Preventing International Crises through Consensus Projects

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Abstract: This article presents a theoretical description highlighting how consensus can constructed to avoid international crises. Perspectives onto reality are the elemental units of our world. They are changed through learning processes. Societal learning can enlarge and approximate spaces of understanding. Social spaces are a type of "social capital".

Design of learning procedures refers to the design of structures in time, space and in the space of opinions that facilitates multi-perspectivist and multidisciplinary understanding of involved stakeholders.

In a series of cases for learning settings, especially dialogic intercultural learning is identified as a key path to a harmonious development of nations. The following section of this case dwells on several cases of cooperative learning through dialogue: the UniNet network in Kyrgyzstan and Nepal, Global Studies, the ESD forum, the Environmental Systems Analysis Curriculum USW, and the European Union Twinning tool applied in Slovakia, Slovenia, Armenia, Georgia and Azerbaijan.

LEARNING TO BUILD CONSENSUS

According to a psychological approach, learning is understood as *mental structural change* that leads to change in real-world behaviour. In this view, learning would be only successful if it results in changes of the person's real actions. Let us undertake a "tour d'horizon", in which contexts we may find a similar viewpoint and how fixed or loose border conditions for such learning should be:

Here we examine any type of learning, especially life-long learning for adults and we draw conclusions from decades of our own teaching, learning and training experience in both roles, active and passive. Often, learning is most productive when taking the role of a trainer. We adopt a constructivist stance, under the philosophical auspices of John Dewey's *Pragmatism* [1, 2]. In the resulting picture, in order to reach the mentioned structural mental change, the *core action is dialogue* and *exchange of views in a discourse*, constituting Dewey's "education for responsible democracy".

As does democracy, education deeply involves ethics: it is based on the "principle of responsibility" [3-5]. Here, preference is given to *teleologic* (target oriented) ethics as opposed to *deontologic* (duty oriented) ethics – stressing the result of any human action as preferred to theoretical and subjective conviction.

In an influential article that has prompted a series of responses and comments, [6] instead propose the notion of "*Spielraum*" – a word that the Canadian authors import into English language from German. It has the meaning "room to play" both in the sense of game-based learning and in the sense of machinery as the desired clearance a joint has in order to allow for motion. So, there should be a playful element or "game" in learning in both senses. The symbolic usage of the word "play" suggests allowing students to enjoy a near-to-real-life situation without fearing the merciless real-world sanctions of suboptimal behaviour.

Concluding from the above, "leeway for wits and senses" [7] should be allowed in any learning setting. *Spielraum* is "elbow room" (an effective existence radius of the self) according to [8] who stems from spatial planning and argues that "the self depends for its ability to recognise itself primarily on collisions that suspend the flow of spatialised complexity".

After decades of classroom experience narrated in vivid examples, [6]: 183) "propose 'Spielraum' as room to manoeuvre, as a concept that describes the reality of teaching much better than reflection-in-action, especially when there is no time out for reflection." They "therefore see [themselves as teachers] always at some point in time and space which means for them to consider the specific individual situation of students in the given classroom. Readiness for appropriate action, whatever the unfolding events, means that the agent has Spielraum, the room to manoeuvre appropriately in the current situation. According to [9], *Dasein* (being here) "combines self and world into a single irreducible

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entity, being-in-the-world, in the face of all the contingencies real-time interactions pose to the participants involved" ([6]: 186) and "constitutes the location from which a person negotiates the world" ([6]: 302). Not the teacher's but "the students' own questions guide or scaffold students because they always test the outer edge of their students' current reality. The questions therefore can neither be completely in the teacher's reality nor completely internal to students' reality, but always along the interface of the two. Students are the builders of their own reality" ([6]: 186-201).

Summing up this subchapter, readers may believe that the following views are helpful:

- learners construct their own reality

- learners benefit from less pressure of real-life consequences

- in the optimal case, trainers and teachers have a set of reactions at their disposal ready to implement them even without lengthy reflections

- learning individuals proceed on a largely unpredictable path; and trying to understand learners' unforeseen explanatory constructions dissolves and replaces immature concepts in teachers' mindsets. No theory whatsoever sufficiently describes real learning paths of individuals.

To continue, we propose one step of reasoning: what applied to individual learning (i.e. of students), may apply also to societal learning, namely to the long-term evolution of countries.

The findings for individual learning deduced from this section in the above four bullets will be adapted to societal learning in the four bullets of the following subchapter.

LEARNING IS LEAPFROGGING BIOLOGICAL AND EVOLUTIONARY CYCLES

Recently several universities have launched initiatives in "intercultural learning" (e.g. [10]) which means that students are trained to better understand divergent cultural and ethical concepts. Thinking of states, countries, economies and cultures (instead of students), we may conclude:

- countries construct their own realities and their own national rationalities and sense – which

might harmonise or not with concepts of sense in other countries or other populations [11]

- the understanding of other cultures and their civilisational trajectories is likely to benefit from loosening the tightness of pre-fabricated explanatory patterns – for example macro-economic theories of one kind or another that state "how economies develop and grow" ([12, 13]: 1718, [9]) and believe to be correct even in a historical sense

- the ones considering themselves as leaders are not likely to act based on thorough, reflected or even scientific understanding of ongoing complex procedures but rather based on "preconceptive understandings", visions, or "preanalytic cognitive acts" [14], similar to an elbow room in the strict sense

- economies proceed on a largely unpredictable path when developing; trying to understand such real techno-socio-economic development quickly unveils the tremendous limitations of economic theories, be they (neo-) classical or Keynesian. No theory whatsoever sufficiently describes real learning paths of societies.

As a consequence, it is proposed to follow the real-world paths of evolutionary development instead of following the results of theoretical concepts boiled down to a set of formulas. Purely formula-centred understanding of economics tumbles down the abyss of non-perceived complexity, it remains painfully simple. *Priority to phenomena!* Freedom from formulas! To promote "reflective science", the sociologist Bourdieu has created a method of letting the phenomena speak for themselves ([15]: 87).

Complexity is the major challenge in multi-actor networks where one actor forms the framework condition and context for the other. Complexity might be seen as a major challenge of slowly maturing rational science ([16]: 7). Robust knowledge is always situated and situating ([6]: 203). Foresight has to be trained especially for entrepreneurs as an art involving intuition and creativity ([17]: 11, [26]).

SETTING THE STAGE

Learning is Dialogue

As a starting point, we look at the core element of any social progress, namely at "dialogue". Dialogue

leads to reflection and reflection, in turn, leads to awareness.

