the contestation level is still low (first column). This is the case when the moderniser fraction is though present but weak. As said before, strong within-community contestation assumes significant opponents. In lack of a massive carrier of globalisation ideas, and in the presence of strong local traditionalists, ideology-driven globalisation cannot penetrate. The case of cell 3 demonstrates that low societal level contestation does not necessarily mean harmony or peace between heterogeneous ideas; it can also mean radically unequal societal impacts of the opposing ideas, for example, if one is effectively suppressed by the other. Still, the appearance of value-laden globalisation ideas by even an insignificant and marginalised moderniser fraction can generate a contrast effect. This contrast renders the dominating traditionalist values even more visible – salient – in society. Salience reinforces boundaries between global ideas and local traditions. A case in point is the growing cultural opposition of fundamentalist countries against the diffusion of the Western global model of modernisation in

the past decades. The moderniser groups are suppressed and marginalised. Still their values can be well used by local authorities to demonstrate a ‘negative example’ for the populace, and so to better underscore the necessity of strict adherence to fundamentalist traditionalism. The Taliban rule in the pre-2002 Afghanistan or the recently emerged Islamic State exemplify extreme salience of anti-globalisation values. Fundamentalists have become massively dominant in society, pushing forward extremist values. The cultural distance between fundamentalist mind-sets and globalisation ideas is huge; even the mildest secular aspects of modernisation are banned; extremist religious views have become salient.

The remaining cells 2 and 4 in Table 1 reflect cases of intense contestation between the local and the global, resulting in a fault line formation in society. The development and also the sustaining of the fault line, however, take place by different mechanisms. In both cases, the two societal fractions are not only oppositional but also significant, with these two jointly leading to intense contestation (second column). Making a distinction between competition for resources and ideological contestation is an important feature of our model. Contestation may take place with and without direct competition for scarce resources between opponents. Accordingly, the potential tension between modernisers and traditionalists may or may not involve niche overlap in a socio-economic or political sense (Carroll et al., 2002; Otjes et al., 2013). Contestation can take place even between groups that do not go for the same resource, and so have no niche overlap. For example, a middle right political party may have a competitive niche overlap with a centrist party as the two are competing for at least partially similar moderate voters. But the same middle right party has no common voter base whatsoever (has no competitive overlap) with a radical left party, even if they fiercely contest each other in the political arena. Cells 2 and 4 represent cases of strong contestation with and without competitive interactions between traditionalists and modernisers.

In cell 2 of Table 1, the fault line between fractions is maintained by *hybridization*. The instrumental value aspects of globalisation like technical development and related knowledge transfer may also be appealing for many traditionalists. These are the people for whom tradition serves as a value compass, but not as a narrow mental frame that excludes all ‘mundane’ aspects of society. So these are the people who are willing and capable to embrace the scientific and technical developments associated with modernisation, while maintaining their devotion to their traditional cultural background. When globalisation

[W5] megjegyzést írt: I replaced the old reference to Downs 1957 to a recent one dealing with political niche overlap.

poses a developmental pressure on a society of significant traditionalist presence, the importance of these pragmatist traditionalists may increase. They may become the proponents of adopting the technical aspects of modernisation. So the traditionalist fraction adopts from the instrumental aspects of globalisation when deeming these aspects useful, and when the non-ideological character of globalisation (first row) makes its potential knowledge- and skill transfer separable from its now relatively mild ideological components. Then, locals can pick up the 'good stuff' from globalisation and so update their competitive skills without too much compromise concerning their adherence to traditional values (Schofer et al., 2000). Hence instrumental global forces create opportunities to build hybrid institutions and organisational forms (Haveman and Rao, 2006). Hybrid forms assemble elements from universalistic forms with elements from particularistic local forms. The resulting new form combines its own, traditional values with new features in an additive way, without full adoption and translation of the others' values. Hybrid forms, however, face unique obstacles as they are often penalised by audiences because they blur the boundaries of (oppositional) taken-for-granted forms challenging their legitimacy (Negro et al., 2010; Minkoff, 2002; Rao et al., 2005). Therefore, a considerable effort is needed to mobilise actors to establish these atypical forms. The threat posed by within-community contestation, now combined with competition for resources, is such a mobilizing force: hybridization supplies traditionalists with the skills to fight modernisers and to handle this threat. The result is an ongoing competition, which sustains the fault line along ideological aspects while makes fractions more similar along instrumental aspects related to technical modernisation. This case fits with the emergence of the so-called Anatolian Imam Hatip schools in Turkey that combine features of the old Turkish secular gymnasia with the traditional Imam Hatip schools for purely religious education (Divarci et al., 2015). This hybrid form emergence is fuelled by the mobilizing force of the strong competition between secular and religious people for a scarce resource: elite positions in society. The case of the Anatolian Imam Hatip Schools exemplifies some important preconditions for outcomes when competitive traditionalists adopt certain aspects from globalisation. Traditionalists have to realise that the instrumentalist aspects of globalisation can serve as an asset for them even to fight globalisation ideology. These religious secondary schools teach Western languages, natural science and mathematics at the same high level as their secular counter-parts. Their graduates have the skills and knowledge to follow university studies in high-level universities all over the world. The Anatolian Imam Hatip Schools involved modern curricular elements to stay competitive

with their Western-oriented secular counterparts, while clearly maintaining their Muslim identity by preserving and emphasizing the traditional religious aspects in their curricula. Nevertheless, reaping the instrumental benefits of globalisation assumes that these aspects are somehow separable from globalisation's ideological content. Other examples of hybridisation are provided by Pakistan, or by nowadays Iran, both assumed developing a nuclear potential. Their governments support the adoption of Western nuclear technologies in order to keep their competitive positions in military aspects. In the meanwhile, they vigilantly defend their religious society from Western ideological influence. They can do so because nuclear technology is a modernisation product that can be adopted even without adopting from the political ideology of those who had first developed this technology.

