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Global Insight and Counterfactuals in Policy-Making.
European Institute of Technology (EIT) as a Conceptual Integration Network

On 2 February 2005 the President of the European Commission, Jose M. Barroso, presented his Commission's vision paper. The proposed agenda (European Commission 2005a) was a reformulation of the original Lisbon Strategy adopted by the European Council five years earlier (European Council 2000). The objective of that important paper was to make "the European Union the most dynamic and competitive knowledge-based economy in the world" (European Commission 2005a: 4). Barroso's Commission took up this strand in the light of an alarmist High-Level Group report (European Communities 2004) stating that Europe must deal with challenges "even more urgent in the face of an ageing population and global competition," in particular challenges linked to determined action by "our competitors in other parts of the world" (European Commission 2005a: 4–5).

The Renewed Lisbon Strategy, sanctioned by the European Council in the spring of 2005, proposes a number of measures that European governments and society at large need to take to meet modern challenges. One of these measures cuts a special figure against the Strategy's background. A proposal is introduced that strikes the reader by an unlikely use of the indefinite article and inverted comas: "The Commission will propose the creation of a 'E u r o p e a n   I n s t i t u t e   o f   T e c h n o l o g y'" (European Commission 2005a: 9, 24).

The object of this article is to discuss the concept of the proposed Institute that emerges from selected response texts in the light of conceptual blending theory (Fauconnier and Turner 2002). It will be argued that "an EIT" is a blend, that it offers global insight into an otherwise unwieldy subject matter, and that the response comments from the stakeholder organizations are, in fact, elaborations of the blend. It will be argued that the EIT blend elaborated in response texts reveals

contradictions that are inevitable in a pan-European debate. It will be concluded that, while successful conceptual blending facilitated a complex innovation discussion, the mechanisms of blending and categorisation (Lakoff 1987) at play in this discussion highlight risks that are involved in providing European-level conceptual input to shape human thought and action through policy-making.

1. Conceptual blending theory

Conceptual integration (conceptual blending) is a fundamental cognitive process underlying human thinking (Fauconnier and Turner 1998, 2002). The conceptual blending theory by Turner and Fauconnier (2002) is one of the most important frameworks of second-generation cognitive linguistics and it has been widely discussed since its formulation. While many aspects of the theory have required elaboration and clarification (Gibbs 2000, Ritchie 2004), the vivid response proves the theory's utility in framing a complex discussion involving scientists and linguists, but also scholars exploring human creativity in general. This is possible because Fauconnier and Turner build their case on an interdisciplinary spectrum of intuitions and earlier studies (2002: 17–38). They explore analogies with chemistry, evolutionary biology (Fauconnier and Turner: 89–91) and earlier studies on human creativity (Koestler 1964).

The pivotal proposition of the conceptual integration theory is a network model to account for the complex cognitive process of forming new concepts, insights and understanding. The theory developed by Fauconnier and Turner (2002: 40) connects current knowledge about neuronal activation associated with thinking processes and language use to a cognitive model of mental spaces that explains the principles of organizing knowledge, linguistic processing and knowledge representation. The point of departure for this construction is the concept of mental spaces (Fauconnier 1994). Mental spaces are "small conceptual packets constructed as we think and talk, for purposes of local understanding and action" (Fauconnier and Turner 2002: 40). According to Fauconnier and Turner, mental spaces may become integrated under the process of conceptual blending to form a conceptual network that offers new insight and understanding to individuals. This network can be consequently elaborated under a narrative scenario ("running the blend"), and may, in fact, be shared among language users as a new concept or idea (Fauconnier and Turner 2002: 241–245, 389–396). In technical sense, the theory builds on the correspondence between "activated neuronal assemblies" (Fauconnier and Turner 2002: 40) in the human brain and their co-bindings on the one hand (empirical research results), and mental spaces with their inter-connections, as they may be experienced "in the human mind," on the other (cognitive models).