The final target of evolution (encompassing amongst others the evolution of mankind) is to *build consciousness*. Consciousness governs procedures in the material world.

Dialogue is a suitable means to approximate divergent views – which is one of the main issues of learning – and to ultimately facilitate changes in consciousness.

Regarding learning, we may distinguish between *individual* learning and *societal* learning. Regarding the multiplicity of learning objects and learners, we distinguish the following types of learning:

- Individual learning

    o traditional learning (1:1)

    o interdisciplinary learning (1:n)

    o intercultural learning (n:m)

- Societal learning, e.g.

    o responding to climate change

    o political integration (globally, Europe-wide).

We are traditionally used to approach learning objects from one perspective (1:1) and consider it a progress to view objects from several, interdisciplinary perspectives (1:n). A still more advanced learning procedure would take into account the *multitude of learning subjects* (m) in addition to the *multiplicity of learning objects* (n), we will refer to it as *intercultural learning* (m:n) in this text because subjects are considered to be rooted and coached in their respective cultures inducing the subject to see and view reality as they decide to.

Useful training situations are spatial planning exercises and other space-related procedures that are open to GIS applications or political, technological, civil engineering, cultural or peace negotiations in the classroom [18-20].

Learning Means Converging Divergent World Views

For very complex, interdisciplinary and intercultural learning issues a purely cognitive approach (an individual learner cognises a well-defined object of learning) appears too simple and the approach of "converging individual perspectives" [16] seems more appropriate.

Here, the object of learning is not regarded as something unchangeable (such as facts in natural sciences), but rather as the result of a constructivist procedure.

In such a procedure, individual perceptions (e.g. of international conflicts such as the complex Nagorny Karabakh conflict between two Caucasian states) are reshaped and reframed, which constitutes the core of "learning" on a societal level.

Learning Means Evolution of Spaces of Understanding

Also practical-minded disciplines take a similar stance: ([21]: 198) stems from spatial planning. He says that *spaces are constructed*: "The most influential recent writer on the social construction of space is Manuel Castells who argues that, in an emerging network society, 'a new spatial logic', 'spaces of flows', is superseding the former logic, 'spaces of places' ([22]: 378). Both of these spatial forms are created through material practices. In his social theory, 'space is the material support of time-sharing practices'. That is to say, social spaces are created to bring together practices requiring simultaneous attention."

Castells is reported to condense this view to the statement "Our societies are increasingly structured around the bipolar opposition of the *Net* and the *Self*". The Net means the new, networked forms of organisation which are replacing vertically integrated hierarchies as the dominant form of social organization. The Self, on the other hand, relates to the multiple practices through which people try to reaffirm identity and meaning in a landscape of rapid change. Castells also coined the term 4th World for the poorest nations. Castells is defining space as the physical support of the way we live in time. The space and time we are used to, "real world time", is referred to by him as a space of places.

Manuel Castells ([23]: 4f) himself says: "So what we have, for instance, in the case of Europe, is a complex system of institutional relations, which I call the *network state*, because, in fact, it's a network of interactions of shared sovereignty". "In a world of global flows of wealth, power, and images, the search for identity - collective or individual, ascribed or constructed - becomes the fundamental source of social meaning."

Such views come close to Horx's [24] emerging "*society of sense*", Renard's "mental structures" and the evolution towards a societal structure autopoietically optimizing towards values such as sense and human well-being ([25]: Fig. 4). On this basis we can say: *the ultimate civilisatoric aim is to create meaning*, be it called "sense of life", "quality of life" or other immaterial values.

Castells writes in his famous trilogy (1996-1998) what is comparable to the above-mentioned evolutionist views:

- "Social movements in the Information Age are essentially mobilized around *cultural values*. The struggle to change the *codes of meaning* in the institutions and practice of the society is the essential struggle in the process of social change in the new historical context, movements to seize the power of the minds, not state power."

- "The networks are not programmed by technology; technological tools are programmed by minds. So the *human consciousness is the source*, because everything now depends on our ability to generate knowledge and process information in every domain and activity. Knowledge and information are cognitive qualities from the human mind."

- "Now, therefore, in a world in which signals, processed by our minds, are constantly shaping and reshaping what we do, the ability to influence, to change the categories through which we think our world (here, what I call the code of our culture) -- this becomes the essential battle. If you win the battle of minds, you win the battle of politics, the battle of the economy, because people will decide what they want to buy or what they don't want to buy, for instance."

- "So it's a *battle*, but ideas and talents are, ultimately, the source of productivity and competitiveness. The same thing is true in terms of the overall social organization, how people *change their minds* determines how they change their behavior. And the change of behavior would, ultimately, translate into changes in the overall social organization."

Castells says according to Stalder [26]: "New social formations emerge around primary identities. These identities are often seen as biologically or socially unchangeable. In the *interplay of the Net and the Self* the conditions of human life and experience around the world are deeply reconfigured."

The first assumption structures Castells' account of the rise of the Net: the dialectical interaction of social relations and technological innovation, or, in Castells' terminology, modes of production and modes of development. The second assumption underlines the importance of the Self: the way social groups define their identity shapes the institutions of society. As Castells ([22]: 6-8) notes "each type of identity-building process leads to a different outcome in constituting society". - "Identity-building itself is a dynamic motor in forming society. *Identity* is defined as the *process of construction of meaning* on the basis of a cultural attribute, or a related set of cultural attributes that are given priority over other sources of meaning". – Remember here that the final result of the GCDB analyses [25] was "to accelerate (social as compared to physical) time" in order to allow for more sustainability in society building.

Learning is Facilitated by a "Geography of Opinions and Perspectives"

Geography is the branch of science offering *perspectives onto reality*. Let us use such an unusual definition for the following deliberations.

Consequently, *geography creates spaces* (of understanding) that may be converging in the best case. The main tool for converging spaces of understanding is the dialogue. The circle of argumentation is closed.

Fundamentally, spaces are "spaces of (common) understanding", i.e. clusters of the same or similar "explanatory software" for the perceptions of the world. In our century, fortunately the path of intercultural understanding is followed more at the expense of thinking in terms of "cultural clashes".

European Integration as Prime Case for a Discursive Building of Structures

As a response to the new geopolitical situation following the events of 1989, the European Union (EU) has seen a round of enlargement in May 2004 based on dialogic procedures, and consequently adopted a new framework for relations with its neighbours, the *European Neighbourhood Policy* (ENP, [27]). The ENP offers neighbouring countries the prospect of an increasingly closer relationship with the EU with the

overall goal of fostering the political and economic reform processes including democratization, promoting closer economic integration as well as legal and technical approximation and sustainable development. In ENP, the cluster of ex-communist "transition economies" is comprised as ENP East [21, 28].