The separability of instrumental and normative value aspects is certainly not the case, however, when globalisation is dominantly ideology-driven (second row). In combination with a high contestation level (second column), this brings us to the fourth cell of the typology. Now, the societal fault line corresponds to a deadlock: two significant fractions stand against each other at the opposite sides of a deep cultural ditch. The emerging *ideological partitioning* prevents learning and adopting from each other. What makes the difference between hybridization and ideological partitioning is the degree of cultural distance, which may or may not allow for the partial adoption of instrumental modernisation aspects. The case of cell 4 is akin to a sustainable bifurcation between local traditionalists and modernisers. Globalisation has a massive ideological load. The heat of induced animosity makes the separated adoption of even the technical globalisation aspects unlikely. Note that the development of the fault line does not depend on whether it is the globalisation side, the fundamental traditionalist side, or maybe both, that carry the hard-liner ideological stance. Whichever of these three is the case, cultural distance is just too large for even partial adoption from the other. The Stalinist period of Soviet rule exemplifies a case when the ideology-driven attitude was at the local, anti-globalisation. In spite of its harsh 'world revolution' ideology and propaganda, the Soviet Union was very much closed from external influence, especially during the pre- and post-WW2 phases of Stalinism (the war-period was rather an exception when the regime had to show some short-term ideological elasticity for survival reasons). The cultural schism between Stalinist orthodoxy and Western influence had become so large that even the adoption of several technical/instrumental modernisation aspects had been prevented. Disciplines as genetics,

sociology and computer science were stigmatised as ideologically false 'bourgeois pseudo-science' and had been subjects of brutal prosecution accordingly. Note also that the examples for extreme ideological partitioning are getting rare with time, because their technological backwardness tends to eliminate such societies in the long run; even North-Korea adopts from Western technologies through industrial and military spying.

The model in symbolic logic

The role of logical model building

Formal methods and qualitative methods are oftentimes, but incorrectly, considered as antinomies. Our method, logical modelling provides a formal but still qualitative approach to derive conclusions from theoretical arguments put forward in a natural language. In the course of models specification, we provide the reader with the logic essentials necessary to evaluate our findings. Theory development, how we normally do it, does not follow the rules of a clear-cut derivation. The initial phases of theoretical model building are normally based on pictures, metaphors and visualizations. But once our mental framework has been established, systematic specification and proof-check gain importance. When researchers want to have a clear view on the inference structure of their work, including an explicit inventory of concepts and model premises their work applies, logical modelling may step in. The task of arriving to correct conclusions from a theory's premises (definitions, assumptions) forces researchers to enlist the information sufficient to get these results explicitly (Bruggeman and Vermeulen, 2002). Logical formalization translates the theory's premises and conclusions, originally all formulated in natural language, into a set of symbolic logical sentences. After this translation, attempts can be made to derive the theory's main conclusions from the premises as theorems. This proof phase is supported by powerful and user-friendly theorem-prover softwares also accessible for the non-technical experts (Appendix 1). The main question at logical modelling is the following: Is there is sufficient information in the premise set to support our particular conclusions? If not, search can begin for additional, or for stronger, premises that patch up the information gap. Adding relevant premises normally constrains the theory. But logical formalization may also support potential model generalization by helping to test if we get the same conclusions from a weaker set of premises, that is, from less information, and so

with less model limitations in place. A benefit of logical modelling is that if we agree with the statements of the premises, then we can also be sure about the validity of the conclusions derived from them. This feature has beneficial impacts on scientific discussion. The protagonists can put forward their arguments in a straightforward manner, while the antagonists of a derived outcome can put their fingers on the particular premises (definitions or assumptions) they would not accept. The transparency of the representation allows both sides to better delimit the spots in the argument they disagree. Attempts can be made to see what conclusions would follow from modified, now consensually accepted premises. The added value of logical modelling is arriving to a theory with more solid foundations, with a more transparent and parsimonious argumentation structure, and with the possibility of deducing even new conclusions from the established (or appropriately extended) premise set. We apply a simple and powerful logical system, classical First-Order Logic (Gamut, 1991a; Kamps and Pólos, 1999; Péli, 2009).² The basic symbols of First-Order Logic and the vocabulary of our formal language are displayed in Table 2. Tables 3-4 give the complete list of the model's premises (definitions and assumptions) in symbolic logic.

The next sub-sections step by step translate the natural language model into a formal one. Translation involves redundancy: we recurrently remind the reader to the natural language arguments when motivating our choices for logical constructs aimed to map these verbal arguments. We begin the model specification with coming up with a symbolic logic sentence counterpart for the natural language description of the basic concepts. Then we put a number of assumptions forward that establish connections between these concepts. At the end, this process brings to a premise set strong enough to imply the theoretical predictions in typology cells 1-4 of Table 1 as theorems.