The model offered by Fauconnier and Turner (2002) presupposes existence of four spaces to a blend: two input spaces, a generic space (what two inputs have in

common) and the emergent blended space. However, the "space" metaphor does not suggest clear boundaries, but rather a point of reference: at numerous avenues the authors stress the evasive character of unconscious background processes that govern the cognitive mechanism of conceptual integration. For example, they quote a study by Kahneman, Slovic and Tversky (1983) on the so-called lottery depression to suggest that blends are not instances of intellectual effort, but continuous blending may motivate human emotionality, action and thought for weeks. In this sense, Fauconnier and Turner highlight two important aspects of blending from scientific viewpoint: blending theory offers insight into mental states and narrative imagination work in temporal perspective (process), and it offers insight into punctual individual cognition (global insight), i.e. points in time when an unconscious process results in presenting to the conscious mind a "Eureka" insight or a solution to a problem (2002: 57). The latter perspective inevitably leads to discussing formal aspects of blending, including grammatical and visual prompts for integration networks.

Fauconnier and Turner (2002) argue that certain grammatical forms cue in blends; e.g. Y-of networks, as in "Ann is the boss of the daughter of Max" (2002: 369). They also point to morphological innovation as blend-efficient (2002: 369). But blending is also extensively discussed outside language forms and its representations: Fauconnier and Turner (2002) make numerous references to objects, e.g. gauges, and artistic representations (caricatures, artefacts and others) that were created as a result of blending, or prompt blending. This is crucial: blending is seen as a pervasive phenomenon that can be activated by all kinds of sensual experience. And it is insistence on the ubiquity of blending that makes the proposition of Fauconnier and Turner (2002) different from other accounts of conceptual integration and knowledge organisation offered before (Goffman 1974, Talmy 2000).

2. EIT as a blend

The Renewed Lisbon Strategy is preceded by a foreword, whose tone significantly differs from the rest of the document in terms of register and EU jargon intensity (European Commission 2005a: 3):

> Just think what Europe could be. Think of the innate strengths of our enlarged Union. Think of its untapped potential to create prosperity and offer opportunity and justice for all its citizens. Europe can be a beacon of economic, social and environmental progress to the rest of the world.

This ambitious purpose is to be achieved by a concerted action. One measure to be taken is the creation of a new organism (2005a: 24):

> The search for knowledge has always been at the heart of the European adventure. It has helped to define our identity and our values, and it is driving force behind our future competi-

tiveness. In order to reinforce our commitment to knowledge as a key to growth, the Commission proposes the creation of a "E u r o p e a n I n s t i t u t e o f T e c h n o l o g y" to act as a pole of attraction for the very best minds, ideas and companies from around the World.

Within months after the publication of the Renewed Lisbon Strategy, European Research Advisory Board (EURAB), European Commission's advisory body, published its opinion on the proposed European Institute of Technology (European Research Advisory Board 2005):

> The objectives behind the initiative to launch a European Institute of Technology (EIT) are well known. ... We share these objectives and see the need for firm and concentrated efforts to achieve them in the near future. However, we do not believe that it is possible to short-cut this arduous and sustained process through the start-up of a new institution before the other necessary conditions are in place. MIT's reputation has grown over decades before counting 59 Nobel Prize winners. Its current annual budget is $1.8 billion. Its close connections with the most advanced industries, including service industries, are well known and for the first time among the highly ranked technical universities a woman president, neurobiologist Susan Hockfield, has been appointed.

EURAB's response is interesting for two reasons. First of all, EURAB uses an acronym for the EIT. Secondly, EURAB juxtaposes the Commission's EIT proposal with a brief summary of MIT (Massachusetts Institute of Technology). This is no coincidence: EURAB's response hinges on two prominent features of the EIT proposal from the Commission, which were either construed from the Lisbon Strategy text, or supplemented using different communication channels (e.g. press releases). As a result, the EIT of the Lisbon paper is discussed by EURAB as a conceptual integration network – "a prestigious European institute of technology," an "organisation on the lines of the US's Massachusetts Institute of Technology" (Boone).