The central element of the ENP is a bilateral Action Plan (AP) which clearly sets out policy targets and benchmarks through which progress with an individual neighbouring country can be assessed over several years. The ENP Action Plan defines a considerable number of priority areas among which environment, aviation and education, which are at the core of the five cases reported in this article. Such deeper integration is based on – if not common – at least approximating human and societal values and constitutes a case of "identity building", as mentioned by Castells above.

European political genesis, its enlargement and subsequent neighbourhood policy represent "societal learning" in the deeper sense of the word.

In a theoretical approach, Eder ([29]: 33) discerns two steps in the process of (European or any large-scale political) integration:

I.   Transcending the utilitarian needs and

II.   Closing the gaps by discourse.

Eder's [29] paper develops a sociological perspective on the process of social integration that has been initiated in the course of the evolution of European political institutions. An abstract notion of social integration is presented as providing an analytical framework for understanding and explaining the process of socially integrating a culturally heterogeneous Europe. The key concept is that of a *transnational space of communication and its discursive closure* (compare Bourdieu, 1997). The central theoretical idea is to use communicative density (compare [30]) as the criterion of the emergence of a communicative space in which two different types of experience make possible its discursive closure:

1.   the experience of being *treated in a fair way by the others* inhabiting this space (the *cognitive* capital of a community) and

2.   the *construction of a common memory frame* resulting from the confrontation of differing national (and subnational) memories in this space (the *narrative* capital of a community).

Thus, two mechanisms can be identified which explain discursive closure. This model leaves open whether this will happen, but it offers a strategy for identifying the extent and the causes of such processes without recourse to normatively motivated wishful thinking.

The main dimensions of such a creation of a society are increasing density of interaction (or density of communication) in a European social space and its discursive closure by cognitive and narrative construction of mutuality, common ground and common interest ([29]: 37).

The two factors listed above are seen as forms of accumulation of *symbolic capital* while the two mentioned appearances of symbolic capital are relevant: cognitive capital and narrative capital (p. 39). In Bourdieu's concept of symbolic capital memory and remembrance become a constitutive part of the structure of collective social practice. Cultures of remembrance are a form of symbolic capital that attributes a certain value (or lack of value) to the constituents of the "common" [7, 29, 31, 32].

On the practical level of countries, a well-targeted strategy for the creation and further development of such communality is a series of so-called Twinning projects that have been developed by the European commission for the mutual help of administrations in the member states and the candidate countries. Twinning means "Institution Building" (compare Berman, 1997). A suitable definition of the "*Twinning principles*" applicable to European neighbourhood countries (from Belarus across Azerbaijan to Morocco) can be found on the Twinning web page [33]:

•   "In addition to meeting requirements laid down in the EU's agreements with third countries, Twinning must also aim at developing *structural* reforms.

•   At the end of a project, any new or adapted system must be *self-sufficient* and function under the auspices of the beneficiary country.

•   Projects must also include some elements relating to the adoption of EU *legislation*. An approximation to the acquis communautaire is called for, rather than full integration of EU legislation as was demanded of the candidate countries.

•   The local partner in a Twinning should be represented by a *public body* that is capable of

working with a Member State organisation which has a similar structure and function.

- The beneficiary country partner must be able to adapt and take on board *change*: the Twinning project is not about the EU providing one-way technical assistance."

Several cases for Twinnings will be presented in the practical part of this contribution.

CASE DESCRIPTIONS

The following cases narrated in the practical part of this contribution will illustrate (individual and societal) collaborative initiatives of providing learning opportunities that may be supported by suitable information technologies:

- Austro-Asian university network UniNet, with local cases in:

  o Kyrgyzstan

  o Nepal;

- Developmental curricula in Austria called Global Studies;

- European Association for the Promotion of Sustainable Development ESD;

- European Union enlargement Twinning tool with cases in:

  o Slovakia

  o Slovenia

  o Armenia

  o Georgia

  o Azerbaijan.

Case Kyrgyzstan

The Austrian-Central Asian Centre for Geographic Information Science (ACA*GIS) was founded in 2008 in Bishkek (Kyrgyzstan) as an offspring of both Unigis and Uninet activities. Starting from this Kyrgyz cooperation, the workshop openSolar'09 (www.aca-giscience.org/opensolar) is organized in August 2009 together with the annual Central Asian GIS conference GISCA'09 [34]. Again, its target is to create sufficient personal links between stakeholders in order to promote

institutionalising of solar-oriented collaboration: construction and deployment of thermal and photovoltaic solar cells, cooperation in research and in legal matters. For this target, high-ranking officials from administration are expected to enhance solar implementation in Kyrgyzstan.

Regarding solar energy applications, the necessity to bridge standpoints occurs (1) between Central Asian and European views to consider for example to what extent the Kyrgyz economy should master the modernisation of the energy system by its own force and (2) among Central Asian standpoints themselves, for example regarding the question of the water management of the Syr-Darya river, if water from the Toktogul reservoir should be released during summer for the needs of the Uzbek cotton plantations or during winter for the needs of the Kyrgyz electricity generation. As another example, the tariff for electricity in Kyrgyztan is presently still so low, that it does not at all cover the cost of electricity generation, which holds back the engagement of foreign investors to exploit the huge hydroelectricity potential of Kyrgyztan. Additionally, an escape from the deadlock of the Kyrgyz electricity market cannot be imagined without external help: the Kyrgyz viewpoint might be too restricted, so that raising electricity tariffs is only seen as socially negative, whereas the World Bank report identifying weak financial sustainability and corruption as prime obstacle might be seen as capitalistically inspired.

Foreign experts are useful in such a situation not only for delivering know-how but also because they are not part of the pattern of interest of the respective country. Therefore, they can play the role of a social catalyst. The very essence of such consultancy work is to bring the social procedures beyond the point of a deadlock when opposing national interests bring national planning efforts to a standstill. The mere fulfilment of World Bank advice does not always seem a possible strategy for everyday politics, especially because the so-called "Tulip-Revolution" in 2003 was initiated among others by a rise in electricity tariffs.

Dialogue and discourse in this case may construct a real-world escape from an unsatisfying situation after the collapse of the Soviet Empire.