Basic concepts and their relations

A guiding principle of logical model building is parsimony. We add a formal element to the model only if its information content is utilised at deriving one of the theorems. The unit of our analysis is yet traditional society subject to an externally given globalisation impact at the time of our investigation and assess globalisation's outcomes at the societal level. There is no need for a formal sentence stating the presence of globalisation: we take as given that

the globalisation influence is already present at the period of investigation. We give motivation for each logical statement in the main text; moreover an English language ‘read’ follows the each symbolic logic sentence. These ‘reads’ obtain by simply instantiating the symbol descriptions in Table 2 into the pertaining symbols of the formulae. With this instantiation properly done, we arrive to grammatically correct, though maybe not very elegant, English sentences. Thus, the researcher can always translate the symbolic logic model back to natural language, just like a scaffold erected to support a new building can be removed after construction work is done. Certainly, logical modelling is not the ‘last word’ in theory building. It is rather a lean and transparent tool for systematization, also for the non-logic expert social scientists.

--- Table 2 comes about here ---

Table 2. Logical symbols and vocabulary items.

[W6] megjegyzést írt: Appendix 1 is copied here as Table 2.

Logical connectives, in order of their decreasing binding strength.^a

\neg (negation), \wedge ('and'), \vee (inclusive 'or'), \rightarrow (implication, 'if ... then'), \leftrightarrow (bi-implication, 'if and only if')

Quantifiers^b

\forall (universal quantifier, 'for all'), \exists (existential quantifier, 'there exists').

Predicates

<i>Accomm</i> (x)	– The accommodation of x
<i>Adopt</i> (x, y)	– x adopts y
<i>Blending</i>	– The blending of values takes place in society
<i>Contest</i> (x)	– x is the level of contestation in society
<i>CultVal</i> (x)	– x is a cultural value in society
<i>Dom</i> (x)	– x is dominant in society
<i>Fraction</i> (x)	– x is a fraction of society
<i>Hybrid</i> (x)	– Hybridization of x takes place
<i>IdeolPart</i>	– There is an ideological partitioning in society
<i>Id_Driven</i>	– Globalization is ideology driven
<i>Instrumental</i>	– Globalization is instrumental value driven
<i>ModVal</i> (x)	– x is a modernization value in society
<i>Opp</i> (x, y)	– x and y are in opposition
<i>Pres</i> (x)	– x is exposed to pressure
<i>Salient</i> (x)	– x is salient in society
<i>Sign</i> (x)	– x is significant in society
<i>Separable</i> (x, y)	– x and y are separable
<i>TradVal</i> (x)	– x is a traditional value in society
$x > y$	– x is greater than x

Proper names

<i>T</i>	– The traditionalist fraction
<i>M</i>	– The modernizer fraction
<i>Instrum</i>	– The instrumental values of globalization
<i>Ideol</i>	– The ideological values of globalization
<i>High, Low</i>	– The proper names for scale values 'high' and 'low'

^a For example, $A \wedge B \vee C$ is equivalent to $(A \wedge B) \vee C$ since ' \wedge ' binds stronger than ' \vee '. Just as in mathematics, the binding strength order can always be overridden by using parentheses.

^b The *scope*, or range of application, of a quantifier is denoted by square brackets: [...]. We also adopt the convention of omitting universal quantification (\forall) from the beginning of formulae.

All model assumptions referred from now on are displayed in Table 3, while Table 4 (below) displays the definitions.

--- Table 3 comes about here ---

We consider the existence of two distinct cultural value sets: modernisation values and traditional values. Assumption 1 states that cultural values are either modernisation values or traditional values. Assumption 2 claims that modernisation value sets can be categorised as ideological (*Ideol*) or instrumental (*Instrum*). Assumption 3 adds that *Ideol* and *Instrum* are the only modernisation value types of the model. Traditional values may also differ; but as the typology outcomes (Table 1) can be derived even without making distinction between traditional values, we need not introduce symbolic logic constructs for them, at least not in the current phase of theory specification. There is no technical obstacle, however, to expand the model to accommodate cases with more diverse value sets, when theoretical developments require doing so. We also assume the presence of two societal fractions, the modernisers (*M*) who embrace modernisation values, and the traditionalists (*T*) carriers of local traditionalist values (Assumptions 4-5). Next, Assumption 6 associates cultural values with fractions, stating that traditionalists are adopters of traditional values while the modernisers are adopters of modernisation values. The reader may find that this premise has little novelty value; still, the formal machinery has to be ‘informed’ about these taken-for-granted connections in order to get the theorems at the end of this part. It is a less trivial constraint that fractions *T* and *M* take oppositional stance towards each other (Assumption 7); we briefly address the case of non-oppositional contexts in Appendix 2. We also make explicit two aspects of tacit knowledge: being oppositional is a symmetric relation and also irreflexive, the latter meaning that no fraction is oppositional to itself (Assumption 8). Stipulating oppositional stance between *T* and *M* is a useful model constraint that helps keeping complexity at bay. Still, it excludes contexts with receptive, or with neutral, attitudes towards the other fractions’ ideological stance.

Table 3. Model assumptions.

