


# Converging International Cooperation Supported by Data Structures

**Gilbert Ahamer**

 <https://orcid.org/0000-0003-2140-7654>

Graz University, Austria

## INTRODUCTION

The organizations involved in the following cases include universities, university clusters, transnational university partnerships, international environmental NGOs, and the European Union's external policy. These organizations range from public to private and from idealistic to pragmatic. All of them plan to “change the world” and for that target they undertake to *exchange views and perspectives* among the stakeholders concerned. This paper approaches to find answers to the specific set of questions through cases of international collaborative educational projects.

## 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* (Ahamer & Strobl, 2009, Toutain et al., 2020, Heuer & Toro, 2019, Janus, 2020, Koumpis et al., 2018, Love, 2018, Padilla & Lagercrantz, 2020). Consciousness governs procedures in the material world (Strigin 2019, Cherdymova et al., 2019, Cominelli et al., 2018, della Volpe et al., 2018).

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 (Akhmetova et al., 2021, Aviv & Spires, 2021, Geraci et al., 2021, Krishnendu et al., 2021, Lodge, 2021, Sergin, 2021, Smith & Schillaci, 2021, West, 2021, Woiwode et al., 2021).

Regarding learning, we may distinguish between *individual* learning and *societal* learning. Regarding the multiplicity of learning objects and learners (Baqui et al., 2021, Bojjireddy et al., 2021, Chaku et al., 2021, Duram 2021, Francesconi et al., 2021, Groves et al., 2021, Hansen et al., 2021, Hasni & Faiz, 2021, Huntington et al., 2021, Kannan et al., 2021, Kunkel & Settersten, 2021, Leach et al., 2021, Rinnooy Kan et al., 2021, Sumell et al., 2021), we distinguish the following types of learning:

- Individual learning
  - traditional learning (1:1)
  - interdisciplinary learning (1:n)
  - intercultural learning (n:m)

DOI: 10.4018/978-1-7998-9220-5.ch092

- Societal learning, e.g.
  - responding to climate change
  - 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 (Ahamer, 2004, 2008, 2012a).

## 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” (Ahamer, 2019, ch. 9, Beames et al., 2021, Claverie, 2021, Greenlees & Cornelius, 2021, Haaker et al., 2021) 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.

## Learning Means Evolution of Spaces of Understanding

Also, practical-minded disciplines take a similar stance: Taylor (2007, p. 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’ (Castells, 1996, p. 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 organization 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 4<sup>th</sup> 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 (2001) 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.*

11 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:  
[www.igi-global.com/chapter/converging-international-cooperation-supported-by-data-structures/317568](http://www.igi-global.com/chapter/converging-international-cooperation-supported-by-data-structures/317568)

## Related Content

---

### Quorum Sensing Digital Simulations for the Emergence of Scalable and Cooperative Artificial Networks

Nedjma Djezzar, Iñaki Fernández Pérez, Nouredine Djediand Yves Duthen (2019). *International Journal of Artificial Intelligence and Machine Learning* (pp. 13-34).

[www.irma-international.org/article/quorum-sensing-digital-simulations-for-the-emergence-of-scalable-and-cooperative-artificial-networks/233888](http://www.irma-international.org/article/quorum-sensing-digital-simulations-for-the-emergence-of-scalable-and-cooperative-artificial-networks/233888)

### Development of a Charge Estimator for Piezoelectric Actuators: A Radial Basis Function Approach

Morteza Mohammadzaheri, Mohammadreza Emadi, Mojtaba Ghodsi, Issam M. Bahadur, Musaab Zarogand Ashraf Saleem (2020). *International Journal of Artificial Intelligence and Machine Learning* (pp. 31-44).

[www.irma-international.org/article/development-of-a-charge-estimator-for-piezoelectric-actuators/249251](http://www.irma-international.org/article/development-of-a-charge-estimator-for-piezoelectric-actuators/249251)

### Challenges and Solutions in Emotion Detection Using Deep Learning Approaches

Sushma Mallikand Anamika Rana (2024). *Machine and Deep Learning Techniques for Emotion Detection* (pp. 184-202).

[www.irma-international.org/chapter/challenges-and-solutions-in-emotion-detection-using-deep-learning-approaches/347297](http://www.irma-international.org/chapter/challenges-and-solutions-in-emotion-detection-using-deep-learning-approaches/347297)

### Exploring Leading Practices in Algorithmic Trading: Insights From Survey and Case Studies on Machine Learning Techniques and Market Dynamics

Partap Singh (2025). *Machine Learning and Modeling Techniques in Financial Data Science* (pp. 151-184).

[www.irma-international.org/chapter/exploring-leading-practices-in-algorithmic-trading/368540](http://www.irma-international.org/chapter/exploring-leading-practices-in-algorithmic-trading/368540)

### Intelligent Prediction Techniques for Chronic Kidney Disease Data Analysis

Shanmugarajeshwari V.and Ilayaraja M. (2021). *International Journal of Artificial Intelligence and Machine Learning* (pp. 19-37).

[www.irma-international.org/article/intelligent-prediction-techniques-for-chronic-kidney-disease-data-analysis/277432](http://www.irma-international.org/article/intelligent-prediction-techniques-for-chronic-kidney-disease-data-analysis/277432)