The technological substrate of this type of collaboration is a web site containing the lectures of Austrian authors and also a web space containing the contributions of the workshop attendants who have

computed the solar energy potential of their respective Central Asian home country, such as Kyrgyztan, Uzbekistan, Kazakhstan, Tajikistan, and Turkmenistan. Continued interlacing of social webs in Austria and Central Asia will be performed during a discussion session on the last day of the workshop, where professors from both sides take part and also industrial actors and development helpers in order to prepare concrete implementation of solar energy in Kyrgyztan.

Case Nepal

Both Austria and the Himalayan countries have special experience with problems in high mountain ranges: natural disasters, earth slides, climate change. Therefore, a long cooperation between Austrians and members of a centre of mountain research has been developed and led to the joint organisation of an annual conference. Additionally, Himalayan countries might encounter political difficulties when cooperating among themselves; they reach from Afghanistan to Myanmar. Therefore, it is important to have a joint platform for discussing scientific and environmental issues without disturbances due to different political systems. Such a platform allows to adopt different viewpoints and to go beyond limited national views. Additionally, the presence of Austrian experts has enlarged the scope of existing perspectives. This annual conference is also organized through Uninet, in this case the scientific output and the technological support were comparable to a conventional conference.

Case Global Studies

Over the last decade, initiatives for "Global Studies" have emerged in the Austrian cities of Vienna, Graz, Salzburg and Innsbruck. The idea is to found a sound scientific curriculum [35] that is inspired by developmental ethics. The first of these developmental studies has been established at the University of Vienna and has recently reached an annual throughput of some two hundred students per year.

Formally, this initiative has been led by the Department for African Studies in Vienna, but is still identified as a "project" and is carried out mainly by a group of half a dozen university lecturers. Despite the growing importance of developmental studies on an international level and their longer traditions in the Anglo-Saxon countries, the institution building process at the University of Vienna has been very slow.

At Graz University, a "bundle of electives" has been offered since 2003 (www.uni-graz.at/globalstudies) and

is currently merged into a regular curriculum for the master course "Global Studies". Whereas the Viennese initiative is mostly rooted in political sciences and sociology, the Graz initiative always maintained a very broad scope encompassing all faculties of this university: economics, political science, international law, languages, theology, global change, and sociological methods. The Graz curriculum is composed of 6 components and ensures a broad understanding. The Graz initiative was founded by a long-standing expert in peace research, Dr. Karl Kumpfmüller, and was implemented by a peer group of active members of Graz University, the so-called "Steering Committee Global Studies", who have been meeting bimonthly for the last 6 years. This bundle of electives amounts to 24 hours per semester or 36 ECTS, of which the only mandatory lecture is one introductory lecture to Global Studies held by the founder and one of the authors. A strength of the master curriculum is the mandatory three-month practical that might consist in developmental work abroad.

The Salzburg initiative is organised by initiative of the Institute for Geography and has accumulated a budget of eight hours per semester for a just starting curriculum also called "Global Studies". The Innsbruck initiative gained momentum after the biannual Austrian developmental conference 2008 in Innsbruck.

Case ESD

The conviction that only radical reforms of our present economic system can heal the environmental and economic crisis to a sufficient extent, has led to the foundation of the European panel on the promotion of sustainable development ESD [36]. This is a loose but clearly organized group of idealists, who have formed as a vivid and constructive discussion round with illustrious authors of critical books in Austria. In an iterative process of mutual review, a book was authored that immediately after its publication reached the second highest rank of the evaluated books in future science. This structured discussion process is maintained and will soon lead to a second reworked edition of the book "The turn of the Titanic". ESD has its own website (www.esd-eu.org) but is mainly relying on personal contacts and face-to-face debates and structured discussion. In no other case is the orientation to "discursive society" so clearly implemented as in ESD. The special chance and the special risk at the same time of this idealistic corporation might be the strong individualism and the

deep ethical motivation that cared for a small but very dedicated group of activists, who managed to disseminate their thoughts in numerous public discussions and debates, especially with high ranking stakeholders from industry, banking and administration.

Case Twinning as a Tool

The historic processes of the break-up of the former Eastern-European Bloc in the year 1989 and the subsequent independence of these nation states has led them to pursue, , membership in the European Union. Consequently, a political and administrative tool on a continental scale had to be developed, that would be useful in defining a clear process of these new states towards restructuring into a democratic society. Such societal procedures can only occur on a voluntary basis; or else they would not be successful because of a lack of perceived ownership in the respective administrations. In 1998, the European Commission started the first "Twinning projects" that where designed to train administrative staff in the candidate countries for their future duties as member state administrations.

The main idea of these Twinning projects is to *jointly solve issues* posed by membership. Both physically and symbolically, civil servants of the candidate country and of a new member state sit next to one another and together face their issues and problems of daily work. Training is done on the job, in partnership, on the same height of eyes (symbolically and literally) and in a non-confrontational manner. The experts of the new member states are not standing "in front" of the experts of the candidate countries and giving them "good advice", but the "common enemy" is the task to be mastered. Therefore, the stakeholders are trained for their future roles as colleagues on EU level. Additionally, the spirit of work and the democratic culture of self-responsible fulfilment of work duties are implemented in real live, not only theoretically taught. The side effects of gradually adapting to a different work attitude after decades of communism where rules and regulations might have been perceived as unnecessary attack on the individual might have constituted the most important achievement in many cases. Hence, Twinning offered a double achievement: learning new matters and new procedures. Anyhow, learning procedures always necessitates "matters" as a substrate of learning.

According to the philosophy of Twinning, concrete projects had to be formulated and applied for by people in the candidate country's administration. Often the most dedicated individuals have taken the effort to define a Twinning project and thus have contributed to the advancement of their specialties and maybe sometimes also to their personal careers. However, an almost invisible "cultural change" in EU financing took place, namely the shift from "demand driven" to "accession driven" projects. Whereas the first type of projects often meant: "candidate country demands, EU pays", towards "if you fulfil your own tasks in approaching the EU system, we will help you with that".

Every year, one hundred Twinning projects have been carried out since 1998 all over Europe in such areas as environment, justice and home affairs, and other key areas that have been enlarged to practically all issues of the so-called 33 "chapters" of the European Union accession mechanism. Twinning philosophy is deeply rooted in dialogue and discourse and was documented by the so-called Twinning Handbook [33] and has been subject to iterative improvements on the basis of annual reviews assessing the success of the individual projects and the Twinning tool as such.