- Assumption 1. $\text{CultVal}(x) \rightarrow \text{ModVal}(x) \vee \text{TradVal}(x)$
(x is a cultural value, if and only if, x is either a modernisation value or x is a traditional value.)
- Assumption 2. $\text{ModVal}(\text{Instrum}) \wedge \text{ModVal}(\text{Ideol})$
(*Instrum* and *Ideol* are modernisation values)
- Assumption 3. $\text{ModVal}(x) \rightarrow (x = \text{Instrum}) \vee (x = \text{Ideol})$
(If x is a modernisation value, then x is either identical to *Ideol* or x is identical to *Instrum*.)
- Assumption 4. $\text{Fraction}(T) \wedge \text{Fraction}(M)$
(T and M are fractions in society.)
- Assumption 5. $\text{Fraction}(z) \rightarrow (z = T \vee z = M)$
(If x is a fraction, then x is identical either with the traditionalist fraction or with the moderniser fraction.)
- Assumption 6. $(\text{ModVal}(x) \rightarrow \text{Adopt}(M, x)) \wedge (\text{TradVal}(y) \rightarrow \text{Adopt}(T, y))$
(If x is a modernisation value, then M adopts x , and if x is a traditional value, then T adopts x .)
- Assumption 7. $\text{Opp}(T, M)$
(Fractions T and M are oppositional to each other.)
- Assumption 8. $\text{Opp}(x, y) \rightarrow \text{Opp}(y, x) \wedge \neg \text{Opp}(x, x)$
(If x is oppositional to y , then y is oppositional to x , and x is not oppositional to x .)
- Assumption 9. $\text{Instrumental} \leftrightarrow \neg \text{Id_Driven}$
(If globalisation is instrumental then it is not ideology driven.)
- Assumption 10. $\text{Instrumental} \leftrightarrow \text{Separable}(\text{Instrum}, \text{Ideol})$
(If globalisation is instrumental then its instrumental and ideological values are separable from each other.)
- Assumption 11. $\text{Contest}(\text{High}) \leftrightarrow \neg \text{Contest}(\text{Low})$
(The level of contestation is high in society, if and only if, it is not low.)
- Assumption 12. $\text{Id_Driven} \wedge \text{TradVal}(x) \rightarrow \neg \text{Adopt}(M, x)$
(If globalisation is ideology driven and x is a traditional value, the modernist fraction of society M does not adopt x .)
- Assumption 13. $\text{Opp}(T, M) \wedge \text{Sign}(T) \rightarrow \neg \text{Adopt}(T, \text{Ideol})$
(If fractions T and M are oppositional and T is significant in society, the T does not adopt the ideological values of globalisation.)
- Assumption 14. $\text{Press}(T) \rightarrow (\text{Adopt}(T, \text{Instrum}) \leftrightarrow \text{Separable}(\text{Instrum}, \text{Ideol}))$
(If T is under pressure, then T adopts *Instrum*, if and only if, *Instrum* is separable from *Ideol*.)
- Assumption 15. $\neg \text{Id_Driven} \wedge \text{Dom}(M) \wedge \text{ModVal}(x) \rightarrow \text{Adopt}(T, x)$
(If globalisation is not ideological value driven, and modernist fraction M is dominant in society and x is a modernisation value, then traditionalist fraction T adopts x .)

A fraction may play a significant role in society. Significance indicates its strong position and impact, either because of its size or because of its intense societal presence (small but hyperactive societal groups may exemplify the latter). Significance enables exercising *pressure* on opponents, a concept that we can now formally define with the vocabulary built up so far (Definition 1). The syntax needs some elucidation. The formula expresses that fraction x experiences pressure, if and only if, there also exists a significant fraction y oppositional to x . There is no need to stipulate that x is different from y since the irreflexivity property of oppositionality (Assumption 8) already precludes this. Note also that Definition 1 does not tell if pressure is exercised upon a strong or a weak fraction x , even though significant fractions might withhold pressure better.

--- Table 4 comes about here ---

Next, we define *dominance*. A fraction plays a dominant role in society when it is the only significant fraction around (Definition 2). The syntax of this premise is similar to that of Definition 1. Still, an important difference is that while exercising pressure may be symmetric, dominance is asymmetric. That is why the right-hand side of Definition 2 excludes the existence of other strong players in society. Note however that the definition does not stipulate oppositional stance (see more on non-oppositional contexts in Appendix 2). Thus, Definition 2 also allows for ‘friendly dominance’, a concept that might be useful at a later exploration of globalisation under cooperative conditions, think of how the dominant role of United States is perceived by some of its allies.

Table 4. Definitions.

Definition 1. *Pressure on a fraction.*

$$\text{Fraction}(x) \rightarrow (\text{Press}(x) \leftrightarrow \exists y [\text{Fraction}(y) \wedge \text{Sign}(y) \wedge \text{Opp}(x, y)])$$

(If x is a fraction, then x is under pressure, if and only if, there exists y such that y is a fraction, significant and oppositional to x .)

Definition 2. *Dominant fraction.*

$$\text{Fraction}(x) \rightarrow (\text{Dom}(x) \leftrightarrow \text{Sign}(x) \wedge \neg \exists y [\text{Fraction}(y) \wedge \text{Sign}(y) \wedge \neg (x = y)])$$

(If x is a fraction, then x is dominant, if and only if, x is significant, and there exists no y such that y is a fraction, significant and not identical to x .)

Definition 3. *High level of contestation.* $\text{Contest}(\text{High}) \leftrightarrow$

$$\exists x, y [\text{Fraction}(x) \wedge \text{Fraction}(y) \wedge \text{Opp}(x, y) \wedge \text{Sign}(x) \wedge \text{Sign}(y)]$$

(The level of contestation is high, if and only if, there exists x and y , such that x and y are fractions in society, oppositional to each other and both significant.)

Definition 4. *Accommodation of traditionalists.*

$$\text{Accomm}(T) \leftrightarrow \forall x [\text{ModVal}(x) \rightarrow \text{Adopt}(T, x)]$$

(T accommodates, if and only if, for all x , if x is a modernisation value, then T adopts x .)

Definition 5. *Hybridization.*

$$\text{Hybrid}(T) \leftrightarrow \text{Sign}(T) \wedge \exists x, y [\text{ModVal}(x) \wedge \text{ModVal}(y) \wedge \text{Adopt}(T, x) \wedge \neg \text{Adopt}(T, y)]$$

(Hybridization of T takes place, if and only if, T is significant, and there exist modernisation values x and y such that T adopts x but T does not adopt y .)