How is the EIT blend prompted? To answer this question it is important to focus on two important formal elements present in the Lisbon passage alone: the indefinite article and capitals ("a E...I...T"). The use of the indefinite article is a cue for a generic space, in which the unique experience of a prestigious private university established in mid-nineteenth century in the Boston area, i.e. MIT, becomes a generalised category for a super-university that can be projected to another, European mental space. The use of analogous three-letter acronym completes the operation. In the integrated network both Europe and the US have their own supreme Institute of Technology. EIT is not a tentative concept advanced to test its merits but rather MIT's equal – "a magnet" for Nobel Prize winners and young talents from all around the world.

3. EIT as a counterfactual blend

Inscribed into the Lisbon Strategy vision, and interpreted by EURAB, the EIT conceptual network is created and unpacked. But, to be sure, these are only first

efforts in the long process of negotiating the network's ultimate topology, web connections, input spaces, and indeed, its generic space.

In February 2006, *The Guardian*'s Brussels correspondent Nicholas Watt reported on the development of the EIT:

> Professor Ian Leslie, the pro-vice chancellor for research at Cambridge University, said the commission should increase the budget of the European Research Council, rather than setting up [sic!] a new body. "This is a strange way of approaching things. The notion of top down innovation is an oxymoron."

In fact, the comment made by Professor Leslie struck a familiar note with a passage from European Commission's working paper entitled "A European Institute of Technology? Public Consultation on the possible missions, objectives, added-value and structure of an EIT," published in September 2005 (2005b: 3):

> Excellence is not created by *fiat*: it lies in the reality of work done over time and in the perceptions of peers. A new institution, however glorious its recruitments and magnificent its facilities, would take many years before it was accepted as being of world class. Nor is there any lack of world-class institutions within the EU today, which makes it less than sensible to try and create a new one.

It is noteworthy that the opinion of Professor Leslie and the argument advanced by the Commission's services construe an MIT-like EIT as a *reductio ad absurdum*. The new institution is created but it immediately faces challenges. In addition, it pulls resources away from the existing research universities, and, consequently, jeopardizes Europe's chances for a world-scale success. Running the blend features a catastrophic waste of public money.

The elaboration of the MIT-like EIT ends in a contradiction: deciding to set up an MIT-like EIT the Commission arrogated power to work against the very principles of innovation. Running the blend offers a warning instantiated in a paradox: top-down innovation is an oxymoron.

This scenario development process accentuates interesting time relations of the EIT blend. On close inspection, the blend bears certain similarities to the Buddhist monk blend discussed at length by Fauconnier and Turner (2002: 39–57). EIT and MIT coexist in the blend. But in reality MIT's history started in the middle of the nineteenth century, whereas MIT-like EIT begins in its future achievement and extends backwards to the present moment, when it is created. There is more: EIT and MIT are connected in terms of role, and thus set up a role-based category. The *reductio ad absurdum* consists precisely in accepting "an EIT" (i.e. a European MIT) as a category in order to develop the blend scenario which ends in its own contradiction: there is no EIT at the end of the scenario, but a failure to create one. Role-based analogy is unpacked as a role-based disanalogy.

Time and role coincide with cause-and-effect, and the EIT blend's cause-and-effect compressions are criticised as well. One insightful comment in this respect comes from Frank Gannon in February 2006:

> As there is no plan at present to describe the goals or actions of the EIT, this promotion strategy is reminiscent of parasite marketing, which accrues credibility by linking to the real thing. ... The EIT is supposed to be the solution, but one persistent and unanswered question remains: what will the EIT actually do?

Gannon questions the postulated role compression of "the real thing" (MIT) and its emulation (EIT) stressing that it fails to define the EIT as an agent. While this obviously draws from the debate about the EIT as a policy-instrument, it is not itself a policy-making point. Gannon drops the detailed analyses of tasks, competences and institutional mandate for a legal entity and plunges back into the Lisbon narration projected to the blend. The postulated institution is again role-connected ("solution") and cause-connected ("what will it do?") to the European input space and the MIT input space. Except, these connections, when unpacked by Gannon, remain apparently unsatisfying.