The last Twinnings for the enlargement round of the Central European countries have been performed in 2006. Due to the overall success of this type of programming the tool of Twinning has been subsequently applied also to the countries of the so-called "European Neighbourhood Policy" (ENP). This is a set of countries reaching from Belarus to Azerbaijan in the East and to Morocco in the West; however, these projects do not lead to accession, only to approximation of states.

The core of any Twinning is the voluntary act of absorbing the so-called "acquis communautaire" which means the entire set of EU legislation.

Many Twinning projects have a typical budget of one million Euros. Regarding the project structure, key roles are the "Resident Twinning Advisor" (RTA), who resides in the beneficiary country for one to two years and acts as a link between the European Union member states (MS) and the candidate countries or beneficiary countries (BC). RTAs report to the project leaders, one from the BC and one from the MS. Apart from the long-term expert RTA, typically five to forty short-term experts (STE) come to missions in the beneficiary country for typically one or two weeks. They should cooperate on a daily basis with their local homologues, who are civil servants on the beneficiary

side. Twinning experts must come from an administration and are typically civil servants; STEs are not consultants in the usual sense of the word. This leads to the main characteristic of Twinning: *Twinning is institution building*, not technical consultancy. Twinning means "*strengthening of institutions*"; after a Twinning the beneficiary country should be able to perform its administrative tasks relying on its own strengths, its own motivation and its own financial and organisational means.

Twinning is certainly not a theoretical exercise limited to science only. It means changed realities in such concrete fields as taxation, border control, anti-corruption within the police, waste management, vocational education, or aviation safety. In this sense Twinning is institutional learning and societal learning in the sense as described in the first chapters. Twinnings may be seen as *one of the most effective methods for societal learning* as such.

Often considerable obstacles may arise in intercultural understanding. Also very often, the understanding prevails that the "western consultants" come, do the work and leave and thus spare the local consultants from this workload. Such an attitude would not comply with the requested ownership leading to empowerment of the beneficiary.

An overall analysis of the Twinning tool will arrive at seeing as a highly effective program enabling smooth transition processes of a large group of countries towards a democratic system. The latest enlargement of the European Union might even be seen as a third world war without one single victim. It represents possibly the first example in human history of an area one thousand kilometres wide encompassing an entire continent that has deliberately and voluntarily changed its political system, ultimately backed by the will of the majority of the population.

The core of the success of a Twinning lies in its potential to provide new perspectives on the same reality by incorporating the Twinning partner's view. When jointly sitting over a task, the expert colleagues exchange their views in an undramatic manner as part of their daily lives in an atmosphere that does not encourage competition but constitutes a win-win situation where the personal success of each one is the highest when having attained consensus with the partner. However, also cases of less harmonious Twinnings have been experienced where the long-term expert was replaced on the basis of dissatisfaction in the beneficiary country.

Case Twinning in Slovakia

An example for an early Twinning project during the early phase of accession is one of the first hundred Twinnings: "Strengthening of Institutions in the Air Quality Sector" in Slovakia in 2000-2001 led by the Austrian Federal Environment Agency ([30]: chapter 2.3).

Initially planned as a technical investment project to provide 40 PCs for the Slovak air monitoring system, this project became a full-fledged Twinning and was later inofficially named "the best Twinning in Slovakia". It produced over twelve concise reports on air quality measurement methodologies that were very positively received by the European Court of Auditors. However, some of the possible shortcomings of Twinnings played a considerable role here: during the planning process, all three involved actors (Slovakia, Austria, and European Commission) contributed to delays during the preparative phase of preparing the Twinning contract (Twinning Covenant). During these early years the Twinning tool was not yet fully developed, the rules were subject to change, and all involved actors lacked experience. The resulting delay of more than one year prompted the beneficiary country to assume that it would no longer need a Twinning at all.

However, the ongoing legal analysis of the "Act on Air" text of the Slovak Republic revealed that there were still considerable shortcomings of the transposition of the EU legal texts (the EU Framework Directive on Air Quality and their related daughter directives). As a consequence, during long periods of this Twinning, the Slovak partners showed considerable reluctance to sufficiently collaborate with the Austrian partners because the beneficiary thought it had sufficiently accomplished transposition. Nonetheless, more gaps emerged in the field of implementation, and even more in enforcement – these three steps are the main phases of any Twinning procedure.

Ultimately, this single Twinning reflected very well the subjective perceptions of the civil society on both sides of the former "Iron Curtain", namely that each one thought the processes on their own side to be much more mature than perceived by the other side. Slovaks considered themselves over-matured to approach the EU, whereas Austrians felt alleged backwardness of any Central or Eastern European country. This fundamental bias of perception of the role of one's own country with respect to the role of the partner country

led to a decrease in factual collaboration during the Twinning process. In contradiction to the mutually agreed plans, the Twinning reports were authored by Austrian experts to 95 %, whereas Slovak experts restricted themselves to delivering data in cases they have been asked for expressly. As a result, the Twinning targets, that actually are understood as "guaranteed results" were watered down and fulfilled either too late or only formally or not at all. Such severe assessment comes from a long-term expert who is one of the authors. The Slovak administration repeatedly declared that it was willing to achieve only the minimum performance in transposition of the acquis into Slovak legislation [37, 38].

During the same time period, another Twinning on water quality in Slovakia was very successful due to the high level of dedication of the Slovak project leader and his team. A third Twinning on waste suffered from distributed responsibilities among several Slovak ministries. In general, Slovak administration was severely understaffed (that was partly triggered by EU advice to cut down costly administrative staff in ministries) and severely underpaid which resulted in a brain drain towards private economy. Ten years after the Velvet Revolution, a change of working atmosphere, the degree of taking responsibilities and self-guidedness of civil servants had not yet reached a sufficient level. This is only one of the conclusions after having spent a year in another working culture. Another conclusion was that after returning home many aspects of administrative life in the home country resembled considerably the unsatisfactory impressions in the beneficiary country. Consequently, the returning long-term expert perceived his own country as a "developing country" - only at a different stage of development. Any country that is reluctant to develop further its social structures and institutions is in danger of creating bottlenecks for fruitful societal evolution.

What were the lasting benefits of such a project? Firstly, training on the technical level of how to fulfil the reporting duties for air quality matters, secondly, personal knowledge of the environmental administration in the partner country and thirdly, and foremostly, the ability to step out of the perspective of one's own country and to adopt the perspective of a member of the other country. This latter *ability of "switching roles and switching perspectives"* is the *core of social learning* in such *intercultural* interdisciplinary projects.