Definition 6. *Salience of a cultural value.* $\text{CultVal}(x) \rightarrow (\text{Salience}(x) \leftrightarrow$

$$\exists z [\text{Fraction}(z) \wedge \text{Dom}(z) \wedge \text{Adopt}(z, x) \wedge \forall y [\text{Fraction}(y) \wedge \text{Opp}(z, y) \rightarrow \neg \text{Adopt}(y, x)])]$$

(If x is a cultural value, then x is salient in society, if and only if, there exists a dominant fraction z and z adopts x , and no fraction y oppositional to z adopts x .)

Definition 7. *Ideological partitioning.*

$$\text{IdeolPart} \leftrightarrow \exists x, y [\text{Fraction}(x) \wedge \text{Fraction}(y) \wedge \text{Opp}(x, y) \wedge \text{Sign}(x) \wedge \text{Sign}(y) \wedge \neg \exists z [\text{CultVal}(z) \wedge \text{Adopt}(x, z) \wedge \text{Adopt}(y, z)]]$$

(There is an ideological partitioning in society, if and only if, there exist fractions x and y , oppositional and significant, and there exists no cultural value z adopted by x and by y .)

Next comes the translation of the two main globalisation dimensions in Table 1 into symbolic logic. The vertical dimension, cultural distance, was conceptualised with reference to the cognitive/instrumental versus normative/ideological loads of globalisation. When globalisation is ideology-driven, cultural distance between global and local is large; when globalisation is dominated by instrumental aspects, cultural distance is smaller. Assumption 9 expresses this dichotomy by stating that the globalisation impact is driven by only one of these two. As argued before, adopting the technical aspects of modernisation can keep traditionalists competitive with challenger modernisers. But technical adoption hinges upon a condition: the instrumental aspects of globalisation should be decoupled from its ideological content. When globalisation is driven by instrumental aspects rather than ideological ones, the tension between globalisation and traditional locality is not extreme. In that case, and only in that case, the possibly acceptable and the definitely opposed globalisation aspects do not come in one ‘take it or leave it’ package. This is summarised by Assumption 10 positing that under instrumental globalisation, the instrumental values are separable from the ideological aspects.

The horizontal dimension of the typology in Table 1 is represented by the high/low levels of contestation between fractions (Assumption 11). High contestation level in society comes together with intense rivalry for ideological dominance, political power and control. High contestation also means strong societal tension, which latter can only build up with significant opponents in place. Accordingly, we define high contestation level with the existence of significant oppositional fractions (Definition 3).

Typology outcomes

We have now also the formal components in place to define the four typology outcomes displayed in Table 1. Local adoption (cell 1) involves that the cultural difference between fractions will lessen along both ideological and instrumental value aspects. Traditionalists and modernisers have already adopted, respectively, their ‘own’ traditionalist and moderniser values (Assumption 6); thus, getting closer can only take place by adopting from the other. As indicated in the Introduction, the present model addresses asymmetric local adaptation, *accommodation*: traditionalists adopt moderniser values, potentially without modernisers’ adoption from traditionalists. Accordingly, Definition 4 characterises

traditionalists' accommodation to globalisation by their adoption of modernisation values.³ The other case of cell 1 in Table 1, *blending*, requires a modification of the premises by allowing for the development of non-oppositional, cooperative attitudes between fractions theory, see more on this in Appendix 2.

Hybridization (cell 2) takes place when a significant fraction adopts some, but not all, aspects of globalisation. The result is that the two oppositional fractions get closer along this particular modernisation aspect, while their cultural gap sustains along other modernisation aspects. In the current globalisation context, hybridization means that traditionalists adopt the technical aspects of modernisation. Definition 5 captures this by requiring the existence of modernization values x and y , from which only x is adopted by T .⁴ The hybridizing fraction is assumed to have a significant role in society; this is because when an insignificant group hybridises, the macro-level competition impact is ignorable.⁵

A *salient* cultural value (cell 3) in society sticks out from the background with its importance and visibility. A cultural value can reach salient status if dominant actors in society 'put it upfront' by adopting and representing it. Definition 6 on salience first stipulates that the concept applies to cultural values. Second, salience requires that some dominant fraction x adopts, and so manifests, this value. Finally, the definition demands that no oppositional fraction adopts this cultural value. Note also that the presence of a non-significant societal fraction with different values can even make the contrast between the salient value and the rest sharper.⁶

An *ideological partitioning* in society (cell 4) assumes the presence of strong opponents that have no relevant aspects in common. The right-hand side of Definition 7 first fixes the presence of significant fractions x and y of oppositional stance, while the rest posits the non-existence of cultural value z adopted by both.⁷ Ideological partitioning exemplifies an even a stronger division line in society than hybridization. Now, the separation along ideological aspects is so deep that precludes any communion with the other side. The landscape is frozen, with two strong fractions looking at each other with animosity on the two sides of the trench.

Premises on value adoption

The rest of the assumptions characterise how fractions react to globalisation. Value adopting behaviour is contingent upon two aspects: the fraction's position in society (significant or not) and on the degree of cultural distance. When fractions have cooperative attitude, adoption from the other may take place by free will. But in the present oppositional context (Assumption 7) value adoption from the opponent needs a pressing reason. This reason can either be the insignificant, underdog position of the adopting fraction (accommodation) or some rational calculations that indicate definite benefits from adoption (hybridization). The next premises reflect these considerations.