4. Europe's MIT: a non-category

Indeed, when seen from the viewpoint of texts cited so far, the postulated category for a European Institute of Technology becomes highly problematic. Role, time, and cause-and-effect relations question the EIT blend's generic space.

It should be noted that postulating a generic space for the EIT blend is illusory in the sense that the *reductio* rebuttal questions its existence, or relevance for thought and analysis. In other words, if Fauconnier and Turner (2002) say that generic space is what "input spaces have in common," manipulating the blend as a thinking tool questions this very commonality.

The MIT-like EIT blend suggests the following spaces: MIT as America's showcase innovation champion (input space), European Union strengthening its innovation capacities (input space), and a generic space that includes a key university with its links to economy and its pervasive influence. By insisting that a university develops in stages (European Research Advisory Board 2005, European Commission 2005b) the critics of MIT-like EIT favour the metaphor DEVELOPMENT IS BIOLOGICAL GROWTH over DEVELOPMENT IS MECHANICAL CONSTRUCTION. This has rich implications: while mechanical construction is largely independent of geographical location and is only partly sequence-dependent, biological growth implies temporal perspective, a definite sequence, space-time and appropriate weather conditions. This, on its part, ties the generic space to the specific and connects the space to the cultural. As a consequence, an EIT blend that concedes temporal organisation in accordance with DEVELOPMENT IS BIOLOGICAL GROWTH sees an implosion of its generic space category of "key university" to witness a nominalist proliferation of culture-located individual interpretations. The generic space here is perhaps to be viewed as an illusory generic space, which, inescapably, displays strong local features when the blend is used for thinking.

Indeed, the term "a university" corresponds to an amalgam of diversified and often incoherent individual or culture specific Idealised Cognitive Models (Lakoff 1987), some of which are evoked and elaborated in the response texts cited in this article. That is all too natural: "university" is applied here in the context of the European Communities with their 23 official languages, 27 Member States and roughly 500 million citizens. At this level it is only in statistical or abstract-model sense that "a university" can be discussed. There is not much that is shared, in real terms, by schools such as "Jagiellonian University" and "Cambridge University," even though both are, in statistical terms, tertiary education institutions that engage in knowledge production and award diplomas. What differentiates the two schools internally and between themselves in reality are things as different as the number of students, faculty, scientific output in terms of refereed journals citations, university traditions, first-name policy in everyday relations, number of essays per week, campus topography, average temperatures, college refectory etiquette and more. Having said that, it is not surprising that when the chief executive body of the European Union proposes establishment of a European MIT-like university, the discussion about its structure and mission is likely to draw from disparate, and possibly incoherent, ICM's (Lakoff 1987). "A key university" is a process to be viewed in temporal perspective (which takes account of its multiple internal and external relations) rather than conceived of as a statistical unit fit for a logical calculus based on the container metaphor.

5. EIT: topographic mismatch

Our short discussion of the generic space brings us to the question of blend's topography. The two input spaces have different inner-relations. In terms of cause and result, the first one sees a university as the cause of a super-power's success, while the other wishes to establish a super-power by dealing with a university. But both input spaces are, all the same, essentially analogous in the sense that they evoke narratives and networks of truly continental proportions.

Such scope naturally needs scaling down, which is successfully achieved in the university blend. But reducing the scale does not suppress the metonymic connection between MIT/EIT and their respective mental spaces. This, in any event, might account for the fact that a university is ascribed strategic role for both continents.