Case Twinning in Slovenia

A different country with a different history and a different phase in the overall accession process has led to very different experiences, self-conceptions and resulting interpersonal relationships. One year after the accession of Slovakia to the EU had already taken place, the Twinning on "Pricing of Water According to the EU Water Framework Directive" has been performed by a mixed German-Austrian team from 2005 to 2006. For half a year of the Twinning period, Slovenia itself adopted the role of EU presidency and fulfilled its duties in a highly respected manner ([30]: chapter 2.7).

A rather complex issue was selected, namely the question of how market mechanisms could control the amount of water consumption as a function of the water price. The aim of the project was to use different levels of water pricing to determine the levels of water consumption in different geographic areas of Slovakia with its only two million inhabitants. The task of the Twinning experts was to develop an algorithm of computing water prices that would sufficiently take into account the ecological ("external") costs linked to the supply of fresh water and subsequent management of waste water.

The selection procedures by the Slovenian administration revealed later on that existing personal contacts had led to the decisions which partner to select.

During the entire Twinning a friendly interpersonal atmosphere prevailed among the experts. However, the collaboration among the RTAs and project leaders was not always without problems. Lack of knowledge of the subject itself might have led to a visibly formalistic attitude on one side of the Twinning partnership.

The fulfilment of the "guaranteed results" in this Twinning was endangered by the interdisciplinary complicatedness of the field and the audacious underlying assumption of controlling water demand by the price level. A very positive aspect was that Slovenia's very young staff in administration saw an active collaboration in this international project as a chance to advance their own careers and showed ongoing consistent activity that was only hampered by the generally very high workload imposed on the exhausted staff of this small EU member country. Different working attitudes were no problem at all, given the folkloristic designation of Slovenes as "the

Prussians of the Balkan" based on the century-long common history with its northern neighbours. There were no frictions between the EU member state senior partner (Germany) and junior partner (Austria) due to the friendly overall attitude of the resident Twinning advisor (RTA). His fair and empathic attitude might have added to a low level of clarity and resistance against the formalistic behaviour exhibited by the other partner. As in all such cases of international projects, final reports reflect mainly the harmonious side of completed projects. The role as EU presidency has prohibited Slovenia to succumb to a role of the recipient of "good advice". Patterns of interaction within the senior member state partner were overshadowed by relationships to the original workplace in the home country, which brought about an inclination to solve strategic issues around a small table "behind closed doors". Also here, social interactions during this exercise of social learning were not ideal, but they did not hamper the overall project success at all.

Case Twinning for Armenia

When the tool of Twinning had been transferred to the countries of the "European Neighbourhood Policy" (ENP), an additional item was introduced: authoring of the so-called "Twinning Fiche" (the tendering document clearly defining the targets and contents of the Twinning project) was also transferred to a team of two or three consultants from the European Union member states, because administrations in the ENP did not usually dispose of sufficient knowledge of EU procedures and institutions to draft this text on their own.

One of the first three Twinning fiches drafted for the Ex-Soviet Republic of Armenia was on aviation safety. For this target, two missions of two weeks and one week respectively took place and comprised mainly visits to Armenian officials in the responsible ministries in descending order of hierarchy. This process ensured the active involvement of the local government and enhanced the spirit of ownership of the institution demanding assistance before the target of meeting the criteria of the international aviation association. The main phase of this preparatory project consisted in long-hour conversations with the national experts on aviation that revealed and precisely defined the real needs of the beneficiary country for EU assistance. The findings of these conversations were moulded into a clear work plan containing clearly defined tasks for the future Twinning project.

During the month between the first and second mission the Armenian experts had the chance to review in detail the draft fiche that has also been translated into Armenian language by the translator who was part of the consultant's team. Additionally, the relative amount of manpower flowing into each expert's area of responsibility has also been clarified during a hearing convening all Armenian experts. In such a way the philosophy of partnership and peer activity was guaranteed.

In a subsequent procedure, the line DGs in Brussels expressed their review comments on the draft fiche. After these last comments had been taken into account by the team of experts, the fiche was published and the bidding procedure was able to start.

Given the highly difficult traffic situation of Armenia it is understandable that one of the first Twinnings related to aviation in order to secure the country's accessibility.

Generally, the level of intercultural understanding between European and Armenian experts was very high and no severe mismatches in working attitudes occurred.

Case Twinning for Georgia

Half a year later, a Twinning fiche preparation project on the same subject matter of aviation safety was held in Georgia. The same geopolitical circumstances were prevailing, namely the wish of a country to have access to European Union traffic schemes. Additionally, in Georgia the wish to adhere to the European Union's system of values, democratic principles and political organisations [34] was very developed, as could be seen during numerous encounters with the local population. In a similar procedure of two missions a first draft fiche was prepared, and then reviewed by the Georgian partners and finally completed by adding a very concrete work plan that defined targets and volume of numerous short-term missions.

In both these Caucasian aviation Twinnings, the task of creating a precise and adequate list of "guaranteed results" was relatively simple, because the targets of the European aviation requirements are precise, independent of the country's characteristics and well-documented. Neither the existence of the working targets nor their concrete definition is questioned – and could not have been questioned,

because they lie out of the reach of both actors. Rather, working targets are defined by an international institution that is responsible for civil aviation safety. Consequently, the task of defining the workload boiled down to attributing numbers of weekly missions to each one of the subdivisions of aviation safety requirements.

Also in this case there occurred no cultural inconsistencies between the partners as a function of different working attitudes, despite the large geographic distance. It was visible both from the numbers of European flags on public buildings and from the behaviour of "people on the street" that Georgian self-understanding was truly European. However, considerable weakening of Georgian integrity was perceived to have occurred by recent military and political issues in two northern territories of Georgia. Not even the presence of three different international bodies of observers seemed to have been able to help out of this impasse.

Case Twinning for Azerbaijan

A third project preparing a Twinning fiche took place recently in the third and largest Caucasian republic of Azerbaijan. The theme of Twinning in this case was "Vocational Education in the Field of Agriculture". At a first glance, almost all the parameters guaranteeing project success seemed to have been lower in this case: possibly a lower level of involvement on part of the beneficiary, possibly a less clear division of responsibilities among the ministries, possibly lower clarity in communication with the Twinning team and in general, and possibly a lower degree of experience with clear, objective, personality-independent ways of working.

Such first impressions have been corroborated by personal experiences with the police on the street, who took money out of our wallets during the course of a passport inspection and during other incidents with street police, who halted taxis on the highway without visible reason but only in order to bluntly ask for money from the taxi driver. An elevated level of informal economic behaviour and corruption is reported by outside perspectives, but not always by spectators from inside the country. Azerbaijan is highly ranked in the international corruption index. In almost any office of mid-level civil servants, a dozen of devotional objects such as photos, portraits, books and videos of political leaders were present in a very self-understood manner.