Modernisers are the proponents of globalisation; if globalisation is ideology-driven, then modernisers would resist adopting from traditional values (Assumption 12). Traditionalists are challenged by globalisation. Their adaptive or refusing behaviour concerning modernisation values will depend on the societal context. The latter is captured by three premises. The first posits that when oppositional to modernisers and also significant enough to resist, traditionalists do not adopt the (for them: alien) ideological aspects of globalisation (Assumption 13). But when facing pressure from moderniser opponents, traditionalists may well adopt the knowledge-related instrumental aspects of globalisation. A precondition of this, however, is that globalisation's instrumental aspects are separable from its ideological load (Assumption 14). The third premise concerns traditionalists' reaction to globalisation from a weak, submissive position. When being dominated by modernisers, traditionalists may give in and adopt from globalisation's instrumental and ideological aspects both. Again, a precondition is that globalisation is not ideology-driven, so that its pragmatic flavour sweetens the pains of value adoption. Assumption 15 depicts a case of triumphant modernisation: under moderniser dominance, traditionalist fraction T adopts all aspects of an ideologically light version of globalisation.

Theorems

The premise set now contains enough information to derive the predictions of the globalisation typology (Table 1). For each coming theorem, we list the subset of premises actually mobilised at proving that particular theorem. The proofs have been provided by the *Prover9* and *Mace4* online available theorem prover softwares (McCune, 2015). Theorem

provers are useful justification tools. But as indicated in the Introduction, logic cannot replace scientific intuition. The use of a prover software does not relieve the researcher from having a clear insight on how a given set of definitions and assumptions imply a particular theorem. But even good insights turn out to be imprecise many times. The use of theorem provers, rigorous by nature, can be a help on at least two accounts. The first is avoiding overlooking pieces of information necessary for a correct proof; the second is potentially identifying premises of the theory that are *not* necessary for the proof of a particular theorem (though it might be necessary at others). While the first case indicates the need to feed in more information by adding model constraints, the second indicates possible theory generalizations through releasing constraints. A premise set supporting a certain theorem constitutes a *sufficient* condition for this particular theorem to hold. But the same outcome might be possibly derived from different, also sufficient, premise sets as well. By identifying the formulae mobilised at a particular proof, the reader gets a picture about the ‘price’, expressed in terms of model constraints, at which the given theorem is obtained. Thus an extant logical formalization can always be seen as a benchmark for potential improvements. The interested reader might play around with the model, trying to get the same, or even other, results from weaker constraints.⁸ Our premise set represents our bid. Let’s see how far we can get with it. Theorems 1-4 below reflect the model’s four main predictions summarized in Table 1.

Theorem 1. *Accommodation.* (From Definitions 2-4, Assumptions 4, 5, 7, 9, 11 and 15.)

When globalisation is driven by instrumental aspects, contestation level is low and modernisers are significant, traditionalists accommodate modernisation values.

$$\text{Instrumental} \wedge \text{Contest}(\text{Low}) \wedge \text{Sign}(M) \rightarrow \text{Accomm}(T)$$

Theorem 1 is restricted to contexts when significant modernisers interact with not very strong traditionalists.⁹ The not too large cultural distance associated to instrumental value driven globalisation makes the value adoption for traditionalists easier.

Theorem 2. *Hybridization.* (From Definitions 1, 3, 5, Assumptions 2, 5, 8, 10, 13 and 14.)

When globalisation is driven by instrumental aspects and contestation level is high, traditionalists hybridise.

$$\text{Instrumental} \wedge \text{Contest}(\text{High}) \rightarrow \text{Hybrid}(T)$$

Now, strong contestation indicates having two significant opponents around (Definition 3) that keep each other under mutual pressure (Definition 1). Both fractions can make a good use of the instrumental advantages of globalisation. But for traditionalists, adopting the instrumental aspects requires the separability of the instrumental and ideological aspects (Assumption 14). This separability is granted by the instrumental character of globalisation (Assumption 10). This allows traditionalists to hybridise, so utilizing instrumental globalisation benefits at their competition with modernisers while still not adopting globalisation's ideological content (Assumption 13).

Theorem 3. *Traditional value salience.* (From Definitions 2, 3, 6, Assumptions 1, 4-7, 11 and 12.)

When globalisation is ideology-driven, contestation level is low and traditionalists are significant, traditional values becomes salient in society.

$$Id_Driven \wedge Contest(Low) \wedge Sign(T) \wedge TradVal(x) \rightarrow Salient(x)$$

Low contestation involves that only one fraction can be significant (Definition 3). Because of this asymmetry, the significant T is also dominant (Definition 2). This dominant position of T gives importance to the traditional values it represents (Assumption 6). The ideology-driven character of globalisation prevents modernisers from adopting traditionalist values (Assumption 12). This state of affairs guarantees the constituent property of salience: the salient cultural values are featured by the dominant fraction (Definition 6). Now, the ideology-driven globalisation cannot make a strong foothold in society. The insignificant but ideologically exposed moderniser fraction still has a role: its presence makes a sharp societal contrast with traditionalism, thus making the prevailing traditionalist values even more visible - salient - in society.