My interpretation is that the integration network contains a cause-and-effect isomorphism fallacy that Fauconnier and Turner discuss in their book (2002: 188–189) in relation to scientific theories. The faulty construction can be summarized in the following way: "EIT is a European response to a European problem, and it draws inspiration from an American success." But the notion of a single problem that the EIT is supposed to address is questioned in very clear terms in the study for the European Parliament's ITRE commission chaired by Peter Tindemans (European Parliament 2007: 4):

> The relative weakness of Europe to convert knowledge into commerce and critical mass or to reward entrepreneurship and excellence in research and education is not homogeneous. Ignoring this fact might result in assuming too easily that a European level institutional solution is necessary in cases where national or regional approaches might be more appropriate.

As there is no single European problem, understanding MIT as "a US response to analogous problem" may be a fallacy.

And here we hit perhaps the last peculiarity of the EIT blend. The US may have a great university to show for as a nation in statistical yearbooks, but that does not mean that this university is an emanation of American federalism. The study by Tindemans emphatically refutes (European Parliament 2007: 7) an idea for an MIT-like EIT:

> There is a US system of higher education, but there are no federal universities. ... While there is little doubt that Europe will experience the development of new high-quality universities, many of which will evolve from existing ones, they will most likely be private or will be set up or supported by national governments. ... it is unlikely that they would be dependent on or closely linked to the European Union, given that the Treaty exclusively reserves responsibility for higher education to the member states.

The point of the report is not to ignore MIT, but to show that creating as good a university does not fall within the remit of the European Communities executive. The study paper dismantles the EIT blend stipulating that attempts to build a European-level university result from a topographic mistake in the blend: MIT is wrongly connected to federal level through compression (part-whole: university stands for super-power so the super-power is suitable to deal with university). What is more, the metonymic connection between the university and the super-power is contrary to existing projections of how the higher education sector will develop: the report offers a narrative in which the future of super-universities is not linked with Community level actions. Indeed, what is at stake here is nothing more than the subsidiarity principle, under which all business in the EU should be handled at the lowest possible level. The blend construction clashes with the legislative conceptual network of the European Communities.

The EIT blend's topography contains a metonymic connection between the mental space as a whole and one of its elements. This connection is projected back to the input space to create a circular formula: America's innovation success is linked metonymically to MIT, which is linked metonymically to America's innovation success. Yet, the closed circuit originates from the European input space, in which the Commission needs a solution to its problem: European innovation needs a metonymic agent, which will be linked metonymically to European innovation. One observation seems to be well-founded here: the blend could only have come into being if the integrating agent was European rather than American. This is because the trigger for the network is a perceived gap in the European input space. In any case, this account explains why the Commission should find itself trespassing Member States' unique competence. It also illustrates the point made by Fauconnier

and Turner: "In using a blend as the basis for thought and action we must remain clear about how inputs and blend do not match topologically" (2002: 331).

6. Conclusions. Driving the policy-making process

Concluding, the EIT debate, as briefly discussed above, exemplifies important challenges faced by European level policy-makers. First of all, the EIT example shows that blending can be very efficient in stimulating a complex debate. The EIT blend was a success in achieving global insight into an unwieldy, complex subject matter. The human-scale of the blend enabled discussion and, consequently, attracted criticism, which was more abundant for the EIT than, for example, the concept of "Innovation Poles" postulated in the same section of the Lisbon Strategy. The EIT integration network offered much more content – and possibly contention – when unpacked.

In this light it is understandable that, while the notion of a European institute of technology to emulate MIT was discarded in the course of blend's elaboration, the blend survived in a modified form and came to serve as the basis for a new European institution governing a network of "co-location" partnerships, which was established in the spring of 2008. Global insight and human-scale of the network stood the test; its generic space had to go.

Consequently, the EIT blend may be singled out as a special element of the Renewed Lisbon Strategy. The main reason for this is that methodological unravelling of the EIT blend's contradictions by its detractors provided a much-desired topographical glossary for the European innovation debate. This glossary is itself an important communication achievement. Even though input spaces on which the EIT debate drew clashed in many respects, the EIT integration network offered a confrontation of Idealised Cognitive Models that structure an important part of the European innovation policy debate.