In parallel to this internal situation, a frozen military and political conflict with the neighbour country was perceived by citizens in an astonishing manner, taking into account only one's own national lines of argumentation and not seeing or perceiving arguments brought forth by the conflict partner.

During the first week of the mission, the impression arose among the European experts that Azerbaijani counterparts were not particularly interested in the project at all. However, with time and as a result of a repeated attempt to communicate by telephone rather than by email (typically officials have no administrative email addresses but only public domain addresses like Gmail and Yahoo) the success of communication increased substantially. Therefore, the assumption became more convincing that not a substantial lack of interest but maybe just general self-constraint and caution were the reason for unsuccessful communication in the first place.

In total, the communicative procedures in Azerbaijan were far more difficult than in the case of the other two Caucasian republics. However, final results will be achieved also there and the prospects are promising that during the three weeks of the project dedication of the actors can be generated and enhanced, even if it might not be present right from the outset.

Relevance of the STEP Structure for these Cases

This section views the described institutional case studies along the four criteria proposed by the editors of this book: S, T, E, P (= Social, Technological, Economical and Political): Table **1**.

CONCLUSION

This text has provided an overview of "dialogic learning". For complex interdisciplinary and intercultural issues, "learning" is seen as converging different and divergent world views into a common synthetic perspective on reality. Manuel Castells concept of the "network society" combines easily with such concept.

One motto of this entire volume is: how have organizations adapted to the advancement of learning options? Therefore this contribution illustrates the genesis and evolutive growth of "structural capital and social capital" which consists in common institutions, common procedures and common values of diverse individuals, communities and societies.

The target of this contribution is transcultural learning. Cultures may be delimited spatially, politically, or also mentally such as different scientific disciplines.

Table 1:   How the STEP Factors Apply to the Cases of this Article; these are Explained in the Earlier Section

Cases	S = Social factors	T = Technological factors	E = Economical factors	P = Political factors
UniGIS	Easy access for individuals, international network embeds	normalised catalogue of criteria for achievements	Costs paid by learners and supporting institutions	UniGIS is embedded in intl. and EU networks
UniNet	Lecturers and students are networking agents	Thematic orientation is secondary, real persons travel	One-way financial transfer from Austria to Asian universities	Developmental aid on academic level in mutual partnership
- Kyrgyzstan	Promote GIS and solar energy	Strengthen local institutions	~ODA + own effort to organise	Young democratic republic
- Nepal	Apply GIS for mountain areas	Divert natural hazards' menaces	Cooperation with Himalaya states	Strengthen local self-governance
Global Studies	Response to increasing students' awareness and NGO work	Partly e-learning, but focus on face2face, students travelling	Efforts made by students who also participate in practicals	The guiding idea of global collaboration is implemented
ESD	A NGO creates itself and provides orientation to others	Only "social software" directs interplay of self-responsible actors	No economic weight. "Just" development of societal strategies	Includes senior political figures with high profile & individualism
USW (= Environmental Systems Analysis)	Institutionalising a pioneering university curriculum	Strong e-learning component but only as blended learning	Synergism with classical curricula boosts attracti-vity for students	Slow diffusion through the traditional university system
Twinning tool	Main tool of EU enlargement & reduce barriers	Self-motivated implementation of EU legislation	Better mutual exchange increases development	Smooth transition from EU to neighb. countries
- Slovakia	Candidate country wants to join	Improve air quality legislation	Reduced pollution improves life	Ex-communist country's rebirth
- Slovenia	New EU member state joined	Implement water quality legislation	Water price covers external costs	New market economy stabilises
- Armenia	Discontinue Soviet safety syst.	Aviation security must be compatible	Switch from old to EU system	European neigh-bourhood policy
- Georgia	Leave behind Soviet security	Aviation will be compatible to EU	Integration in larger aviation area	Equilibration of strategic contacts
- Azerbaijan	Re-build agr. vocational training	Agriculture employs 40% of pop.	Agricult. value added is minimal	Wish to modennise non-oil sect.

Consequently, the described 14 cases in this contribution

- extending on both individual and societal learning

- comprising aspects of interdisciplinary and intercultural learning settings

all attempt to illustrate that a suitable way to "make a change" in our world is to exchange and adapt our world views.

REFERENCES

[1]   Berding JWA. John Dewey's participatory philosophy of education - Education, experience and curriculum. The History of Education and Childhood, Nijmegen University 2000, http://www.socsci.kun.nl/ped/whp/histeduc/misc/dewey01.html.

[2]   Haack S. Pragmatism, Old and New. Contemporary Pragmatism 2004; 1(1): 3-41. https://doi.org/10.1163/18758185-90000126

[3]   Stähli F. Ingenieurethik an Fachhochschulen [Ethics for Engineers at Universities of Applied Science]. Fortis FH, Verlag Sauerländer AG, Aarau 1998.

[4]   Stähli F. Warum muss Technik ein Gegenstand der Ethik sein? [Why must technology be an object of ethics?]. Aarau 2005. Retrieved from http://web.fhnw.ch/personenseiten/fridolin.staehli/_html/publ.html.

[5]   Werner MH. Hans Jonas' Prinzip Verantwortung [H. Jonas' principle of responsibility]. In M. Düwell, K. Steigleder (Eds.), Bioethik: Eine Einführung. Frankfurt, Germany: Suhrkamp 2003; pp. 41-56. Retrieved from http://www.micha-h-

[6]   Roth W-M, Lawless DV, Masciotra D. Spielraum and Teaching. Curriculum Inquiry 2001; 31(2): 183-207. https://doi.org/10.1111/0362-6784.00191

[7]   Tröhler M. Leeway for wits and sense [Spielraum für Sinne und Sinn]. Du: Zeitschrift Der Kultur 2007; 778: 45-61. Retrieved from http://www.du-magazin.com/

[8]   Jaros S. Meyer and Allen model of organizational commitment: Measurement issues. The ICFAI Journal of Organizational Behavior 2007; 6(4): 7-25.

[9]   Hall, R., Jones, C.I. (1999). Why do Some Countries Produce so Much More Output per Worker than Others? *Quarterly Journal of Economics*, *114*(1), 83-116.

[10] Heidegger M. Sein und Zeit. Tübingen, Germany 1977.