Theorem 4. *Ideological partitioning.* (From Definitions 1, 3, 7, Assumptions 1, 3, 5, 7, 9, 10, 12-14)

When globalisation is ideology-driven and contestation level is high, an ideological partitioning takes place in society.

$$Id_Driven \wedge Contest(High) \rightarrow IdeolPart$$

High contestation level means that the fractions are significant and also oppositional (Definition 3). Globalisation is ideology-driven; so adopting its instrumental aspects in separation from the ideological content is not possible (Assumptions 10, 14). The ideology-driven modernisers do not adopt from the traditionalists either (Assumption 12). Consequently, the strongly contesting fractions do not converge along any aspects. An impasse occurs, with an ideological partitioning between strong and intransigent opponents. It may still be a question how stable this impasse can be. The instrumental aspects of globalisation may yield a competitive advantage to modernisers above non-adopting hard-liner traditionalists. This suggests that such ideological partitionings can only be stable if some yet unspecified effects working in favour of traditionalists (external to our model to the moment) stabilise it. Putting differently, traditionalists need some isolation mechanism that inhibits modernisers outcompeting them with their technical superiority. Identifying such mechanisms is another topic for future research.

Concluding remarks

In his seminal review on globalisation, Guillén (2001) made a plea for the development of globalisation theory sensitive to local variations that bridge the micro-macro gap by moving across different levels of analysis to explore how the effects of globalisation change from one setting to another. To contribute filling this gap, we have put forward a theory explicating how local contexts interact with globalizing forces. In the proposed typology, globalisation's impact depends on two major features of local communities which saliency has been emphasised in past literature (Meyer, 2000; Marquis and Battilana, 2009; Divarci et al., 2015): on the cultural distance between local and global values, and on the actual contestation intensity between adherents of local and global values.

We represented the predicted typology outcomes using symbolic logic and derived each as a theorem from premises characterizing the context and agents' attitudes towards, or against, value-adoption from the other. With applying symbolic logic, our goal was making a step towards conceptual solidification of vivid and insightful theoretical ideas put forward by the globalisation research of the last decade. Although our theory allows capturing several important outcomes of globalisation discussed in the literature, our logical rendering is certainly not – and does not even intend to be – the final word in the ongoing

discussion about globalisation. Some readers might still have the feeling that logic ‘nails’ the concepts and ideas to the ‘cross of formulae’, so closing the door for future modifications and theory development. But this is certainly not the case; transparent logical models may even help finding ways for potential modifications. Once a conclusion is derived, opponents of this conclusion can survey the premise list for items they deem unacceptable. Experimentation then can begin with more ‘pleasing’ modified premises, seeing how far one can get with them in terms of theoretical conclusions. The ongoing re-formulations may lead to consensual solutions, just like in case of usual theorizing in natural language. Accommodation, blending, hybridization, value salience, and ideological partitioning are important, substantially different ways how local communities react to globalisation. Our theory allows to predict which particular outcome will emerge. But as the proof of the pudding is in the eating, systematic comparative, empirical research is needed to test its major predictions. Also here much work remains to be done, since systematic empirical research into the interplay between the global and the local is yet scarce. Recently, however, scholars have taken up this challenge showing the feasibility of this kind of empirics-driven theoretical research (Divarci et al., 2015).

[PG7] megjegyzést írt: Can we give also other cites?

Symbolic logic endows extra transparency and the modularity to the model proposed in this paper, features can be well utilised at further research and subsequent theory development. One way to follow is addressing the political, economic and social conditions in more depth and details that facilitate events to unfold in the directions put forwarding this paper. These effects are there in the current model as well but rather through their aggregate effects. For example, hybridisation, the adoption of instrumental aspects of globalisation is fuelled by traditionalists’ need to stand the competition with modernisers on economic and political grounds. Later theory versions might disentangle the interplay between social, economic and political aspects. Whenever the essential work of qualitative theory development is done, symbolic logic, again, can be a use at the parsimonious and explicit representation of the results of these intellectual efforts. Another line of research could be surpassing what economists would call *comparative static* and address the dynamics that forms and sustains the categories in the typology. How do persons and social groups move between categories, so shaping and possibly blurring them? Moreover, what are the obstacles to, and limits of, such categorisations (Hsu, Hannan and Pólos, 2011)? Such efforts hold much promise as they will increase our understanding of globalisation, a

phenomenon that is complicated and contested but, at the same time, of utmost importance in modern times.

References

- Brady D, Beckfield J and Zhao W (2007) The consequences of economic globalization for affluent democracies. *Annual Review of Sociology* 33: 313-334.
- Bromley P, Meyer JW and Ramirez FO (2011) Student-centeredness in social science textbooks, 1970-2008: a cross-national study. *Social Forces* 90: 547-570.
- Bruggeman JP, Vermeulen I (2002) A logical toolkit for theory (re)construction. *Sociological Methodology* 32: 183-217.
- Carroll GR, Dobrev SD and Swaminathan A (2002) Organizational processes of resource partitioning. *Research in Organizational Behavior* 24: 1-40.
- da Costa NCA, Krause D and Bueno O (2007) Paraconsistent logics and paraconsistency In: Jacqueline D (ed) *Philosophy of Logic. Handbook of the Philosophy of Science*. Amsterdam: North-Holland, pp. 791-912.
- Divarci A, Boone C, Witteloostuijn A van (2015) When does globalization lead to local adaptation? The emergence of hybrid Islamic schools in Turkey. ACED working paper, University of Antwerpen, Belgium.
- Gamut LTF (1990) *Logic, Language and Meaning: Introduction to Logic*. Chicago: Chicago University Press.
- Gamut LTF (1990) *Logic, Language and Meaning: Intensional Logic and Logical Grammar*. Chicago: Chicago University Press.
- Guillén MF (2001) Is globalization civilizing, destructive or feeble? A critique of five key debates in the social science literature. *Annual Review of Sociology* 27: 235-260.
- Hannan, MT, Pólos L and Carroll GR (2007) *Logics of Organization Theory: Audiences, Codes, and Ecologies*. Princeton, US: Princeton University Press.