The Lisbon Strategy opened with an address that aims to evoke a European's sense of common destiny. But the paper offered little human-scale content, and when it did, as in the case of the EIT blend, ensuing discussion proved to be critically dependent on incoherent Idealised Cognitive Models. Consequently, the EIT debate provided evidence that innovation policy, i.e. practical creativity expressed through a mix of research, knowledge production and commercialisation, is particularly sensitive to local knowledge and conceptualisations. This, in itself, is serious enough a reason for a thorough study of the European innovation policy cognitive models.

References

Fauconnier, G. 1994. *Mental Spaces. Aspects of Meaning Construction in Natural Language.* Cambridge: Cambridge University Press.

Fauconnier, G. and M. Turner 1998. "Principles of Conceptual Integration." In: J.-P. Koenig (ed.). *Discourse and Cognition.* Stanford: Center for the Study of Language and Information, pp. 269–283.

Fauconnier, G. and M. Turner 2002. *The Way We Think. Conceptual Blending and the Mind's Hidden Complexities.* New York: Basic Books.

Gannon, F. 2006. "A European institute of technology?" EMBO Reports. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1500835/. 15 November 2009.

Gibbs, R.W. Jr. 2000. "Making good psychology out of blending theory." *Cognitive Linguistics* 11, pp. 327–358.

Goffman, E. 1974. *Frame Analysis: An Essay on the Organization of Experience.* New York: Harper & Row.

Kahneman, D.P. and A. Tversky 1982. *Judgement Under Uncertainty: Heuristics and Biases.* Cambridge-New York: Cambridge University Press.

Koestler, A. 1964. *The Act of Creation.* New York: Macmillan.

Lakoff, G. 1987. *Women, Fire, and Dangerous Things. What Categories Reveal about the Mind.* London, UK-Chicago, Illinois: The University of Chicago Press.

Ritchie, D. 2004. "Lost in space: metaphors in conceptual integration theory." *Metaphor and Symbol* 19, pp. 31–50.

Talmy, L. 2000. *Toward a Cognitive Semantics.* Vol. 1. *Concept Structuring Systems*; Vol. 2. *Typology and Process.* Cambridge, Massachusetts: MIT Press.

Internet sources

Bone, D. 2006. Universities UK. Media Release. http://www.universitiesuk.ac.uk/Newsroom/Media-Releases/Pages/MediaRelease-449.aspx. 16 April 2009.

Boone, J. 2006. "Financial Times." http://www.ft.com/cms/s/0/a05b55b6-9f59-11da-ba48-0000-779e2340.html?nclick_check=1. 15 November 2009.

European Commission. 2005a. "Working together for jobs and growth. A new start for the Lisbon Strategy." http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2005: 0024:FIN:EN:PDF. 14 November 2009.

European Commission. 2005b. "A European Institute of Technology? Public Consultation on the possible missions, objectives, added-value and structure of an EIT." http://www.avcr.cz/data/aktuality_man/EIT-Public_consultation.pdf. 15 November 2009.

European Communities. 2004. "Facing the Challenge. The Lisbon strategy for growth and employment. Report from the High Level Group chaired by Wim Kok." http://ec.europa.eu/growthandjobs/pdf/kok_report_en.pdf. 15 November 2009.

European Council. 2000. "Presidency Conclusions. Lisbon European Council. 23 and 24 March 2000." http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ec/00100-r1.en0.htm. 15 November 2000.

European Parliament. 2007. "European Institute of Technology. Assessment of the feasibility and possible impact of a European Institute of Technology." http://www.europarl.europa.eu/comparl/itre/pe382188_en.pdf. 15 November 2009.

European Research Advisory Board. 2005. "EURAB Recommendation on the proposed European Institute of Technology (EIT)." http://ec.europa.eu/research/eurab/pdf/eurab_05_021_1_eit.pdf. 14 November 2009.

Watt, N. 2006. "European institute to rival MIT." *The Guardian.* http://www.guardian.co.uk/world/2006/feb/22/highereducation.internationaleducationnews. 15 November 2009.