[11] Global Studies. Bundle of Electives on "Global Studies" at Graz University 2009. Retrieved from http://www.uni-graz.at/en/vre1www/vre1www-wfs.htm

[12] Castells M, Arsenault A. Conquering the Minds, Conquering Iraq. Information, Communication & Society 2006; 9(3): 284-307.
https://doi.org/10.1080/13691180600751256

[13] Mankiw NG, Romer D, Weil DN. A contribution to the empirics of economic growth. Quarterly Journal of Economics 1992; 107(2): 407-438.
https://doi.org/10.2307/2118477

[14] Coats AW. The American Economic Association and the Economics Profession. Journal of Economic Literature 1985k 23(4): 1697-1727.

[15] Schumpeter JA. The theory of economic development. Cambridge, MA: Harvard Univ. Press 1949.

[16] Robbins D. Sociology as reflective science - On Bourdieu's Project. Theory, Culture & Society 2007; 24(5): 77-98.
https://doi.org/10.1177/0263276407081284

[17] Ahamer G, Car A, Marschallinger R, Wallentin G, Zobl F. How to map perspectives: Moving GISc to IISc. 4th International Conference on Information Technology ICIT'09, Al-Zaytoonah University of Jordan, Amman, June 3rd – 5th, 2009. Retrieved from http://www.alzaytoonah.edu.jo/ICIT/pages/index.aspx.

[18] Fontela E, Guzmán J, Pérez M, Santos FJ. The art of entrepreneurial foresight. Foresight 2006; 8(6): 3-13.
https://doi.org/10.1108/14636680610712496

[19] Ahamer G. Negotiate your Future: Web Based Role Play. Campus-Wide Information Systems 2004; 21(1): 35-58.
https://doi.org/10.1108/10650740410512329

[20] Ahamer G. Heuristics of social process design. In: Computational Intelligence & Modern Heuristics, Lazinica, A. (ed.), 2010, ISBN 978-953-7619-28-2, INTECH, 2010; pp. 265-298.
https://doi.org/10.5772/7812

[21] Ahamer G, Schrei C. Exercise 'Technology Assessment' through a gaming procedure. The Journal of Design Research 2006; 5(2): 224-252.
https://doi.org/10.1504/JDR.2006.011364

[22] Taylor PJ, Derudder B, García CG, Witlox F. From North-South to 'Global' South An investigation of a changing 'South' using airline flows between cities, 1970-2005. Geography Compass 2007; 3(2): 836-855.
https://doi.org/10.1111/j.1749-8198.2009.00216.x

[23] Castells M. The Information Age: Economy, Society and Culture. Cambridge, MA: Blackwell 1997.

[24] Castells M. Identity and Change in the Network Society. Institute of International Studies, UC Berkeley 2001. Retrieved from http://globetrotter.berkeley.edu/people/Castells/castells-con0.html

[25] Horx M. How We Will Live. Vienna: Signum 2007. Retrieved from http://www.zukunftsinstitut.de/verlag/medien_detail.php?nr=9

[26] Popke E.J. (2003). Poststructuralist ethics: subjectivity, responsibility and the space of community. Progress in Human Geography, 27(3), 298–316.

[27] Ahamer G, Strobl J. Learning across Social Spaces. In S. Mukerji & P. Tripathi, (Eds.), Cases on Transnational Learning and Technologically Enabled Environments. Hershey, PA: IGI Global, 2009; pp. 1-26.

[28] Stalder F. The Network Paradigm: Social Formations in the Age of Information. The Information Society 2000; 14(1). Retrieved from http://www.indiana.edu:80/~tisj/readers/full-text/14-4%20Stalder.html

[29] ENP. European Neighbourhood Policy 2009. See http://ec.europa.eu/world/enp/

[30] Derudder B, Devriendt L, Witlox F. An Empirical Analysis of Former Soviet Cities in Transnational Airline Networks. Eurasian Geography and Economics 2007; 48(1): 95-110.
https://doi.org/10.2747/1538-7216.48.1.95

[31] Ahamer, G., Jekel, T. (2010), Make a Change by Exchanging Views. In: "*Cases on Transnational Learning and Technologically Enabled Environments*", Mukerji S. & Tripathi, P. (eds.), pp. 1-30, IGI Global, Hershey, New York, DOI: 10.4018/978-1-61520-749-7.ch001

[32] Eder K. Europe as a particular space of communication. On the question of the social integration of a culturally heterogeneous community. Berliner Journal fur Soziologie, 2007; 17(1): 33-50+140.

[33] Ahamer G. Mapping Global Dynamics. Springer International, Doordrecht 2019.

[34] Bourdieu P. The Forms of Capital. Education: Culture, Economy, and Society. A. H. Halsey, H. Lauder, P. Brown, & A. S. Wells (Eds.). Oxford, UK: Oxford University Press 1997; pp. 46-58.

[35] Ahamer G. A Planet-Wide Information System" Campus-Wide Information Systems 2013; 30(5): 369-378.
https://doi.org/10.1108/CWIS-08-2013-0032

[36] EU. Boosting Co-operation through Twinning. European Commission, EuropeAid 2009. Retrieved from http://ec.europa.eu/europeaid/where/neighbourhood/overview/Twinning_en.htm

[37] Ahamer G. Virtual Structures for mutual review promote understanding of opposed standpoints. The Turkish Online Journal of Distance Education (TOJDE) 2008; 9(1): 17-43. January 2008, ISSN 1302-6488, http://tojde.anadolu.edu.tr/.

[38] Ahamer G, Kumpfmüller KA. Education and Literature for Development in Responsibility: Partnership Hedges Globalization. In: Business Law and Ethics: Concepts, Methodologies, Tools, and Applications, Business Science Reference, IGI Global, Hershey, PA 2015; pp. 774-830. doi:10.4018/978-1-4666-8195-8.ch040

[39] Rauch H, Strigl A. Die Wende der Titanic [The Turn of the Titanic], oekom, Vienna 2006.

[40] Ahamer G. Documentation of existing air quality measurement sites in the Slovak Republic. Report 9 in the framework of the Twinning Project SR98/IB/EN/03 on Air Quality, Bratislava, ISBN 80-88907-20-9, 250 pages, as Slovak translation: Dokumentácia existujúcich monitorovacích staníc kvality ovzdušia na Slovensku 2001.

[41] Ahamer G. Twinning on air quality: comparison of results regarding the Slovak accession process. Meteorological Journal (Meteorologický Časopis), Bratislava, 2002; 5(1): 3-19.