Hsu G, Hannan MT and Pólos L (2011) Typecasting, legitimation, and form emergence: A formal theory. *Sociological Theory* 29: 97-123.

Haveman HA, Rao H (2006) Hybrid forms and the evolution of thrifts. *American Behavioral Scientist* 49: 974-986.

Kamps J, Pólos L (1999) Reducing uncertainty: a formal theory of Organizations in Action?. *American Journal of Sociology* 104: 1774-1810.

Kern T (2010) Translating global values into national contexts: the rise of environmentalism in South Korea. *International Sociology* 25: 869-896.

Marquis C, Battilana J (2009) Acting globally but thinking locally? The enduring influence of local communities on organizations. *Research in Organizational Behavior* 29: 283-302.

Masuch M, Lapotin P (1996) The disorder of organizational logic – makework among members of bureaucratic organizations. In: Warglien M and Masuch M (eds) *The Logic of Organizational Disorder*. Berlin, New York: Walter de Gruyter, pp. 145-162.

McCune W. Prover9 and Mace4. Theorem-prover software manual and download Available: <http://www.cs.unm.edu/~mccune/mace4> (visited on 20.04.2015)

Meyer JW (2000) Globalization: sources and effects on national states and societies. *International Sociology* 15: 233-248.

Meyer JW, Boli JT, George M and Ramirez FO (1997) World society and the nation-state *American Journal of Sociology* 103: 144–181.

Meyer JW, Bromley P and Ramirez FO (2010) Human rights in social science textbooks: cross-national analysis, 1970-2008. *Sociology of Education* 83: 111-134.

Minkoff DC (2002) The emergence of hybrid organizational forms: Combining identity-based service provision and political action. *Non-Profit and Voluntary Sector Quarterly* 31: 377-401.

Negro G, Hannan MT and Rao H (2010) Categorical contrast and audience appeal: niche width and critical success in winemaking. *Industrial and Corporate Change* 19: 1397-1425.

Otjes S, Lowery D, Gherghina S, Witteloostuijn A van, Péli G and Brasher H (2013). Policy agendas and births and deaths of political parties. *Party Politics* 19: 381-407.

Péli G (2009) Fit by founding, fit by adaptation: Reconciling conflicting organization theories with logical formalization. *Academy of Management Review* 34: 343-360.

Péli G. (2016) Analyzing complex organizational arguments with logical model building. In: Kuckertz A and Berger E (eds) *Complexity in Entrepreneurship, Innovation and Technology Research - Applications of Emergent and Neglected Methods*. Berlin: Springer, pp. 139-159.

Pólos L, Hannan MT (2004) A logic for theories in flux: a model theoretic approach. *Logique et Analyse* 47: 85-121.

Rao H, Monin P and Durand R 2005. Border crossing: bricolage and the erosion of categorical boundaries in French gastronomy. *American Sociological Review* 70: 968-991.

Robertson R, Khonder HH (1998) Discourses of globalization. *International Sociology* 13:25-40.

Saito H (2011) Cosmopolitan nation-building: The institutional contradiction and politics of postwar Japanese education. *Social Science Japan Journal* 14: 125-144.

Schneiberg M, Clemens ES (2006) The typical tools for the job: Research strategies in institutional analysis. *Sociological Theory* 24: 195-227.

Schofer E, Ramirez FO, Meyer JW (2000) The effects of science on national economic development, 1970 to 1990. *American Sociological Review* 65: 866-887.

Veltman F (1996) Defaults in update semantics. *Journal of Philosophical Logic* 25: 221-261.

Notes

¹ This section builds on the excellent review presented in Berry et al. (2009).

² Logical model building may apply languages based on more sophisticated logical systems, which are often extensions of First-Order Logic. Non-monotonic logics (Veltman, 1996; Pólos and Hannan, 2004; Hannan, Pólos and Carroll, 2007) and paraconsistent logics (da Costa et al., 2007) may handle well when new information possibly contradicts the extant knowledge. Modal logics (Gamut, 1991b) can be useful if modalities (like necessities, possibilities or beliefs) play a central role in the argument. The present model could be well formalised without such extensions. Our choice for the standard First-Order Logic framework does not exclude, however, using more sophisticated logical tools if future research necessitates such change.

³ Value adoption also involves non-trivial processes of dissolving discrepancies, removing contradictions between two, or more, value systems. The present machinery does not reflect this intriguing dynamism. Still, it keeps the door open for that sort of theory refinement.

⁴ Modernization values x and y have to be different in Definition 5. Now, it is the $Adopt(T, x) \wedge \neg Adopt(T, y)$ clause that implies that x and y are different.

⁵ In case of a weak player, we'd arrive to a form of partial value accommodation (cf. cell 1).

⁶ Here, the mechanism might be a kind of 'inoculation effect' like when injecting weakened bacteria boosts the immune system of the host, a feedback process to be explored in subsequent research.

⁷ In Definition 7, the scope of the second existential quantor (\exists) is embedded to the scope of the first existential quantor. This ensures that x and y in the inner pair of square brackets denote the same fractions x and y mentioned in the outer square brackets.

⁸ To facilitate experimentation, we give the theorem prover-ready version of logical model in Appendix 1.

⁹ Traditionalists' insignificance is implied by the premises as well. The context is oppositional (Assumption 7); so two significant fractions would involve strong contestation (Definition 3) so contradicting to the low contestation level constraint in Theorem 1.